# Appendix E
# Soil Investigation Report

July 31, 2019

Ms. Abby Mazza
City of Chicago
Department of Fleet and Facility Management
30 North LaSalle, Suite 300
Chicago, Illinois 60606

**Subject:** **Investigation Summary Report – January/March 2019 Sampling Events**
**Former Carnotite Reduction Company Site**
**434 East 26th Street**
**Chicago, Illinois**

Dear Ms. Mazza:

Tetra Tech, Inc. (Tetra Tech) has prepared this investigation summary report for the City of Chicago Department of Fleet and Facility Management (2FM) under Task Order Request 14-2FMEHS-00018. On January 15, 2019, Tetra Tech conducted a soil boring investigation and additional groundwater sampling. The soil boring investigation was conducted to (1) delineate the maximum depth of radium-226, uranium, and thorium-230 contamination beneath the north portion of East 26th Street and (2) determine the extent of contamination at the north property boundary beneath overhead power lines. Also, an additional groundwater sample was collected from MW-1 and analyzed for volatile organic compounds, polycyclic aromatic hydrocarbons, semivolatile organic compounds, pesticides, polychlorinated biphenyls, and dioxins and furans. The purpose of the groundwater sampling was to evaluate (1) groundwater concentrations in the area of soil contamination and (2) potential groundwater treatment requirements during future remediation. Potential groundwater treatment requirements are based on the requirements for maximum concentrations acceptable for discharge of environmental remediation wastewater into sewer systems under the jurisdiction of the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), as required by the MWRDGC Environmental Remediation Wastewater Ordinance, Appendix A, Section 1, dated February 18, 2010.

On March 30, 2019, Tetra Tech advanced one hand auger soil boring to delineate the northeast extent of thorium-230 contamination along the north property boundary. In addition, Stan A. Huber Consultants, Inc. (SAHCI) conducted radiological field screening of soil cores and screening of equipment and coolers before removal from the site during both sampling events. The following sections discuss the site background, soil boring activities, and soil and groundwater sampling and analytical results.

Appendices are as follows:

- **Appendix A:** figures showing sampling locations and exceedances of site-specific concentrations of concern
- **Appendix B:** soil and groundwater analytical results summary tables
- **Appendix C:** soil boring logs
- **Appendix D:** SAHCI data package
- **Appendix E:** laboratory data packages

## SITE BACKGROUND

The site is located at 434 East 26th Street in Chicago, Illinois (see Figure 1 in Appendix A). The site formerly operated as an elemental radium separation and refining facility. Tetra Tech (and others) previously acquired information at the site and provided investigative reports. 2FM obtained a site-specific radioactive materials license (Number IL-02467-01) issued by the Illinois Emergency Management Agency (IEMA). Investigations at the site since 2009 have identified the presence of gamma activity. A subsurface investigation in June 2012 confirmed the presence of elevated levels of radium and uranium in subsurface soil. Subsequent investigations further delineated the extent of radium-226, uranium, thorium-230 contamination. Based on the data collected at the site, the horizontal and vertical extent of the radium-226, uranium, and thorium-230 soil contamination required further refinement to facilitate remedial design and cost estimating and additional characterization of groundwater was required in the area of contamination.

## SOIL BORING ACTIVITIES

The January 2019 sampling event included installing soil borings for delineating the extent of radium-226, uranium, and thorium-230 contamination. Four investigative soil borings were advanced using direct-push technology (DPT) with a Geoprobe® to a maximum depth of 19 feet below ground surface (bgs). Investigative soil boring locations are shown on Figure 2 in Appendix A. Borings CRC-SB-01, CRC-SB-02, CRC-SB-03, and CRC-SB-04 were advanced to delineate the vertical and horizontal extent of radium, thorium-230, and uranium. Soil lithology was characterized in all soil borings by logging continuous soil samples (except CRC-SB-01) in accordance with the Unified Soil Classification System (see soil boring logs in Appendix C). CRC-SB-01 was blind drilled to 11 feet bgs before continuous soil sampling at that location. At this location, previous analytical results documented contamination to 11 feet bgs. Therefore, the purpose of the sampling activities at CRC-SB-01 was to determine the vertical extent of contamination. The purpose of soil borings CRC-SB-02, CRC-SB-03, and CRC-SB-04 was to determine the extent along the north property boundary because overhead power lines prevented boring in this vicinity. For this investigation, 2FM and Tetra Tech coordinated with ComEd to temporarily shut down the power supply to these overhead lines.

The March 2019 sampling event consisted of advancing one soil boring, designated CRC-HB-01, using a hand auger to an approximate depth of 2 feet bgs for the purposes of delineating the northeast extent of

thorium-230 soil contamination. Boring CRC-HB-01 was advanced along the northern boundary of the site. Figure 2 also shows the boring location.

During the January sampling event, soil cores from each location were screened by SAHCI before collection of soil samples. SAHCI screened the soil cores using a Ludlum Model 2221 Scaler/Ratemeter with attached Ludlum Model 44-10 6-inch shield. Typically, field radiation screening devices can detect only high concentrations of radionuclides in soil cores with limited soil volume. Most screening results were indistinguishable from background. However, where detected, contamination was primarily between 0 and 5 feet bgs (see soil screening data sheets in Appendix D). The highest field screening result was 10,400 counts per minute at 0 to 2 feet bgs in soil boring CRC-SB-02. No soil screening was conducted in March.

## SOIL AND GROUNDWATER SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

Tetra Tech collected 21 investigative soil samples in January from varying depth intervals of 0 to 19 feet bgs from four DPT soil borings. Thirteen of the 21 soil samples were submitted for analysis of radium-226, uranium, and thorium-230 in January. The remaining soil samples were stored in the on-site storage container pending receipt of analytical results. The results indicated a total uranium concentration of 31.3 picoCuries per gram (pCi/g) in the deepest sample analyzed at location CRC-SB-02-0608. Therefore, the following two additional depth intervals were subsequently submitted for analysis:

- 10 to 12 feet bgs (CRC-SB-02-1012)
- 12 to 14 feet bgs (CRC-SB-02-1214)

No radium-226, uranium, or thorium-230 concentrations above soil remediation criteria were detected in these samples. Also, at the remaining sample locations the vertical extent of contamination was delineated based on the results of the soil samples initially submitted for analysis. Therefore, no additional stored samples were submitted for analysis. However, the eastern-most soil boring advanced in January, SB-04, contained thorium-230 at 0 to 2 feet bgs. Therefore, Tetra Tech collected hand auger sample CRC-HB-01-0002 from 0 to 2 feet bgs to determine the horizontal extent of thorium-230 along the north property boundary. Thorium-230 was not detected above soil remediation criteria in sample CRC-HB-01-0002.

Investigative soil analytical results were compared to site-specific concentrations of concern (COC), which are soil remediation criteria outlined by IEMA in the radioactive materials license. The COC for total radium is 5.9 picocuries per gram (pCi/g), COCs for total uranium are 22 pCi/g to a depth of 5 meters and 52 pCi/g at 5 meters and below, and the COC for thorium-230 is 5.8 pCi/g. Exceedances of COCs were detected in five soil samples collected at various depths (see Figure 3 in Appendix A and Table 2 in Appendix B).

Tetra Tech collected a groundwater sample from MW-1 for groundwater treatment system design and discharge purposes. A Tetra Tech chemist verified the analytical results, which were compared to Illinois Environmental Protection Agency's (IEPA) Tiered Approach to Corrective Action Objectives (TACO), groundwater remediation objectives and pollutant concentration limits in MWRDGC's Environmental Remediation Wastewater Ordinance. Only acetone and methylene chloride, common laboratory contaminants, and bis(2-ethylhexyl)phthalate were detected at concentrations below the laboratory reporting limits. The analytical results are summarized in Table 3 in Appendix B. The laboratory analytical report is in Appendix E.

All samples were shipped to TestAmerica, Inc., in Earth City, Missouri, for analysis.

All tools and equipment were monitored for radiological contamination prior to release for unrestricted use in accordance with procedures outlined in the site-specific Environmental Monitoring Plan (EMP). All equipment was decontaminated to levels As Low As Reasonably Achievable (ALARA) by application of decontamination procedures outlined in the site-specific EMP (Tetra Tech 2015).

Investigation-derived wastes were containerized in drums and securely stored in the on-site Conex box for management and disposal during site remediation.

**SUMMARY**

Of the 15 investigative soil samples collected via DPT within 0 and 19 feet bgs in January and one investigative soil sample collected via hand auger from 0 to 2 feet bgs in March, five contained radium, uranium, or thorium-230 above site-specific COCs at various depths. These exceedances were detected at various depths. Most field radiation screening results were indistinguishable from background. However, where detected, contamination was primarily between 0 and 5 feet bgs.

Other study objectives achieved included the acquisition of groundwater analytical results for wastewater treatment design and discharge purposes.

## REFERENCES

Tetra Tech, Inc. (Tetra Tech). 2015. "Environmental Monitoring Plan, Former Carnotite Reduction Company Site, 434 East 26th Street, Chicago, Illinois." May 28.

If you have any questions about this investigation report, please contact me at (312) 201-7480.

Sincerely,

Kristine Schnoes
Project Manager

cc: Stacey Durley, Tetra Tech
Carol Nissen, Tetra Tech
Glenn Huber, Stan A. Huber Consultants, Inc.

Appendices:
A – Figures
B – Tables
C – Soil Boring Logs
D – SACHI Data Package
E – Laboratory Data Packages

# APPENDIX A
# FIGURES




**REFERENCE MAP**




N

0 2,000 4,000

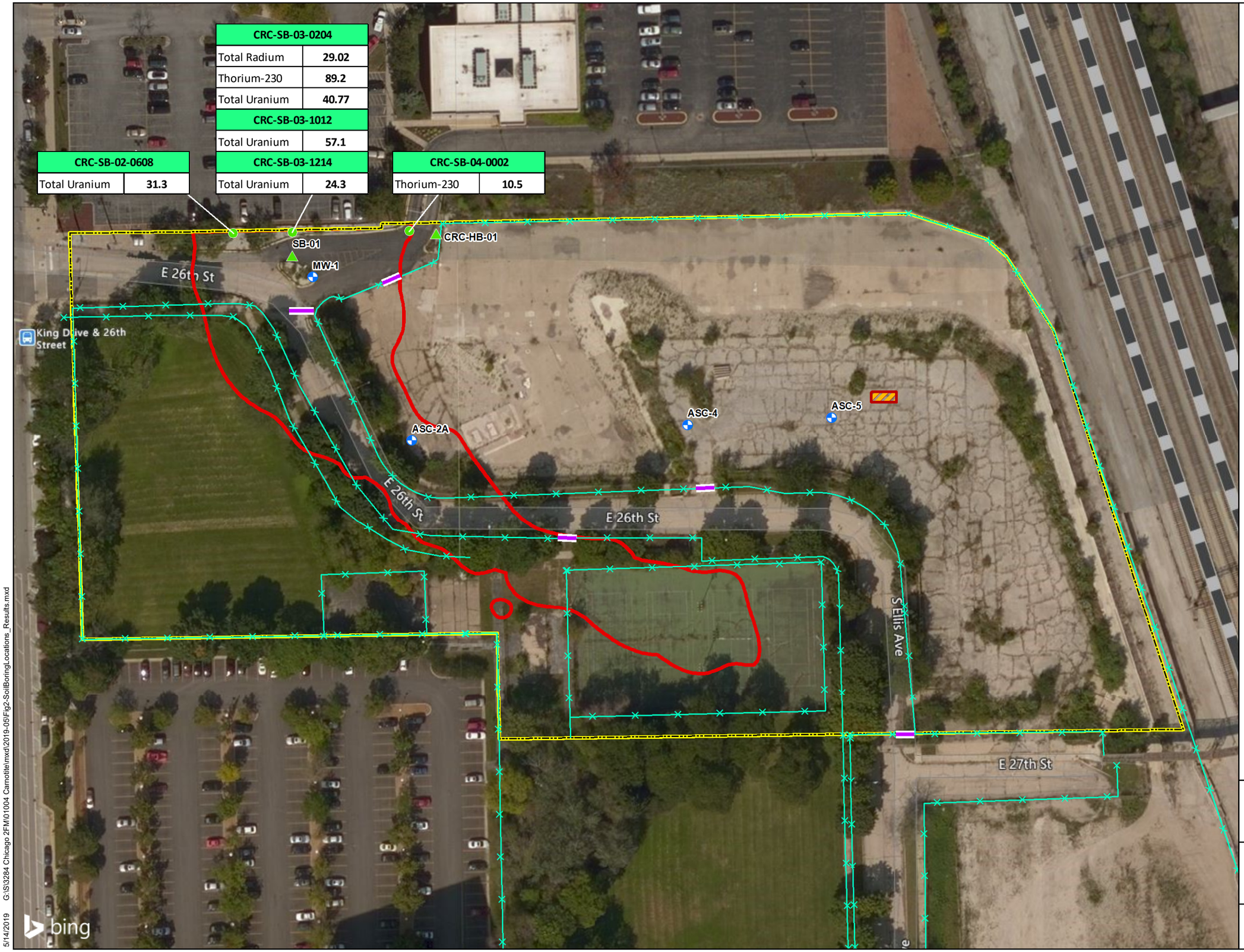
Feet

FORMER CARNOTITE REDUCTION COMPANY SITE
434 E. 26th STREET
CHICAGO, ILLINOIS

**FIGURE 1**
**SITE LOCATION MAP**

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4/6/2015 G:\S\3284 Chicago 2FM01004 Carnotite\mxd\Fig1-SiteLoc.mxd m.banh




**Legend**

- Soil Sample Location – 2019
- Soil Sample Location – 2019 Concentration below soil remediation criteria
- Monitoring Well Location
- Plume/ Soil Excavation Area Boundary
- Fence
- Gate
- Cargo Storage Container
- Radioactive Facility License Boundary

All results presented in units of pCi/g
pCi/g = picoCuries per gram

N

0 50 100
Feet

FORMER CARNOTITE REDUCTION COMPANY SITE
434 E. 26th STREET
CHICAGO, ILLINOIS

**FIGURE 2**
SOIL BORING LOCATIONS AND ANALYTICAL RESULTS ABOVE REMEDIATION CRITERIA

TETRA TECH

5/14/2019 G:\S\3284 Chicago 2FM\01004 Carnotite\mxd\2019-05\Fig2-SoilBoringLocations_Results.mxd

| CRC-SB-03-0204 | |
|---|---|
| Total Radium | 29.02 |
| Thorium-230 | 89.2 |
| Total Uranium | 40.77 |

| CRC-SB-03-1012 | |
|---|---|
| Total Uranium | 57.1 |

| CRC-SB-03-1214 | |
|---|---|
| Total Uranium | 24.3 |

| CRC-B20-0206 | |
|---|---|
| *7/27/2018* | |
| Total Radium | 19 |
| Thorium-230 | 35 |
| Total Uranium | 41.3 |

| CRC-B7-0204 | |
|---|---|
| *7/11/2018* | |
| Total Radium | 135 |
| Thorium-230 | 165 |
| Total Uranium | 116 |

| CRC-SB-04-0002 | |
|---|---|
| Thorium-230 | 10.5 |

| CRC-SB-02-0608 | |
|---|---|
| Total Uranium | 31.3 |

| A-6 | | |
|---|---|---|
| Depth (ft-bgs) | *2* | *5* |
| Radium-226 | 13.66 | 0.5 |
| Total Uranium | 17.12 | 9.89 |

| B-8 | | |
|---|---|---|
| Depth (ft-bgs) | *3* | *11* |
| Radium-226 | 274.19 | 1.27 |
| Total Uranium | 162.16 | 3,310.75 |

| A-8 | |
|---|---|
| Depth (ft-bgs) | *10* |
| Radium-226 | 1.34 |
| Total Uranium | 2,990.19 |

| B-9 | | |
|---|---|---|
| Depth (ft-bgs) | *4* | *7* |
| Radium-226 | 18.91 | 52.13 |
| Total Uranium | 2,444.96 | 3,670.42 |

| B-11 | |
|---|---|
| Depth (ft-bgs) | *2* |
| Radium-226 | 364.56 |
| Total Uranium | 78.18 |

| CRC-B6-0204 | |
|---|---|
| *7/11/2018* | |
| Thorium-230 | 11.6 |

| CRC-B1-0002 | |
|---|---|
| *7/10/2018* | |
| Total Radium | 11.3 J- |
| Thorium-230 | 36.3 |

| A-12 | |
|---|---|
| Depth (ft-bgs) | *2* |
| Radium-226 | 56.96 |
| Total Uranium | 24.66 |

| C-10 | |
|---|---|
| Depth (ft-bgs) | *7* |
| Radium-226 | 16.37 |
| Total Uranium | 261.89 |

| E-10 | |
|---|---|
| Depth (ft-bgs) | *1* |
| Radium-226 | 77.46 |
| Total Uranium | ND |

| E-12 | |
|---|---|
| Depth (ft-bgs) | *5* |
| Radium-226 | 1,124.31 |
| Total Uranium | 826.36 |

| SS-01 | |
|---|---|
| Depth (ft-bgs) | *2.5* |
| Radium-226 | 592.00 |
| Thorium-230 | 445.00 |
| Total Uranium | 47.95 |

| B-6 | |
|---|---|
| Depth (ft-bgs) | *3* |
| Radium-226 | 28.56 |
| Total Uranium | 2,434.95 |

| SS-02 | |
|---|---|
| Depth (ft-bgs) | *1* |
| Radium-226 | 57.90 |
| Thorium-230 | 106.00 |
| Total Uranium | 36.51 |

| D-7 | |
|---|---|
| Depth (ft-bgs) | *1* |
| Radium-226 | 240.05 |
| Total Uranium | 157.59 |

| G-8 | | |
|---|---|---|
| Depth (ft-bgs) | *2* | *3* |
| Radium-226 | 109.08 | 4.91 |
| Total Uranium | 54.45 | 27.30 |

| H-10 | |
|---|---|
| Depth (ft-bgs) | *1* |
| Radium-226 | 31.57 |
| Total Uranium | ND |

| I-9 | |
|---|---|
| Depth (ft-bgs) | *1* |
| Radium-226 | 9.72 |
| Total Uranium | 6.44 |

| CRC-B11-0204 | |
|---|---|
| *7/30/2018* | |
| Total Radium | 9.86 |
| Thorium-230 | 10.3 |

| J-13 | | |
|---|---|---|
| Depth (ft-bgs) | *2* | *3* |
| Radium-226 | 8.78 | 7.56 |
| Total Uranium | 3.18 | 4.26 |

| K-13 | |
|---|---|
| Depth (ft-bgs) | *2* |
| Radium-226 | 7.53 |
| Total Uranium | 1.72 |

| M-15 | | |
|---|---|---|
| Depth (ft-bgs) | *2* | *3* |
| Radium-226 | 6.30 | 8.06 |
| Total Uranium | 1.09 | 1.86 |

| CRC-B14-0204 | |
|---|---|
| *7/27/2018* | |
| Thorium-230 | 14.1 |

| CRC-B5-0204 | |
|---|---|
| *7/30/2018* | |
| Thorium-230 | 8.76 |

| G-12 | |
|---|---|
| Depth (ft-bgs) | *2* |
| Radium-226 | 527.66 |
| Total Uranium | 31.84 |

| H-12 | |
|---|---|
| Depth (ft-bgs) | *4* |
| Radium-226 | 61.78 |
| Total Uranium | 11.11 |

| N-19 | |
|---|---|
| Depth (ft-bgs) | *1* |
| Radium-226 | 14.99 |
| Total Uranium | 15.09 |

| N-22 | |
|---|---|
| Depth (ft-bgs) | *1* |
| Radium-226 | 11.00 |
| Total Uranium | 5.57 |

| O-26 | |
|---|---|
| Depth (ft-bgs) | *2* |
| Radium-226 | 14.67 |
| Total Uranium | 3.68 |

| CRC-B17-0204 | |
|---|---|
| *7/27/2018* | |
| Total Radium | 24.7 |
| Thorium-230 | 89.3 |
| Total Uranium | 38.1 |

| CRC-B17-0406 | |
|---|---|
| *7/27/2018* | |
| Total Radium | 19.9 |
| Thorium-230 | 361 |
| Total Uranium | 27.9 |

| O-23 | | |
|---|---|---|
| Depth (ft-bgs) | *2* | *3* |
| Radium-226 | 1.34 | 100.14 |
| Total Uranium | 1.74 | 44.12 |

| Q-24 | |
|---|---|
| Depth (ft-bgs) | *2* |
| Radium-226 | 16.48 |
| Total Uranium | 36.71 |

| R-25 | | |
|---|---|---|
| Depth (ft-bgs) | *3* | |
| Radium-226 | 48.43 | |
| Total Uranium | 16.12 | |

**Legend**

- Soil Sample Location – 2019
- Soil Sample Location – 2019 Concentration below soil remediation criteria
- Soil Sample Location – 2012
- Soil Sample Location – 2012 Concentration below soil remediation criteria
- Soil Sample Location – 2017
- Soil Sample Location – 2018
- Soil Sample Location – 2018 Concentration below soil remediation criteria
- Fence
- Gate
- Total uranium in soil above 22 pCi/g above 5 meters bgs
- Thorium-230 in soil above 5.5 pCi/g
- Radium-226 in soil above 5.9 pCi/g
- Cargo Storage Container
- Radioactive Facility License Boundary

All results presented in units of pCi/g
ft-bgs = feet-below ground surface
pCi/g = picoCuries per gram

N

0 50 100

Feet

FORMER CARNOTITE REDUCTION COMPANY SITE
434 E. 26th STREET
CHICAGO, ILLINOIS

**FIGURE 3**
SOIL ANALYTICAL RESULTS ABOVE REMEDIATION CRITERIA

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TETRA TECH

# APPENDIX B
# TABLES

**Table 1**
**Soil Borings and Analyses**
**Former Carnotite Reduction Company Site**

| Soil Boring | Sample Location | Sample Date | Sample Depth (feet bgs) | Laboratory Analyses | | |
|---|---|---|---|---|---|---|
| | | | | Radium[1] | Uranium[2] | Thorium-230[3] |
| SB-01 | CRC-SB-01-1113 | 1/15/2019 | 11 to 13 | ● | ● | ● |
| | CRC-SB-01-1315 | 1/15/2019 | 13 to 15 | ● | ● | ● |
| | CRC-SB-01-1517 | 1/15/2019 | 15 to 17 | ● | ● | ● |
| SB-02 | CRC-SB-02-0608 | 1/15/2019 | 6 to 8 | ● | ● | ● |
| | CRC-SB-02-1012 | 1/15/2019 | 10 to 12 | ● | ● | ● |
| | CRC-SB-02-1214 | 1/15/2019 | 12 to 14 | ● | ● | ● |
| SB-03 | CRC-SB-03-0204 | 1/15/2019 | 2 to 4 | ● | ● | ● |
| | CRC-SB-03-0608 | 1/15/2019 | 6 to 8 | ● | ● | ● |
| | CRC-SB-03-0810 | 1/15/2019 | 8 to 10 | ● | ● | ● |
| | CRC-SB-03-1012 | 1/15/2019 | 10 to 12 | ● | ● | ● |
| | CRC-SB-03-1214 | 1/15/2019 | 12 to 14 | ● | ● | ● |
| | CRC-SB-03-1416 | 1/15/2019 | 14 to 16 | ● | ● | ● |
| SB-04 | CRC-SB-04-0002 | 1/15/2019 | 0 to 2 | ● | ● | ● |
| | CRC-SB-04-0204 | 1/15/2019 | 2 to 4 | ● | ● | ● |
| | CRC-SB-04-0406 | 1/15/2019 | 4 to 6 | ● | ● | ● |
| HB-01 | CRC-HB-01-0002 | 3/30/2019 | 0 to 2 | ● | ● | ● |

**Notes:**

[1] Radium analyses included radium-226 and radium-228 by gamma spectroscopy (EPA Method 901.1M)

[2] Uranium analyses included uranium-234, uranium-235, and uranium-238 by alpha spectroscopy (HASL 300 and laboratory SOP U-02/ A-01-R)

[3] Thorium-230 analysis by alpha spectroscopy (HASL 300 and laboratory SOP Th-01/ A-01-R)

bgs = below ground surface
EPA = U.S. Environmental Protection Agency
HASL 300 = U.S. Department of Energy, Environmental Measurements Laboratory (formerly health and safety laboratory) procedures manual
SOP = Standard operating procedures

**Table 2**
**Soil Analytical Results Summary**
**Former Carnotite Reduction Company Site**

**January 2019 Investigation Analytical Results**

| Sample Location | Sample Date | Units | Radium-226 | | Radium-228 | | Total Radium | Radium COC | Thorium-230 | | Thorium-230 COC | Uranium-234 | | Uranium-235 | | Uranium-238 | | Total Uranium | Uranium COC | Uranium COC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Result | Uncertainty | Result | Uncertainty | | | Result | Uncertainty | | Result | Uncertainty | Result | Uncertainty | Result | Uncertainty | | <5 meters bgs | ≥5 meters bgs |
| CRC-SB-01-1113 | 1/15/2019 | pCi/g | 0.196 U | ± 0.148 | 0.259 U | ± 0.252 | 0.455 U | 7.1 | 0.512 | ± 0.157 | 5.8 | 3.63 | ± 0.462 | 0.203 | ± 0.0936 | 3.42 | ± 0.442 | 7.25 | 22 | 52 |
| CRC-SB-01-1315 | 1/15/2019 | pCi/g | 0.120 U | ± 0.108 | -0.055 U | ± 0.298 | 0.120 U | 7.1 | 0.361 | ± 0.144 | 5.8 | 0.499 | ± 0.140 | 0.0165 U | ± 0.0321 | 0.463 | ± 0.134 | 0.962 | 22 | 52 |
| CRC-SB-01-1517 | 1/15/2019 | pCi/g | 0.282 | ± 0.099 | 0.395 | ± 0.153 | 0.677 | 7.1 | 0.255 | ± 0.129 | 5.8 | 1.10 | ± 0.212 | 0.0722 | ± 0.0549 | 1.10 | ± 0.212 | 2.20 | 22 | 52 |
| CRC-SB-02-0608 | 1/15/2019 | pCi/g | 0.949 | ± 0.213 | 0.176 U | ± 0.189 | 0.949 | 7.1 | 1.51 | ± 0.295 | 5.8 | 14.7 | ± 1.51 | 0.731 | ± 0.229 | 15.9 | ± 1.62 | **31.3** | 22 | 52 |
| CRC-SB-02-1012 | 1/15/2019 | pCi/g | 0.437 | ± 0.144 | 0.136 U | ± 0.301 | 0.437 | 7.1 | 0.32 | ± 0.130 | 5.8 | 1.4 | ± 0.23 | 0.047 | ± 0.042 | 1.5 | ± 0.24 | 2.9 | 22 | 52 |
| CRC-SB-02-1214 | 1/15/2019 | pCi/g | 0.408 | ± 0.154 | 0.327 | ± 0.202 | 0.735 | 7.1 | 0.34 | ± 0.133 | 5.8 | 2.4 | ± 0.35 | 0.130 | ± 0.073 | 2.3 | ± 0.34 | 4.9 | 22 | 52 |
| CRC-SB-03-0204 | 1/15/2019 | pCi/g | 26.9 | ± 2.96 | 2.12 | ± 0.605 | **29.02** | 7.1 | **89.2** | ± 7.70 | 5.8 | 20.1 | ± 1.97 | 1.07 | ± 0.281 | 19.6 | ± 1.94 | **40.77** | 22 | 52 |
| CRC-SB-03-0608 | 1/15/2019 | pCi/g | 0.317 U | ± 0.169 | 0.164 U | ± 0.215 | 0.481 U | 7.1 | 1.21 | ± 0.251 | 5.8 | 1.17 | ± 0.228 | 0.0884 U | ± 0.0677 | 1.15 | ± 0.227 | 2.32 | 22 | 52 |
| CRC-SB-03-0810 | 1/15/2019 | pCi/g | 0.345 | ± 0.106 | 0.181 | ± 0.151 | 0.526 | 7.1 | 0.331 | ± 0.137 | 5.8 | 0.686 | ± 0.168 | 0.0491 U | ± 0.0496 | 0.987 | ± 0.205 | 1.673 | 22 | 52 |
| CRC-SB-03-1012 | 1/15/2019 | pCi/g | 0.353 | ± 0.132 | 0.243 U | ± 0.233 | 0.353 | 7.1 | 0.417 | ± 0.143 | 5.8 | 27.3 | ± 2.67 | 1.38 | ± 0.365 | 28.4 | ± 2.77 | **57.1** | 22 | 52 |
| CRC-SB-03-1214 | 1/15/2019 | pCi/g | 0.468 | ± 0.159 | 0.244 | ± 0.178 | 0.712 | 7.1 | 0.356 | ± 0.146 | 5.8 | 11.8 | ± 1.23 | 0.643 | ± 0.198 | 11.9 | ± 1.23 | **24.3** | 22 | 52 |
| CRC-SB-03-1416 | 1/15/2019 | pCi/g | 0.167 | ± 0.0775 | 0.106 U | ± 0.193 | 0.167 | 7.1 | 0.186 | ± 0.119 | 5.8 | 1.07 | ± 0.220 | 0.0689 | ± 0.0566 | 0.935 | ± 0.202 | 2.074 | 22 | 52 |
| CRC-SB-04-0002 | 1/15/2019 | pCi/g | 3.43 | ± 0.534 | 0.838 | ± 0.336 | 4.268 | 7.1 | **10.5** | ± 1.07 | 5.8 | 1.54 | ± 0.262 | 0.0461 U | ± 0.0519 | 1.41 | ± 0.249 | 2.95 | 22 | 52 |
| CRC-SB-04-0204 | 1/15/2019 | pCi/g | 0.720 | ± 0.208 | 0.584 | ± 0.215 | 1.304 | 7.1 | 0.612 | ± 0.171 | 5.8 | 0.548 | ± 0.140 | 0.0663 | ± 0.0525 | 0.563 | ± 0.143 | 1.177 | 22 | 52 |
| CRC-SB-04-0406 | 1/15/2019 | pCi/g | 0.520 | ± 0.145 | 0.508 | ± 0.188 | 1.028 | 7.1 | 0.741 | ± 0.184 | 5.8 | 0.545 | ± 0.145 | 0.0188 U | ± 0.0308 | 0.484 | ± 0.136 | 1.029 | 22 | 52 |
| CRC-HB-01-0002 | 3/30/2019 | pCi/g | 0.746 | ± 0.157 | 0.797 | ± 0.228 | 1.543 | 7.1 | 0.945 | ± 0.209 | 5.8 | 0.880 | ± 0.190 | 0.0857 | ± 0.0610 | 1.010 | ± 0.205 | 1.976 | 22 | 52 |

**Notes:**

COC = Concentration of concern
NA = Not applicable
bgs = below ground surface
pCi/g = PicoCuries per gram
U = Result is less than the sample detection limit.
J- = Isotope is present at an estimated concentration and may be biased low.
**XXX** Result is greater than the site-specific concentration of concern

**Table 3**
**Groundwater Sample Analytical Results**
**Former Carnotite Reduction Site**
**Chicago, Illinois**

| Analyte | Groundwater Remediation Objective | | CRC-MW-1-011519 |
|---|---|---|---|
| | Class I | Class II | 1/15/2019 |
| **VOCs (mg/L)** | | | |
| Acetone | 6.3 | 6.3 | 0.0087 J |
| Benzene | 0.005 | 0.025 | 0.001 U |
| Bromodichloromethane | 0.0002 | 0.0002 | 0.001 U |
| Bromoform | 0.001 | 0.001 | 0.001 U |
| Bromomethane | 0.0098 | 0.049 | 0.002 U |
| 2-Butanone | NA | NA | 0.006 U |
| Carbon disulfide | 0.7 | 3.5 | 0.002 U |
| Carbon tetrachloride | 0.005 | 0.025 | 0.001 U |
| Chlorobenzene | 0.1 | 0.5 | 0.001 U |
| Chloroethane | NA | NA | 0.002 U |
| Chloroform | 0.0002 | 0.001 | 0.001 U |
| Chloromethane | NA | NA | 0.002 U |
| Dibromochloromethane | 0.14 | 0.14 | 0.001 U |
| 1,1-Dichloroethane | 0.7 | 3.5 | 0.001 U |
| 1,2-Dichloroethane | 0.005 | 0.025 | 0.001 U |
| 1,1-Dichloroethene | 0.007 | 0.035 | 0.001 U |
| cis-1,2-Dichloroethene | 0.07 | 0.2 | 0.001 U |
| trans-1,2-Dichloroethene | 0.1 | 0.5 | 0.001 U |
| 1,2-Dichloropropane | 0.005 | 0.025 | 0.001 U |
| cis-1,3-Dichloropropene | 0.001 | 0.005 | 0.001 U |
| trans-1,3-Dichloropropene | 0.001 | 0.005 | 0.003 U |
| Ethylbenzene | 0.7 | 1.0 | 0.001 U |
| 2-Hexanone | NA | NA | 0.005 U |
| 4-Methyl-2-pentanone | NA | NA | 0.005 U |
| Methylene chloride | 0.005 | 0.05 | 0.0004 J |
| Methyl tert-butyl ether | 0.07 | 0.07 | 0.0005 U |
| Styrene | 0.1 | 0.5 | 0.001 U |
| 1,1,2,2-Tetrachloroethane | NA | NA | 0.001 U |
| Tetrachloroethene | 0.005 | 0.025 | 0.001 U |
| Toluene | 1.0 | 2.5 | 0.001 U |
| 1,1,1-Trichloroethane | 0.2 | 1.0 | 0.001 U |
| 1,1,2-Trichloroethane | 0.005 | 0.05 | 0.001 U |
| Trichloroethene | 0.005 | 0.025 | 0.001 U |
| Vinyl chloride | 0.002 | 0.01 | 0.001 U |
| Xylenes, Total | 10.0 | 10.0 | 0.002 U |

**Table 3**
**Groundwater Sample Analytical Results**
**Former Carnotite Reduction Site**
**Chicago, Illinois**

| Analyte | Groundwater Remediation Objective | | CRC-MW-1-011519 |
|---|---|---|---|
| | Class I | Class II | 1/15/2019 |
| **PAHs (mg/L)** | | | |
| Acenaphthene | 0.42 | 2.1 | 0.0041 U |
| Acenaphthylene | NA | NA | 0.0041 U |
| Anthracene | 2.1 | 10.5 | 0.0041 U |
| Benz(a)anthracene | 0.00013 | 0.00065 | 0.0041 U |
| Benzo(a)pyrene | 0.0002 | 0.002 | 0.0041 U |
| Benzo(b)fluoranthene | 0.00018 | 0.0009 | 0.0041 U |
| Benzo(g,h,i)perylene | NA | NA | 0.0041 U |
| Benzo(k)fluoranthene | 0.00017 | 0.00085 | 0.0041 U |
| Chrysene | 0.0015 | 0.0075 | 0.0041 U |
| Dibenz(a,h)anthracene | 0.0003 | 0.0015 | 0.0041 U |
| Fluoranthene | 0.28 | 1.4 | 0.0041 U |
| Fluorene | 0.28 | 1.4 | 0.0041 U |
| Indeno(1,2,3-cd)pyrene | 0.00043 | 0.00215 | 0.0041 U |
| Naphthalene | 0.14 | 0.22 | 0.0041 U |
| Phenanthrene | NA | NA | 0.0041 U |
| Pyrene | 0.21 | 1.05 | 0.01 U |
| **SVOCs (mg/L)** | | | |
| Aniline | NA | NA | 0.01 U |
| Benzidine | NA | NA | 0.1 U |
| Benzoic acid | 28 | 28 | 0.026 U |
| Benzyl alcohol | NA | NA | 0.01 U |
| Bis(2-chloroethoxy)methane | NA | NA | 0.01 U |
| Bis(2-chloroethyl)ether | 0.01 | 0.01 | 0.01 U |
| Bis(2-ethylhexyl)phthalate | 0.006 | 0.06 | 0.0052 J |
| 4-Bromophenyl phenyl ether | NA | NA | 0.01 U |
| Butyl benzyl phthalate | 1.4 | 7.0 | 0.0052 U |
| Carbazole | NA | NA | 0.0041 U |
| 4-Chloroaniline | 0.028 | 0.028 | 0.01 U |
| 2,4-Dinitrotoluene | 0.00002 | 0.00002 | 0.01 U |
| 4-Chloro-3-methylphenol | NA | NA | 0.01 U |
| 2,6-Dinitrotoluene | 0.00031 | 0.00031 | 0.01 U |
| 2-Chloronaphthalene | NA | NA | 0.0041 U |
| 2-Chlorophenol | 0.035 | 0.035* | 0.01 U |
| N-Nitrosodi-n-propylamine | 0.0018 | 0.0018 | 0.01 U |
| 4-Chlorophenyl phenyl ether | NA | NA | 0.01 U |
| Nitrobenzene | 0.0035 | 0.0035 | 0.01 U |
| Pentachlorophenol | 0.001 | 0.005 | 0.052 U |
| Dibenzofuran | NA | NA | 0.0041 U |
| 1,2-Dichlorobenzene | 0.6 | 1.5 | 0.001 U |
| 1,3-Dichlorobenzene | NA | NA | 0.001 U |
| 1,4-Dichlorobenzene | 0.075 | 0.375 | 0.001 U |
| 3,3´-Dichlorobenzidine | 0.02 | 0.1 | 0.052 U |
| 2,4-Dichlorophenol | 0.021 | 0.021 | 0.01 U |

**Table 3**
**Groundwater Sample Analytical Results**
**Former Carnotite Reduction Site**
**Chicago, Illinois**

| Analyte | Groundwater Remediation Objective | | CRC-MW-1-011519 |
|---|---|---|---|
| | Class I | Class II | 1/15/2019 |
| Diethyl phthalate | 5.6 | 5.6 | 0.0041 U |
| 2,4-Dimethylphenol | 0.14 | 0.14 | 0.01 U |
| Dimethyl phthalate | NA | NA | 0.0041 U |
| 4,6-Dinitro-2-methylphenol | NA | NA | 0.052 U |
| 2,4-Dinitrophenol | 0.014 | 0.014 | 0.031 U |
| Di-n-butyl phthalate | 0.7 | 3.5 | 0.0041 U |
| Di-n-octyl phthalate | 0.14 | 0.7 | 0.0052 U |
| Hexachlorobenzene | 0.00006 | 0.0003 | 0.01 U |
| Hexachlorobutadiene | NA | NA | 0.031 U |
| Hexachlorocyclopentadiene | 0.05 | 0.5 | 0.052 U |
| Hexachloroethane | 0.007 | 0.035 | 0.031 U |
| Isophorone | 1.4 | 1.4 | 0.01 U |
| 2-Methylnaphthalene | NA | NA | 0.0041 U |
| 2-Methylphenol | 0.35 | 0.35 | 0.01 U |
| 4-Methylphenol | NA | NA | 0.01 U |
| 2-Nitroaniline | NA | NA | 0.01 U |
| 3-Nitroaniline | NA | NA | 0.01 U |
| 4-Nitroaniline | NA | NA | 0.01 U |
| 2-Nitrophenol | NA | NA | 0.01 U |
| 4-Nitrophenol | NA | NA | 0.01 U |
| N-Nitrosodimethylamine | NA | NA | 0.01 U |
| N-Nitrosodiphenylamine | 0.0032 | 0.016 | 0.01 U |
| 2, 2'-oxybis(1-Chloropropane) | NA | NA | 0.01 U |
| Phenol | 0.1 | 0.1 | 0.01 U |
| Pyridine | NA | NA | 0.021 U |
| 1,2,4-Trichlorobenzene | 0.07 | 0.7 | 0.001 U |
| 2,4,5-Trichlorophenol | 0.7 | 0.7* | 0.01 U |
| 2,4,6-Trichlorophenol | 0.01 | 0.01* | 0.01 U |
| **Pesticides (mg/L)** | | | |
| 4,4´-DDD | 0.014 | 0.07 | 0.000052 U |
| 4,4´-DDE | 0.01 | 0.05 | 0.000052 U |
| 4,4´-DDT | 0.006 | 0.03 | 0.000052 U |
| Aldrin | 0.014 | 0.07 | 0.000052 U |
| alpha-BHC | 0.00011 | 0.00055 | 0.000052 U |
| alpha-Chlordane | NA | NA | 0.000052 U |
| beta-BHC | NA | NA | 0.000052 U |
| Chlordane | 0.002 | 0.01 | 0.000052 U |
| delta-BHC | NA | NA | 0.000052 U |
| Dieldrin | 0.009 | 0.045 | 0.000052 U |
| Endosulfan I | 0.042 | 0.21 | 0.000052 U |
| Endosulfan II | 0.042 | 0.21 | 0.000052 U |
| Endosulfan sulfate | NA | NA | 0.000052 U |
| Endrin | 0.002 | 0.01 | 0.000052 U |
| Endrin aldehyde | NA | NA | 0.000052 U |

**Table 3**
**Groundwater Sample Analytical Results**
**Former Carnotite Reduction Site**
**Chicago, Illinois**

| Analyte | Groundwater Remediation Objective | | CRC-MW-1-011519 |
|---|---|---|---|
| | Class I | Class II | 1/15/2019 |
| Endrin ketone | NA | NA | 0.000052 U |
| gamma-BHC | 0.0002 | 0.001 | 0.000052 U |
| gamma-Chlordane | NA | NA | 0.000052 U |
| Heptachlor | 0.0004 | 0.002 | 0.000052 U |
| Heptachlor epoxide | 0.0002 | 0.001 | 0.000052 U |
| Methoxychlor | 0.04 | 0.2 | 0.0001 U |
| Toxaphene | 0.003 | 0.015 | 0.0021 U |
| **PCBs (mg/L)** | | | |
| Aroclor 1016 | 0.0005 | 0.0025 | 0.001 U |
| Aroclor 1221 | 0.0005 | 0.0025 | 0.001 U |
| Aroclor 1232 | 0.0005 | 0.0025 | 0.001 U |
| Aroclor 1242 | 0.0005 | 0.0025 | 0.001 U |
| Aroclor 1248 | 0.0005 | 0.0025 | 0.001 U |
| Aroclor 1254 | 0.0005 | 0.0025 | 0.001 U |
| Aroclor 1260 | 0.0005 | 0.0025 | 0.001 U |
| **Dioxins and Furans (pg/L)** | | | |
| 2,3,7,8-TCDD | 0.05 | 0.25 | 10 U |

**Notes:**

mg/L = milligrams per liter
NA = Not applicable
pCi/g = PicoCuries per gram
U = Result is less than the sample detection limit.
J = Result is less than the reporting limit but greater than or equal to the sample detection limit and the concentration is an approximate value.
* = Laboratory Control Sample (LCS) or Laboratory Control Sample Duplicate (LSCD) is outside acceptance limits.

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# APPENDIX C
# SOIL BORING LOGS

Tetra Tech

# BORING NUMBER CRC-SB-01



**CLIENT** City of Chicago, Department of Fleet and Facility Management
**PROJECT NAME** Former Carnotite Reduction Company Site
**PROJECT NUMBER** 103S328401004.009d
**PROJECT LOCATION** Chicago, IL
**DATE STARTED** 1/15/19 **COMPLETED** 1/15/19
**SURFACE ELEVATION**
**DRILLING CONTRACTOR** Earth Solutions
**GROUND WATER LEVELS:**
**DRILLING METHOD** Direct-Push
▽ **AT TIME OF DRILLING** 11.00 ft
**LOGGED BY**
**AT END OF DRILLING** ---
**AFTER DRILLING** ---

| DEPTH (ft) | SAMPLE TYPE NUMBER | RECOVERY % | U.S.C.S. | GRAPHIC LOG | MATERIAL DESCRIPTION |
|---|---|---|---|---|---|
| 0 | | | | | Blind Drill |
| 11.0 ▽ | UD | 88 | SP | | Wet light brown fine-grained SAND, trace silt and clay, medium dense |
| 15 | UD | 100 | | | |
| 19.0 | | | | | Bottom of borehole at 19.0 feet. |

GENERAL BH / TP / WELL - GINT STD US.GDT - 1/16/19 08:19 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\SCHOOL STREET UST.GPJ

Tetra Tech

# BORING NUMBER CRC-SB-02



**CLIENT** City of Chicago, Department of Fleet and Facility Management
**PROJECT NAME** Former Carnotite Reduction Company Site
**PROJECT NUMBER** 103S328401004.009d
**PROJECT LOCATION** Chicago, IL
**DATE STARTED** 1/15/19 **COMPLETED** 1/15/19
**SURFACE ELEVATION**
**DRILLING CONTRACTOR** Earth Solutions
**GROUND WATER LEVELS:**
**DRILLING METHOD** Direct-Push
▽ **AT TIME OF DRILLING** 10.00 ft
**LOGGED BY**
**AT END OF DRILLING** ---
**AFTER DRILLING** ---

| DEPTH (ft) | SAMPLE TYPE NUMBER | RECOVERY % | U.S.C.S. | GRAPHIC LOG | MATERIAL DESCRIPTION |
|---|---|---|---|---|---|
| 0 | | | | | |
| | | | | | Moist brown sand, gravel, silt, and clay, loose to medium dense (FILL) |
| | | | | | 2.0 |
| | UD | 30 | | | No Recovery |
| 5 | | | | | 5.0 |
| | | | SC-SM | | Moist light brown CLAYEY SAND, medium dense |
| | | | | | 5.5 |
| | | | SP | | Moist light brown fine-grained SAND, trace silt and clay, medium dense |
| | UD | 60 | | | 8.0 |
| | | | | | No Recovery |
| 10 | | | | | 10.0 ▽ |
| | | | | | Wet light brown fine-grained SAND, trace silt and clay, medium dense |
| | UD | 90 | SP | | |
| 15 | | | | | |
| | UD | 100 | | | 16.0 |

Bottom of borehole at 16.0 feet.

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# BORING NUMBER CRC-SB-03



**CLIENT** City of Chicago, Department of Fleet and Facility Management
**PROJECT NAME** Former Carnotite Reduction Company Site
**PROJECT NUMBER** 103S328401004.009d
**PROJECT LOCATION** Chicago, IL
**DATE STARTED** 1/15/19 **COMPLETED** 1/15/19
**SURFACE ELEVATION**
**DRILLING CONTRACTOR** Earth Solutions
**GROUND WATER LEVELS:**
**DRILLING METHOD** Direct-Push
▽ **AT TIME OF DRILLING** 10.00 ft
**LOGGED BY**
**AT END OF DRILLING** ---
**AFTER DRILLING** ---

| DEPTH (ft) | SAMPLE TYPE NUMBER | RECOVERY % | U.S.C.S. | GRAPHIC LOG | MATERIAL DESCRIPTION |
|---|---|---|---|---|---|
| 0 | UD | 63 | | | Dry to moist brown and black sand, gravel, and clay, some brick fragements, loose (FILL) |
| | | | | | 4.0 |
| 5 | | | SP | | Moist dark brown fine-grained SAND, medium dense |
| | | | | | 6.0 |
| | UD | 97 | | | Moist to wet (10 feet bgs) light brown fine-grained SAND, medium dense |
| 10 | | | | | ▽ |
| | UD | 87 | SP | | |
| 15 | | | | | |
| | UD | 100 | | | |
| | | | | | 18.0 |
| | | | | | Bottom of borehole at 18.0 feet. |

GENERAL BH / TP / WELL - GINT STD US.GDT - 1/16/19 08:19 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\SCHOOL STREET UST.GPJ

Tetra Tech

# BORING NUMBER CRC-SB-04



**CLIENT** City of Chicago, Department of Fleet and Facility Management
**PROJECT NAME** Former Carnotite Reduction Company Site
**PROJECT NUMBER** 103S328401004.009d
**PROJECT LOCATION** Chicago, IL
**DATE STARTED** 1/15/19 **COMPLETED** 1/15/19
**SURFACE ELEVATION**
**DRILLING CONTRACTOR** Earth Solutions
**GROUND WATER LEVELS:**
**DRILLING METHOD** Direct-Push
**AT TIME OF DRILLING** ---
**LOGGED BY**
**AT END OF DRILLING** ---
**AFTER DRILLING** ---

| DEPTH (ft) | SAMPLE TYPE NUMBER | RECOVERY % | U.S.C.S. | GRAPHIC LOG | MATERIAL DESCRIPTION |
|---|---|---|---|---|---|
| 0.0 | | | | | Dry to moist black asphalt, gravel, sand, and clay (FILL) |
| 2.5 | UD | 60 | | | |
| 4.0 | | | | | Moist light brown fine-grained SAND, loose |
| 5.0 | | | SP | | |
| 7.5 | UD | 80 | | | |
| 10.0 | | | | | Bottom of borehole at 10.0 feet. |

GENERAL BH / TP / WELL - GINT STD US.GDT - 1/16/19 08:19 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\SCHOOL STREET UST.GPJ

TETRA TECH

# APPENDIX D
# SAHCI DATA PACKAGE

**Carnotite Geoprobe Boring Log**

Date: 1/15/2019
Name: Glenn Huber
Instrument ID: Ludlum 2221 (#134542) w/ 44-10 (6" Shield)
7.1 pCi/g TH: 6,262 cpm

| **CRC-SB-01** | CPM |
|---|---|
| 11-15' | 1,500 |
| 15-19' | 1,400 |
| | |
| | |
| | |

| **CRC-SB-02** | CPM |
|---|---|
| 0-2' | 10,400 |
| 5-8' | 1,800 |
| 10-15' | 1,700 |
| 15-16' | N/A |
| | |

| **CRC-SB-03** | CPM |
|---|---|
| 0-5' | 3,300 |
| 5-10' | 1,800 |
| 10-15' | 1,600 |
| 15-18' | 1,800 |
| | |

| **CRC-SB-04** | CPM |
|---|---|
| 0-5' | 2,100 |
| 5-10' | 1,700 |
| | |
| | |
| | |

TETRA TECH

# APPENDIX E
# LABORATORY DATA PACKAGES

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

Job Number: 160-32649-1

Job Description: Former Carnotite Site - MW-1 Sampling

For:
Tetra Tech, Inc.
1 South Wacker Dr.
Suite 3700
Chicago, IL 60606

Attention: Ms. Kristine Schnoes



Approved for release.
Chenise Y Lambert-Sykes
Project Manager I
2/7/2019 4:25 PM

Chenise Y Lambert-Sykes, Project Manager I
13715 Rider Trail North, Earth City, MO, 63045
(314)298-8566
chenise.lambert-sykes@testamericainc.com
02/07/2019

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. Pursuant to NELAP, this report shall not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager.

Louisiana Lab Certification ID (Non-Potable, Solid/Haz. Material): 106151
Florida Lab Certification ID (Drinking Water): E87689.

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## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| U | Indicates the analyte was analyzed for but not detected. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| * | LCS or LCSD is outside acceptance limits. |
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| E | Result exceeded calibration range. |

### GC/MS VOA TICs

| Qualifier | Qualifier Description |
|---|---|
| J | Indicates an Estimated Value for TICs |
| T | Result is a tentatively identified compound (TIC) and an estimated value. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### GC/MS Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| U | Indicates the analyte was analyzed for but not detected. |
| * | LCS or LCSD is outside acceptance limits. |
| * | RPD of the LCS and LCSD exceeds the control limits |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### GC/MS Semi VOA TICs

| Qualifier | Qualifier Description |
|---|---|
| J | Indicates an Estimated Value for TICs |
| T | Result is a tentatively identified compound (TIC) and an estimated value. |

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| U | Indicates the analyte was analyzed for but not detected. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### Dioxin

| Qualifier | Qualifier Description |
|---|---|
| U | Indicates the analyte was analyzed for but not detected. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |

## Glossary (Continued)

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# CASE NARRATIVE

## Client: Tetra Tech, Inc.

## Project: Former Carnotite Site - MW-1 Sampling

## Report Number: 160-32649-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica St. Louis attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Manual Integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure. Detailed information can be found in the raw data section of the level IV report.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

**RECEIPT**

The samples were received on 01/16/2019; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.2º C and 3.6º C.

**VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Sample CRC-MW-1-011519 (160-32649-1) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 01/28/2019.

Analytical Batch: 280-445753

The laboratory control sample (LCS) for analytical batch 280-445753 recovered outside control limits for the following analytes: Chloroethane (140 %R, limit 46-136 %R) and Dichlorodifluoromethane (146 %R, limit 43-142 %R). This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The following samples are impacted CRC-MW-1-011519 (160-32649-1) and (LCS 280-445753/4).

Methylene Chloride failed the recovery criteria low for the MSD of sample 280-119359-1 in batch 280-445753. The presence of the "4 qualifier denotes that the analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. Refer to the QC report for details.

Batch QC was performed on a non-client sample, an LCS/LCSD was also performed..

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**SEMIVOLATILE ORGANIC COMPOUNDS (GC MS)**
Sample CRC-MW-1-011519 (160-32649-1) was analyzed for semivolatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 01/21/2019 and analyzed on 01/22/2019.

Analytical Batch: 280-444835
The laboratory control sample (LCSD) for preparation batch 280-444835 and analytical batch 280-445019 recovered outside control limits for the following analytes: Pyridine, Aniline, and 4-Chloroaniline. The samples have exceeded holding time. The LCS was within limits for all compounds.

Pyridine= 0% limits of 10-69%
Aniline= 3% limits of 29-87%
4-Chloroaniline= 40% limits of 41-93%

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 280-444835 and analytical batch 280-445019 recovered outside control limits for the following analytes: Phenol, Pyridine, Benzidine, Aniline, 4-Nitrophenol, Benzoic acid and 4-Chloroaniline.

**Organic Prep**
Methods 3510C:
The matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-444835 was not performed; however, an LCS duplicate was performed to provide evidence of batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**SEMIVOLATILE ORGANIC COMPOUNDS (GC)**
Sample CRC-MW-1-011519 (160-32649-1) was analyzed for semivolatile organic compounds (GC) in accordance with EPA SW-846 Method 8081B. The samples were prepared on 01/18/2019 and analyzed on 01/23/2019.

Analytical Batch: 280-444894
The continuing calibration verification (CCV) for associated with analytical batch 280-444894 recovered below the lower control limit on the front column for Dieldrin & 4,4-DDD. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the back column which is in control.

CCVIS:
Dieldrin: front: -27%D, back: in control
4,4-DDD: front: -21%D, back: in control

CCV
Dieldrin: front: -20%D, back: in control
4,4-DDD: front: in control, back: in control

The continuing calibration verification (CCV) for associated with analytical batch 280-444894 recovered below the lower control limit on the back column for Endosulfan I. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the front column which is in control.

CCVIS
Endosulfan I: Front: in control, Back: -21%D

The Tetrachloro-m-xylene surrogate recovery for the following samples was outside acceptance limits (low biased) on the confirmation column: CRC-MW-1-011519 (160-32649-1), (CCV 280-444894/47) and (CCVIS 280-444894/13). The recovery is within acceptance limits on the other column, indicating that the extraction process was in control. DCB Decachlorobiphenyl is in control on both columns for the CCVIS and CCV.

CCVIS
Tetrachloro-m-xylene, Front: in control, Back: -22%D

CCV
Tetrachloro-m-xylene, Front: in control, Back: -20%D

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**POLYCHLORINATED BIPHENYLS (PCBS)**
Sample CRC-MW-1-011519 (160-32649-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 01/21/2019 and analyzed on 02/05/2019.

**Organic Prep**
Methods 3510C:
The matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-444887 was not performed; however, an LCS duplicate was performed to provide evidence of batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**DIOXINS AND FURANS (HRGC/HRMS)**

Sample CRC-MW-1-011519 (160-32649-1) was analyzed for Dioxins and Furans (HRGC/HRMS) in accordance with 1613B. The samples were prepared on 01/22/2019 and analyzed on 01/29/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: Tetra Tech, Inc.
Project/Site: Former Carnotite Site - MW-1 Sampling

TestAmerica Job ID: 160-32649-1

## Client Sample ID: CRC-MW-1-011519

## Lab Sample ID: 160-32649-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 8.7 | J | 10 | 1.9 | ug/L | 1 | | 8260B | Total/NA |
| Methylene Chloride | 0.40 | J | 2.0 | 0.32 | ug/L | 1 | | 8260B | Total/NA |
| Bis(2-ethylhexyl) phthalate | 5.2 | J | 10 | 1.2 | ug/L | 1 | | 8270D | Total/NA |

This Detection Summary does not include radiochemical test results.

**Client Sample ID: CRC-MW-1-011519** **Lab Sample ID: 160-32649-1**
**Date Collected: 01/15/19 12:30** **Matrix: Water**
**Date Received: 01/16/19 09:10**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.21 | U | 1.0 | 0.21 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,1,2-Trichloroethane | 0.27 | U | 1.0 | 0.27 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,1,2-Trichlorotrifluoroethane | 0.42 | U | 3.0 | 0.42 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,1-Dichloroethane | 0.22 | U | 1.0 | 0.22 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,1-Dichloroethene | 0.23 | U | 1.0 | 0.23 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,2,3-Trichlorobenzene | 0.21 | U | 1.0 | 0.21 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,2,4-Trichlorobenzene | 0.21 | U | 1.0 | 0.21 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.47 | U | 5.0 | 0.47 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,2-Dibromoethane | 0.18 | U | 1.0 | 0.18 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,2-Dichlorobenzene | 0.15 | U | 1.0 | 0.15 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,2-Dichloroethane | 0.13 | U | 1.0 | 0.13 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,2-Dichloropropane | 0.18 | U | 1.0 | 0.18 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,3,5-Trimethylbenzene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,3-Dichlorobenzene | 0.13 | U | 1.0 | 0.13 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,4-Dichlorobenzene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 23:21 | 1 |
| 1,4-Dioxane | 57 | U | 200 | 57 | ug/L | | | 01/28/19 23:21 | 1 |
| 2-Butanone (MEK) | 2.0 | U | 6.0 | 2.0 | ug/L | | | 01/28/19 23:21 | 1 |
| 2-Chloroethyl vinyl ether | 0.69 | U | 3.0 | 0.69 | ug/L | | | 01/28/19 23:21 | 1 |
| 2-Hexanone | 1.7 | U | 5.0 | 1.7 | ug/L | | | 01/28/19 23:21 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 0.98 | U | 5.0 | 0.98 | ug/L | | | 01/28/19 23:21 | 1 |
| **Acetone** | **8.7** | **J** | 10 | 1.9 | ug/L | | | 01/28/19 23:21 | 1 |
| Acetonitrile | 9.6 | U | 30 | 9.6 | ug/L | | | 01/28/19 23:21 | 1 |
| Acrolein | 2.8 | U | 20 | 2.8 | ug/L | | | 01/28/19 23:21 | 1 |
| Acrylonitrile | 1.4 | U | 20 | 1.4 | ug/L | | | 01/28/19 23:21 | 1 |
| Benzene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 23:21 | 1 |
| Bromoform | 0.19 | U | 1.0 | 0.19 | ug/L | | | 01/28/19 23:21 | 1 |
| Bromomethane | 0.21 | U | 2.0 | 0.21 | ug/L | | | 01/28/19 23:21 | 1 |
| Carbon disulfide | 0.45 | U | 2.0 | 0.45 | ug/L | | | 01/28/19 23:21 | 1 |
| Carbon tetrachloride | 0.19 | U | 1.0 | 0.19 | ug/L | | | 01/28/19 23:21 | 1 |
| Chlorobenzene | 0.17 | U | 1.0 | 0.17 | ug/L | | | 01/28/19 23:21 | 1 |
| Chlorobromomethane | 0.10 | U | 1.0 | 0.10 | ug/L | | | 01/28/19 23:21 | 1 |
| Chlorodibromomethane | 0.17 | U | 1.0 | 0.17 | ug/L | | | 01/28/19 23:21 | 1 |
| Chloroethane | 0.41 | U * | 2.0 | 0.41 | ug/L | | | 01/28/19 23:21 | 1 |
| Chloroform | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 23:21 | 1 |
| Chloromethane | 0.30 | U | 2.0 | 0.30 | ug/L | | | 01/28/19 23:21 | 1 |
| cis-1,2-Dichloroethene | 0.15 | U | 1.0 | 0.15 | ug/L | | | 01/28/19 23:21 | 1 |
| cis-1,3-Dichloropropene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 23:21 | 1 |
| Cyclohexane | 0.28 | U | 2.0 | 0.28 | ug/L | | | 01/28/19 23:21 | 1 |
| Dichlorobromomethane | 0.17 | U | 1.0 | 0.17 | ug/L | | | 01/28/19 23:21 | 1 |
| Dichlorodifluoromethane | 0.31 | U * | 2.0 | 0.31 | ug/L | | | 01/28/19 23:21 | 1 |
| Ethylbenzene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 23:21 | 1 |
| Isopropylbenzene | 0.19 | U | 1.0 | 0.19 | ug/L | | | 01/28/19 23:21 | 1 |
| Methyl acetate | 1.6 | U | 5.0 | 1.6 | ug/L | | | 01/28/19 23:21 | 1 |
| Methyl tert-butyl ether | 0.25 | U | 5.0 | 0.25 | ug/L | | | 01/28/19 23:21 | 1 |
| Methylcyclohexane | 0.36 | U | 1.0 | 0.36 | ug/L | | | 01/28/19 23:21 | 1 |
| **Methylene Chloride** | **0.40** | **J** | 2.0 | 0.32 | ug/L | | | 01/28/19 23:21 | 1 |
| m-Xylene & p-Xylene | 0.34 | U | 2.0 | 0.34 | ug/L | | | 01/28/19 23:21 | 1 |
| o-Xylene | 0.19 | U | 1.0 | 0.19 | ug/L | | | 01/28/19 23:21 | 1 |

**Client Sample ID: CRC-MW-1-011519** **Lab Sample ID: 160-32649-1**
**Date Collected: 01/15/19 12:30** **Matrix: Water**
**Date Received: 01/16/19 09:10**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Styrene | 0.17 | U | 1.0 | 0.17 | ug/L | | | 01/28/19 23:21 | 1 |
| Tetrachloroethene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 01/28/19 23:21 | 1 |
| Toluene | 0.17 | U | 1.0 | 0.17 | ug/L | | | 01/28/19 23:21 | 1 |
| trans-1,2-Dichloroethene | 0.15 | U | 1.0 | 0.15 | ug/L | | | 01/28/19 23:21 | 1 |
| trans-1,3-Dichloropropene | 0.19 | U | 3.0 | 0.19 | ug/L | | | 01/28/19 23:21 | 1 |
| Trichloroethene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 23:21 | 1 |
| Trichlorofluoromethane | 0.29 | U | 2.0 | 0.29 | ug/L | | | 01/28/19 23:21 | 1 |
| Vinyl chloride | 0.10 | U | 1.0 | 0.10 | ug/L | | | 01/28/19 23:21 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Unknown* | *1.7* | *T J* | *ug/L* | | *6.53* | | | *01/28/19 23:21* | *1* |
| *Unknown* | *1.5* | *T J* | *ug/L* | | *10.54* | | | *01/28/19 23:21* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *110* | | *70 - 127* | | *01/28/19 23:21* | *1* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *78 - 120* | | *01/28/19 23:21* | *1* |
| *Dibromofluoromethane (Surr)* | *107* | | *77 - 120* | | *01/28/19 23:21* | *1* |
| *Toluene-d8 (Surr)* | *106* | | *80 - 125* | | *01/28/19 23:21* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1'-Biphenyl | 0.42 | U | 10 | 0.42 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 1,2,4,5-Tetrachlorobenzene | 2.1 | U | 10 | 2.1 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 1,2,4-Trichlorobenzene | 2.1 | U | 5.2 | 2.1 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 1,2-Dichlorobenzene | 2.1 | U | 5.2 | 2.1 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 1,2-Diphenylhydrazine(as Azobenzene) | 0.56 | U | 10 | 0.56 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 1,3-Dichlorobenzene | 2.1 | U | 10 | 2.1 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 1,3-Dinitrobenzene | 1.0 | U | 10 | 1.0 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 1,4-Dichlorobenzene | 2.1 | U | 5.2 | 2.1 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 1,4-Dioxane | 0.73 | U | 21 | 0.73 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 1-Methylnaphthalene | 0.36 | U | 4.1 | 0.36 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2,3,4,6-Tetrachlorophenol | 0.99 | U | 52 | 0.99 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2,4,5-Trichlorophenol | 0.54 | U | 10 | 0.54 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2,4,6-Trichlorophenol | 0.76 | U | 10 | 0.76 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2,4-Dichlorophenol | 0.70 | U | 10 | 0.70 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2,4-Dimethylphenol | 0.69 | U | 10 | 0.69 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2,4-Dinitrophenol | 7.7 | U | 31 | 7.7 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2,4-Dinitrotoluene | 0.96 | U | 10 | 0.96 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2,6-Dichlorophenol | 0.77 | U | 10 | 0.77 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2,6-Dinitrotoluene | 0.74 | U | 10 | 0.74 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2-Chloronaphthalene | 0.48 | U | 4.1 | 0.48 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2-Chlorophenol | 0.44 | U | 10 | 0.44 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2-Methylnaphthalene | 0.42 | U | 4.1 | 0.42 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2-Methylphenol | 0.58 | U | 10 | 0.58 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2-Nitroaniline | 0.93 | U | 10 | 0.93 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 2-Nitrophenol | 0.64 | U | 10 | 0.64 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 3 & 4 Methylphenol | 0.41 | U | 10 | 0.41 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 3,3'-Dichlorobenzidine | 0.86 | U | 52 | 0.86 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 3-Methylphenol | 0.41 | U | 10 | 0.41 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |

**Client Sample ID: CRC-MW-1-011519** **Lab Sample ID: 160-32649-1**
**Date Collected: 01/15/19 12:30** **Matrix: Water**
**Date Received: 01/16/19 09:10**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 3-Nitroaniline | 0.81 | U | 10 | 0.81 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 4,6-Dinitro-2-methylphenol | 6.1 | U | 52 | 6.1 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 4-Bromophenyl phenyl ether | 0.42 | U | 10 | 0.42 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 4-Chloro-3-methylphenol | 0.46 | U | 10 | 0.46 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 4-Chloroaniline | 0.58 | U * | 10 | 0.58 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 4-Chlorophenyl phenyl ether | 0.65 | U | 10 | 0.65 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 4-Methylphenol | 0.41 | U | 10 | 0.41 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 4-Nitroaniline | 0.87 | U | 10 | 0.87 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| 4-Nitrophenol | 1.0 | U * | 10 | 1.0 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Acenaphthene | 0.46 | U | 4.1 | 0.46 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Acenaphthylene | 0.52 | U | 4.1 | 0.52 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Acetophenone | 0.54 | U | 10 | 0.54 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Aniline | 0.91 | U * | 10 | 0.91 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Anthracene | 0.46 | U | 4.1 | 0.46 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Azobenzene | 0.56 | U | 4.1 | 0.56 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Benzaldehyde | 0.55 | U | 10 | 0.55 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Benzidine | 4.5 | U * | 100 | 4.5 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Benzo[a]anthracene | 0.60 | U | 4.1 | 0.60 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Benzo[a]pyrene | 0.66 | U | 4.1 | 0.66 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Benzo[b]fluoranthene | 0.55 | U | 4.1 | 0.55 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Benzo[g,h,i]perylene | 0.82 | U | 4.1 | 0.82 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Benzo[k]fluoranthene | 0.58 | U | 4.1 | 0.58 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Benzoic acid | 5.8 | U * | 26 | 5.8 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Benzyl alcohol | 0.36 | U | 10 | 0.36 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| bis (2-chloroisopropyl) ether | 0.43 | U | 10 | 0.43 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Bis(2-chloroethoxy)methane | 0.63 | U | 10 | 0.63 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Bis(2-chloroethyl)ether | 0.51 | U | 10 | 0.51 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| **Bis(2-ethylhexyl) phthalate** | **5.2** | **J** | 10 | 1.2 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Butyl benzyl phthalate | 2.1 | U | 5.2 | 2.1 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Caprolactam | 1.2 | U | 10 | 1.2 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Carbazole | 0.46 | U | 4.1 | 0.46 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Chrysene | 0.54 | U | 4.1 | 0.54 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Dibenz(a,h)anthracene | 0.67 | U | 4.1 | 0.67 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Dibenzofuran | 0.37 | U | 4.1 | 0.37 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Diethyl phthalate | 0.77 | U | 4.1 | 0.77 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Dimethyl phthalate | 0.55 | U | 4.1 | 0.55 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Di-n-butyl phthalate | 0.91 | U | 4.1 | 0.91 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Di-n-octyl phthalate | 1.6 | U | 5.2 | 1.6 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Diphenylamine | 0.51 | U | 10 | 0.51 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Famphur | 2.1 | U | 100 | 2.1 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Fluoranthene | 0.66 | U | 4.1 | 0.66 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Fluorene | 0.51 | U | 4.1 | 0.51 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Hexachlorobenzene | 0.99 | U | 10 | 0.99 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Hexachlorobutadiene | 7.8 | U | 31 | 7.8 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Hexachlorocyclopentadiene | 6.8 | U | 52 | 6.8 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Hexachloroethane | 7.9 | U | 31 | 7.9 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Hexadecane | 0.36 | U | 10 | 0.36 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Indeno[1,2,3-cd]pyrene | 1.7 | U | 4.1 | 1.7 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Isophorone | 0.69 | U | 10 | 0.69 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |

**Client Sample ID: CRC-MW-1-011519** **Lab Sample ID: 160-32649-1**
**Date Collected: 01/15/19 12:30** **Matrix: Water**
**Date Received: 01/16/19 09:10**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 0.41 | U | 4.1 | 0.41 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Nitrobenzene | 0.44 | U | 10 | 0.44 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| N-Nitrosodimethylamine | 0.64 | U | 10 | 0.64 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| N-Nitrosodi-n-propylamine | 0.58 | U | 10 | 0.58 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| N-Nitrosodiphenylamine | 0.63 | U | 10 | 0.63 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Pentachlorophenol | 5.7 | U | 52 | 5.7 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Phenanthrene | 0.29 | U | 4.1 | 0.29 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Phenol | 0.58 | U * | 10 | 0.58 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Pyrene | 0.44 | U | 10 | 0.44 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |
| Pyridine | 1.8 | U * | 21 | 1.8 | ug/L | | 01/21/19 06:56 | 01/22/19 22:36 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Unknown* | *4.6* | *T J* | *ug/L* | | *3.01* | | *01/21/19 06:56* | *01/22/19 22:36* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol (Surr)* | *77* | | *52 - 123* | *01/21/19 06:56* | *01/22/19 22:36* | *1* |
| *2-Fluorobiphenyl* | *65* | | *47 - 119* | *01/21/19 06:56* | *01/22/19 22:36* | *1* |
| *2-Fluorophenol (Surr)* | *49* | | *17 - 71* | *01/21/19 06:56* | *01/22/19 22:36* | *1* |
| *Nitrobenzene-d5 (Surr)* | *67* | | *45 - 113* | *01/21/19 06:56* | *01/22/19 22:36* | *1* |
| *Phenol-d5 (Surr)* | *34* | | *10 - 52* | *01/21/19 06:56* | *01/22/19 22:36* | *1* |
| *Terphenyl-d14 (Surr)* | *74* | | *50 - 123* | *01/21/19 06:56* | *01/22/19 22:36* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.0080 | U | 0.052 | 0.0080 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| 4,4'-DDE | 0.0078 | U | 0.052 | 0.0078 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| 4,4'-DDT | 0.015 | U | 0.052 | 0.015 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Aldrin | 0.0061 | U | 0.052 | 0.0061 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| alpha-BHC | 0.0055 | U | 0.052 | 0.0055 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| alpha-Chlordane | 0.0055 | U | 0.052 | 0.0055 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| beta-BHC | 0.0090 | U | 0.052 | 0.0090 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| delta-BHC | 0.0060 | U | 0.052 | 0.0060 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Dieldrin | 0.0065 | U | 0.052 | 0.0065 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Endosulfan I | 0.0060 | U | 0.052 | 0.0060 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Endosulfan II | 0.0072 | U | 0.052 | 0.0072 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Endosulfan sulfate | 0.0059 | U | 0.052 | 0.0059 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Endrin | 0.0082 | U | 0.052 | 0.0082 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Endrin aldehyde | 0.0091 | U | 0.052 | 0.0091 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Endrin ketone | 0.0072 | U | 0.052 | 0.0072 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| gamma-BHC (Lindane) | 0.0071 | U | 0.052 | 0.0071 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| gamma-Chlordane | 0.0094 | U | 0.052 | 0.0094 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Heptachlor | 0.0080 | U | 0.052 | 0.0080 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Heptachlor epoxide | 0.0078 | U | 0.052 | 0.0078 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Methoxychlor | 0.013 | U | 0.10 | 0.013 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |
| Toxaphene | 0.38 | U | 2.1 | 0.38 | ug/L | | 01/18/19 12:03 | 01/23/19 03:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *48* | | *34 - 122* | *01/18/19 12:03* | *01/23/19 03:22* | *1* |
| *Tetrachloro-m-xylene* | *78* | | *28 - 115* | *01/18/19 12:03* | *01/23/19 03:22* | *1* |

## Client Sample ID: CRC-MW-1-011519 — Lab Sample ID: 160-32649-1

**Date Collected: 01/15/19 12:30** — **Matrix: Water**
**Date Received: 01/16/19 09:10**

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | 0.22 | U | 1.0 | 0.22 | ug/L | | 01/21/19 11:30 | 02/05/19 16:14 | 1 |
| PCB-1016 | 0.13 | U | 1.0 | 0.13 | ug/L | | 01/21/19 11:30 | 02/05/19 16:14 | 1 |
| PCB-1232 | 0.17 | U | 1.0 | 0.17 | ug/L | | 01/21/19 11:30 | 02/05/19 16:14 | 1 |
| PCB-1242 | 0.11 | U | 1.0 | 0.11 | ug/L | | 01/21/19 11:30 | 02/05/19 16:14 | 1 |
| PCB-1248 | 0.093 | U | 1.0 | 0.093 | ug/L | | 01/21/19 11:30 | 02/05/19 16:14 | 1 |
| PCB-1254 | 0.12 | U | 1.0 | 0.12 | ug/L | | 01/21/19 11:30 | 02/05/19 16:14 | 1 |
| PCB-1260 | 0.16 | U | 1.0 | 0.16 | ug/L | | 01/21/19 11:30 | 02/05/19 16:14 | 1 |
| PCB-1262 | 0.086 | U | 1.0 | 0.086 | ug/L | | 01/21/19 11:30 | 02/05/19 16:14 | 1 |
| PCB-1268 | 0.37 | U | 1.0 | 0.37 | ug/L | | 01/21/19 11:30 | 02/05/19 16:14 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *87* | | *25 - 120* | *01/21/19 11:30* | *02/05/19 16:14* | *1* |
| *DCB Decachlorobiphenyl* | *41* | | *30 - 136* | *01/21/19 11:30* | *02/05/19 16:14* | *1* |

### Method: 1613B - Dioxins and Furans (HRGC/HRMS)

| Analyte | Result | Qualifier | RL | EDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 0.35 | U | 10 | 0.35 | pg/L | | 01/22/19 13:19 | 01/29/19 12:43 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C-2,3,7,8-TCDD* | *63* | | *25 - 164* | *01/22/19 13:19* | *01/29/19 12:43* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *37Cl4-2,3,7,8-TCDD* | *95* | | *35 - 197* | *01/22/19 13:19* | *01/29/19 12:43* | *1* |

# Default Detection Limits

Client: Tetra Tech, Inc. TestAmerica Job ID: 160-32649-1
Project/Site: Former Carnotite Site - MW-1 Sampling

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | RL | MDL | Units | Method |
|---|---|---|---|---|
| 1,1,1-Trichloroethane | 1.0 | 0.16 | ug/L | 8260B |
| 1,1,2,2-Tetrachloroethane | 1.0 | 0.21 | ug/L | 8260B |
| 1,1,2-Trichloroethane | 1.0 | 0.27 | ug/L | 8260B |
| 1,1,2-Trichlorotrifluoroethane | 3.0 | 0.42 | ug/L | 8260B |
| 1,1-Dichloroethane | 1.0 | 0.22 | ug/L | 8260B |
| 1,1-Dichloroethene | 1.0 | 0.23 | ug/L | 8260B |
| 1,2,3-Trichlorobenzene | 1.0 | 0.21 | ug/L | 8260B |
| 1,2,4-Trichlorobenzene | 1.0 | 0.21 | ug/L | 8260B |
| 1,2-Dibromo-3-Chloropropane | 5.0 | 0.47 | ug/L | 8260B |
| 1,2-Dibromoethane | 1.0 | 0.18 | ug/L | 8260B |
| 1,2-Dichlorobenzene | 1.0 | 0.15 | ug/L | 8260B |
| 1,2-Dichloroethane | 1.0 | 0.13 | ug/L | 8260B |
| 1,2-Dichloropropane | 1.0 | 0.18 | ug/L | 8260B |
| 1,3,5-Trimethylbenzene | 1.0 | 0.16 | ug/L | 8260B |
| 1,3-Dichlorobenzene | 1.0 | 0.13 | ug/L | 8260B |
| 1,4-Dichlorobenzene | 1.0 | 0.16 | ug/L | 8260B |
| 1,4-Dioxane | 200 | 57 | ug/L | 8260B |
| 2-Butanone (MEK) | 6.0 | 2.0 | ug/L | 8260B |
| 2-Chloroethyl vinyl ether | 3.0 | 0.69 | ug/L | 8260B |
| 2-Hexanone | 5.0 | 1.7 | ug/L | 8260B |
| 4-Methyl-2-pentanone (MIBK) | 5.0 | 0.98 | ug/L | 8260B |
| Acetone | 10 | 1.9 | ug/L | 8260B |
| Acetonitrile | 30 | 9.6 | ug/L | 8260B |
| Acrolein | 20 | 2.8 | ug/L | 8260B |
| Acrylonitrile | 20 | 1.4 | ug/L | 8260B |
| Benzene | 1.0 | 0.16 | ug/L | 8260B |
| Bromoform | 1.0 | 0.19 | ug/L | 8260B |
| Bromomethane | 2.0 | 0.21 | ug/L | 8260B |
| Carbon disulfide | 2.0 | 0.45 | ug/L | 8260B |
| Carbon tetrachloride | 1.0 | 0.19 | ug/L | 8260B |
| Chlorobenzene | 1.0 | 0.17 | ug/L | 8260B |
| Chlorobromomethane | 1.0 | 0.10 | ug/L | 8260B |
| Chlorodibromomethane | 1.0 | 0.17 | ug/L | 8260B |
| Chloroethane | 2.0 | 0.41 | ug/L | 8260B |
| Chloroform | 1.0 | 0.16 | ug/L | 8260B |
| Chloromethane | 2.0 | 0.30 | ug/L | 8260B |
| cis-1,2-Dichloroethene | 1.0 | 0.15 | ug/L | 8260B |
| cis-1,3-Dichloropropene | 1.0 | 0.16 | ug/L | 8260B |
| Cyclohexane | 2.0 | 0.28 | ug/L | 8260B |
| Dichlorobromomethane | 1.0 | 0.17 | ug/L | 8260B |
| Dichlorodifluoromethane | 2.0 | 0.31 | ug/L | 8260B |
| Ethylbenzene | 1.0 | 0.16 | ug/L | 8260B |
| Isopropylbenzene | 1.0 | 0.19 | ug/L | 8260B |
| Methyl acetate | 5.0 | 1.6 | ug/L | 8260B |
| Methyl tert-butyl ether | 5.0 | 0.25 | ug/L | 8260B |
| Methylcyclohexane | 1.0 | 0.36 | ug/L | 8260B |
| Methylene Chloride | 2.0 | 0.32 | ug/L | 8260B |
| m-Xylene & p-Xylene | 2.0 | 0.34 | ug/L | 8260B |
| o-Xylene | 1.0 | 0.19 | ug/L | 8260B |
| Styrene | 1.0 | 0.17 | ug/L | 8260B |
| Tetrachloroethene | 1.0 | 0.20 | ug/L | 8260B |
| Toluene | 1.0 | 0.17 | ug/L | 8260B |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | RL | MDL | Units | Method |
|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1.0 | 0.15 | ug/L | 8260B |
| trans-1,3-Dichloropropene | 3.0 | 0.19 | ug/L | 8260B |
| Trichloroethene | 1.0 | 0.16 | ug/L | 8260B |
| Trichlorofluoromethane | 2.0 | 0.29 | ug/L | 8260B |
| Vinyl chloride | 1.0 | 0.10 | ug/L | 8260B |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

### Prep: 3510C

| Analyte | RL | MDL | Units | Method |
|---|---|---|---|---|
| 1,1'-Biphenyl | 10 | 0.41 | ug/L | 8270D |
| 1,2,4,5-Tetrachlorobenzene | 10 | 2.0 | ug/L | 8270D |
| 1,2,4-Trichlorobenzene | 5.0 | 2.0 | ug/L | 8270D |
| 1,2-Dichlorobenzene | 5.0 | 2.0 | ug/L | 8270D |
| 1,2-Diphenylhydrazine(as Azobenzene) | 10 | 0.54 | ug/L | 8270D |
| 1,3-Dichlorobenzene | 10 | 2.0 | ug/L | 8270D |
| 1,3-Dinitrobenzene | 10 | 0.97 | ug/L | 8270D |
| 1,4-Dichlorobenzene | 5.0 | 2.0 | ug/L | 8270D |
| 1,4-Dioxane | 20 | 0.71 | ug/L | 8270D |
| 1-Methylnaphthalene | 4.0 | 0.35 | ug/L | 8270D |
| 2,3,4,6-Tetrachlorophenol | 50 | 0.96 | ug/L | 8270D |
| 2,4,5-Trichlorophenol | 10 | 0.52 | ug/L | 8270D |
| 2,4,6-Trichlorophenol | 10 | 0.74 | ug/L | 8270D |
| 2,4-Dichlorophenol | 10 | 0.68 | ug/L | 8270D |
| 2,4-Dimethylphenol | 10 | 0.67 | ug/L | 8270D |
| 2,4-Dinitrophenol | 30 | 7.5 | ug/L | 8270D |
| 2,4-Dinitrotoluene | 10 | 0.93 | ug/L | 8270D |
| 2,6-Dichlorophenol | 10 | 0.75 | ug/L | 8270D |
| 2,6-Dinitrotoluene | 10 | 0.72 | ug/L | 8270D |
| 2-Chloronaphthalene | 4.0 | 0.46 | ug/L | 8270D |
| 2-Chlorophenol | 10 | 0.43 | ug/L | 8270D |
| 2-Methylnaphthalene | 4.0 | 0.41 | ug/L | 8270D |
| 2-Methylphenol | 10 | 0.56 | ug/L | 8270D |
| 2-Nitroaniline | 10 | 0.90 | ug/L | 8270D |
| 2-Nitrophenol | 10 | 0.62 | ug/L | 8270D |
| 3 & 4 Methylphenol | 10 | 0.40 | ug/L | 8270D |
| 3,3'-Dichlorobenzidine | 50 | 0.83 | ug/L | 8270D |
| 3-Methylphenol | 10 | 0.40 | ug/L | 8270D |
| 3-Nitroaniline | 10 | 0.78 | ug/L | 8270D |
| 4,6-Dinitro-2-methylphenol | 50 | 5.9 | ug/L | 8270D |
| 4-Bromophenyl phenyl ether | 10 | 0.41 | ug/L | 8270D |
| 4-Chloro-3-methylphenol | 10 | 0.45 | ug/L | 8270D |
| 4-Chloroaniline | 10 | 0.56 | ug/L | 8270D |
| 4-Chlorophenyl phenyl ether | 10 | 0.63 | ug/L | 8270D |
| 4-Methylphenol | 10 | 0.40 | ug/L | 8270D |
| 4-Nitroaniline | 10 | 0.84 | ug/L | 8270D |
| 4-Nitrophenol | 10 | 1.0 | ug/L | 8270D |
| Acenaphthene | 4.0 | 0.45 | ug/L | 8270D |
| Acenaphthylene | 4.0 | 0.50 | ug/L | 8270D |
| Acetophenone | 10 | 0.52 | ug/L | 8270D |
| Aniline | 10 | 0.88 | ug/L | 8270D |
| Anthracene | 4.0 | 0.45 | ug/L | 8270D |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

### Prep: 3510C

| Analyte | RL | MDL | Units | Method |
|---|---|---|---|---|
| Azobenzene | 4.0 | 0.54 | ug/L | 8270D |
| Benzaldehyde | 10 | 0.53 | ug/L | 8270D |
| Benzidine | 100 | 4.4 | ug/L | 8270D |
| Benzo[a]anthracene | 4.0 | 0.58 | ug/L | 8270D |
| Benzo[a]pyrene | 4.0 | 0.64 | ug/L | 8270D |
| Benzo[b]fluoranthene | 4.0 | 0.53 | ug/L | 8270D |
| Benzo[g,h,i]perylene | 4.0 | 0.79 | ug/L | 8270D |
| Benzo[k]fluoranthene | 4.0 | 0.56 | ug/L | 8270D |
| Benzoic acid | 25 | 5.7 | ug/L | 8270D |
| Benzyl alcohol | 10 | 0.35 | ug/L | 8270D |
| bis (2-chloroisopropyl) ether | 10 | 0.42 | ug/L | 8270D |
| Bis(2-chloroethoxy)methane | 10 | 0.61 | ug/L | 8270D |
| Bis(2-chloroethyl)ether | 10 | 0.49 | ug/L | 8270D |
| Bis(2-ethylhexyl) phthalate | 10 | 1.1 | ug/L | 8270D |
| Butyl benzyl phthalate | 5.0 | 2.0 | ug/L | 8270D |
| Caprolactam | 10 | 1.2 | ug/L | 8270D |
| Carbazole | 4.0 | 0.45 | ug/L | 8270D |
| Chrysene | 4.0 | 0.52 | ug/L | 8270D |
| Dibenz(a,h)anthracene | 4.0 | 0.65 | ug/L | 8270D |
| Dibenzofuran | 4.0 | 0.36 | ug/L | 8270D |
| Diethyl phthalate | 4.0 | 0.75 | ug/L | 8270D |
| Dimethyl phthalate | 4.0 | 0.53 | ug/L | 8270D |
| Di-n-butyl phthalate | 4.0 | 0.88 | ug/L | 8270D |
| Di-n-octyl phthalate | 5.0 | 1.6 | ug/L | 8270D |
| Diphenylamine | 10 | 0.49 | ug/L | 8270D |
| Famphur | 100 | 2.0 | ug/L | 8270D |
| Fluoranthene | 4.0 | 0.64 | ug/L | 8270D |
| Fluorene | 4.0 | 0.49 | ug/L | 8270D |
| Hexachlorobenzene | 10 | 0.96 | ug/L | 8270D |
| Hexachlorobutadiene | 30 | 7.5 | ug/L | 8270D |
| Hexachlorocyclopentadiene | 50 | 6.6 | ug/L | 8270D |
| Hexachloroethane | 30 | 7.6 | ug/L | 8270D |
| Hexadecane | 10 | 0.35 | ug/L | 8270D |
| Indeno[1,2,3-cd]pyrene | 4.0 | 1.6 | ug/L | 8270D |
| Isophorone | 10 | 0.67 | ug/L | 8270D |
| Naphthalene | 4.0 | 0.40 | ug/L | 8270D |
| Nitrobenzene | 10 | 0.43 | ug/L | 8270D |
| N-Nitrosodimethylamine | 10 | 0.62 | ug/L | 8270D |
| N-Nitrosodi-n-propylamine | 10 | 0.56 | ug/L | 8270D |
| N-Nitrosodiphenylamine | 10 | 0.61 | ug/L | 8270D |
| Pentachlorophenol | 50 | 5.5 | ug/L | 8270D |
| Phenanthrene | 4.0 | 0.28 | ug/L | 8270D |
| Phenol | 10 | 0.56 | ug/L | 8270D |
| Pyrene | 10 | 0.43 | ug/L | 8270D |
| Pyridine | 20 | 1.8 | ug/L | 8270D |

## Method: 8081B - Organochlorine Pesticides (GC)

### Prep: 3510C

| Analyte | RL | MDL | Units | Method |
|---|---|---|---|---|
| 4,4'-DDD | 0.050 | 0.0077 | ug/L | 8081B |

# Default Detection Limits

Client: Tetra Tech, Inc. TestAmerica Job ID: 160-32649-1
Project/Site: Former Carnotite Site - MW-1 Sampling

## Method: 8081B - Organochlorine Pesticides (GC) (Continued)

### Prep: 3510C

| Analyte | RL | MDL | Units | Method |
|---|---|---|---|---|
| 4,4'-DDE | 0.050 | 0.0075 | ug/L | 8081B |
| 4,4'-DDT | 0.050 | 0.015 | ug/L | 8081B |
| Aldrin | 0.050 | 0.0059 | ug/L | 8081B |
| alpha-BHC | 0.050 | 0.0053 | ug/L | 8081B |
| alpha-Chlordane | 0.050 | 0.0053 | ug/L | 8081B |
| beta-BHC | 0.050 | 0.0087 | ug/L | 8081B |
| delta-BHC | 0.050 | 0.0058 | ug/L | 8081B |
| Dieldrin | 0.050 | 0.0063 | ug/L | 8081B |
| Endosulfan I | 0.050 | 0.0058 | ug/L | 8081B |
| Endosulfan II | 0.050 | 0.0070 | ug/L | 8081B |
| Endosulfan sulfate | 0.050 | 0.0057 | ug/L | 8081B |
| Endrin | 0.050 | 0.0079 | ug/L | 8081B |
| Endrin aldehyde | 0.050 | 0.0088 | ug/L | 8081B |
| Endrin ketone | 0.050 | 0.0070 | ug/L | 8081B |
| gamma-BHC (Lindane) | 0.050 | 0.0069 | ug/L | 8081B |
| gamma-Chlordane | 0.050 | 0.0091 | ug/L | 8081B |
| Heptachlor | 0.050 | 0.0077 | ug/L | 8081B |
| Heptachlor epoxide | 0.050 | 0.0075 | ug/L | 8081B |
| Methoxychlor | 0.10 | 0.013 | ug/L | 8081B |
| Toxaphene | 2.0 | 0.37 | ug/L | 8081B |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

### Prep: 3510C

| Analyte | RL | MDL | Units | Method |
|---|---|---|---|---|
| PCB-1016 | 1.0 | 0.12 | ug/L | 8082A |
| PCB-1221 | 1.0 | 0.21 | ug/L | 8082A |
| PCB-1232 | 1.0 | 0.17 | ug/L | 8082A |
| PCB-1242 | 1.0 | 0.10 | ug/L | 8082A |
| PCB-1248 | 1.0 | 0.092 | ug/L | 8082A |
| PCB-1254 | 1.0 | 0.11 | ug/L | 8082A |
| PCB-1260 | 1.0 | 0.16 | ug/L | 8082A |
| PCB-1262 | 1.0 | 0.085 | ug/L | 8082A |
| PCB-1268 | 1.0 | 0.36 | ug/L | 8082A |

## Method: 1613B - Dioxins and Furans (HRGC/HRMS)

### Prep: HRMS-Sepf

| Analyte | RL | | Units | Method |
|---|---|---|---|---|
| 2,3,7,8-TCDD | 10 | | pg/L | 1613B |

# Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: Former Carnotite Site - MW-1 Sampling

TestAmerica Job ID: 160-32649-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (70-127) | (78-120) | (77-120) | (80-125) |
| 160-32649-1 | CRC-MW-1-011519 | 110 | 100 | 107 | 106 |
| 280-119359-A-1 MSD | Matrix Spike Duplicate | 108 | 99 | 103 | 102 |
| 280-119359-A-1 MSD | Matrix Spike Duplicate | 106 | 97 | 105 | 103 |
| 280-119359-C-1 MS | Matrix Spike | 112 | 102 | 108 | 105 |
| 280-119359-C-1 MS | Matrix Spike | 103 | 95 | 102 | 101 |
| LCS 280-445753/4 | Lab Control Sample | 114 | 105 | 109 | 111 |
| LCS 280-445753/6 | Lab Control Sample | 114 | 106 | 110 | 111 |
| LCSD 280-445753/5 | Lab Control Sample Dup | 112 | 102 | 107 | 106 |
| LCSD 280-445753/7 | Lab Control Sample Dup | 114 | 103 | 109 | 108 |
| MB 280-445753/8 | Method Blank | 113 | 102 | 109 | 110 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | |
|---|---|---|---|---|---|---|---|
| | | TBP | FBP | 2FP | NBZ | PHL | TPHL |
| Lab Sample ID | Client Sample ID | (52-123) | (47-119) | (17-71) | (45-113) | (10-52) | (50-123) |
| 160-32649-1 | CRC-MW-1-011519 | 77 | 65 | 49 | 67 | 34 | 74 |
| LCS 280-444835/2-A | Lab Control Sample | 86 | 80 | 42 | 82 | 26 | 82 |
| LCSD 280-444835/3-A | Lab Control Sample Dup | 84 | 74 | 54 | 75 | 38 | 82 |
| MB 280-444835/1-A | Method Blank | 73 | 56 | 44 | 59 | 30 | 81 |

**Surrogate Legend**

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

## Method: 8081B - Organochlorine Pesticides (GC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | DCBP1 | TCX1 |
| Lab Sample ID | Client Sample ID | (34-122) | (28-115) |
| 160-32649-1 | CRC-MW-1-011519 | 48 | 78 |
| LCS 280-444680/2-A | Lab Control Sample | 86 | 74 |
| LCSD 280-444680/3-A | Lab Control Sample Dup | 95 | 85 |
| MB 280-444680/1-A | Method Blank | 70 | 54 |

**Surrogate Legend**

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

# Surrogate Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 160-32649-1
Project/Site: Former Carnotite Site - MW-1 Sampling

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | TCX2 | DCBP2 |
| Lab Sample ID | Client Sample ID | (25-120) | (30-136) |
| 160-32649-1 | CRC-MW-1-011519 | 87 | 41 |
| LCS 280-444887/2-A | Lab Control Sample | 90 | 84 |
| LCSD 280-444887/3-A | Lab Control Sample Dup | 93 | 88 |
| MB 280-444887/1-A | Method Blank | 73 | 77 |

**Surrogate Legend**

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

## Method: 1613B - Dioxins and Furans (HRGC/HRMS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) |
|---|---|---|
| | | 37TCDD |
| Lab Sample ID | Client Sample ID | (35-197) |
| 160-32649-1 | CRC-MW-1-011519 | 95 |
| MB 140-27087/10-A | Method Blank | 97 |

**Surrogate Legend**

37TCDD = 37Cl4-2,3,7,8-TCDD

## Method: 1613B - Dioxins and Furans (HRGC/HRMS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) |
|---|---|---|
| | | 37TCDD |
| Lab Sample ID | Client Sample ID | (31-191) |
| LCS 140-27087/11-A | Lab Control Sample | 100 |

**Surrogate Legend**

37TCDD = 37Cl4-2,3,7,8-TCDD

# Isotope Dilution Summary

Client: Tetra Tech, Inc.
Project/Site: Former Carnotite Site - MW-1 Sampling

TestAmerica Job ID: 160-32649-1

## Method: 1613B - Dioxins and Furans (HRGC/HRMS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Isotope Dilution Recovery (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | TCDD (25-164) |
| 160-32649-1 | CRC-MW-1-011519 | 63 |
| MB 140-27087/10-A | Method Blank | 84 |

**Surrogate Legend**

TCDD = 13C-2,3,7,8-TCDD

## Method: 1613B - Dioxins and Furans (HRGC/HRMS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Isotope Dilution Recovery (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | TCDD (20-175) |
| LCS 140-27087/11-A | Lab Control Sample | 83 |

**Surrogate Legend**

TCDD = 13C-2,3,7,8-TCDD

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 280-445753/8**
**Matrix: Water**
**Analysis Batch: 445753**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.21 | U | 1.0 | 0.21 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,1,2-Trichloroethane | 0.27 | U | 1.0 | 0.27 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,1,2-Trichlorotrifluoroethane | 0.42 | U | 3.0 | 0.42 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,1-Dichloroethane | 0.22 | U | 1.0 | 0.22 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,1-Dichloroethene | 0.23 | U | 1.0 | 0.23 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,2,3-Trichlorobenzene | 0.21 | U | 1.0 | 0.21 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,2,4-Trichlorobenzene | 0.21 | U | 1.0 | 0.21 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.47 | U | 5.0 | 0.47 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,2-Dibromoethane | 0.18 | U | 1.0 | 0.18 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,2-Dichlorobenzene | 0.15 | U | 1.0 | 0.15 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,2-Dichloroethane | 0.13 | U | 1.0 | 0.13 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,2-Dichloropropane | 0.18 | U | 1.0 | 0.18 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,3,5-Trimethylbenzene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,3-Dichlorobenzene | 0.13 | U | 1.0 | 0.13 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,4-Dichlorobenzene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 19:09 | 1 |
| 1,4-Dioxane | 57 | U | 200 | 57 | ug/L | | | 01/28/19 19:09 | 1 |
| 2-Butanone (MEK) | 2.0 | U | 6.0 | 2.0 | ug/L | | | 01/28/19 19:09 | 1 |
| 2-Chloroethyl vinyl ether | 0.69 | U | 3.0 | 0.69 | ug/L | | | 01/28/19 19:09 | 1 |
| 2-Hexanone | 1.7 | U | 5.0 | 1.7 | ug/L | | | 01/28/19 19:09 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 0.98 | U | 5.0 | 0.98 | ug/L | | | 01/28/19 19:09 | 1 |
| Acetone | 1.9 | U | 10 | 1.9 | ug/L | | | 01/28/19 19:09 | 1 |
| Acetonitrile | 9.6 | U | 30 | 9.6 | ug/L | | | 01/28/19 19:09 | 1 |
| Acrolein | 2.8 | U | 20 | 2.8 | ug/L | | | 01/28/19 19:09 | 1 |
| Acrylonitrile | 1.4 | U | 20 | 1.4 | ug/L | | | 01/28/19 19:09 | 1 |
| Benzene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 19:09 | 1 |
| Bromoform | 0.19 | U | 1.0 | 0.19 | ug/L | | | 01/28/19 19:09 | 1 |
| Bromomethane | 0.21 | U | 2.0 | 0.21 | ug/L | | | 01/28/19 19:09 | 1 |
| Carbon disulfide | 0.45 | U | 2.0 | 0.45 | ug/L | | | 01/28/19 19:09 | 1 |
| Carbon tetrachloride | 0.19 | U | 1.0 | 0.19 | ug/L | | | 01/28/19 19:09 | 1 |
| Chlorobenzene | 0.17 | U | 1.0 | 0.17 | ug/L | | | 01/28/19 19:09 | 1 |
| Chlorobromomethane | 0.10 | U | 1.0 | 0.10 | ug/L | | | 01/28/19 19:09 | 1 |
| Chlorodibromomethane | 0.17 | U | 1.0 | 0.17 | ug/L | | | 01/28/19 19:09 | 1 |
| Chloroethane | 0.41 | U | 2.0 | 0.41 | ug/L | | | 01/28/19 19:09 | 1 |
| Chloroform | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 19:09 | 1 |
| Chloromethane | 0.30 | U | 2.0 | 0.30 | ug/L | | | 01/28/19 19:09 | 1 |
| cis-1,2-Dichloroethene | 0.15 | U | 1.0 | 0.15 | ug/L | | | 01/28/19 19:09 | 1 |
| cis-1,3-Dichloropropene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 19:09 | 1 |
| Cyclohexane | 0.28 | U | 2.0 | 0.28 | ug/L | | | 01/28/19 19:09 | 1 |
| Dichlorobromomethane | 0.17 | U | 1.0 | 0.17 | ug/L | | | 01/28/19 19:09 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 2.0 | 0.31 | ug/L | | | 01/28/19 19:09 | 1 |
| Ethylbenzene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 19:09 | 1 |
| Isopropylbenzene | 0.19 | U | 1.0 | 0.19 | ug/L | | | 01/28/19 19:09 | 1 |
| Methyl acetate | 1.6 | U | 5.0 | 1.6 | ug/L | | | 01/28/19 19:09 | 1 |
| Methyl tert-butyl ether | 0.25 | U | 5.0 | 0.25 | ug/L | | | 01/28/19 19:09 | 1 |
| Methylcyclohexane | 0.36 | U | 1.0 | 0.36 | ug/L | | | 01/28/19 19:09 | 1 |
| Methylene Chloride | 0.32 | U | 2.0 | 0.32 | ug/L | | | 01/28/19 19:09 | 1 |
| m-Xylene & p-Xylene | 0.34 | U | 2.0 | 0.34 | ug/L | | | 01/28/19 19:09 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 280-445753/8** **Client Sample ID: Method Blank**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445753**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | 0.19 | U | 1.0 | 0.19 | ug/L | | | 01/28/19 19:09 | 1 |
| Styrene | 0.17 | U | 1.0 | 0.17 | ug/L | | | 01/28/19 19:09 | 1 |
| Tetrachloroethene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 01/28/19 19:09 | 1 |
| Toluene | 0.17 | U | 1.0 | 0.17 | ug/L | | | 01/28/19 19:09 | 1 |
| trans-1,2-Dichloroethene | 0.15 | U | 1.0 | 0.15 | ug/L | | | 01/28/19 19:09 | 1 |
| trans-1,3-Dichloropropene | 0.19 | U | 3.0 | 0.19 | ug/L | | | 01/28/19 19:09 | 1 |
| Trichloroethene | 0.16 | U | 1.0 | 0.16 | ug/L | | | 01/28/19 19:09 | 1 |
| Trichlorofluoromethane | 0.29 | U | 2.0 | 0.29 | ug/L | | | 01/28/19 19:09 | 1 |
| Vinyl chloride | 0.10 | U | 1.0 | 0.10 | ug/L | | | 01/28/19 19:09 | 1 |

| *Tentatively Identified Compound* | *MB Est. Result* | *MB Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Iodomethane* | *0.390* | *J* | *ug/L* | | *5.52* | *74-88-4* | | *01/28/19 19:09* | *1* |
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *01/28/19 19:09* | *1* |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *113* | | *70 - 127* | | *01/28/19 19:09* | *1* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *78 - 120* | | *01/28/19 19:09* | *1* |
| *Dibromofluoromethane (Surr)* | *109* | | *77 - 120* | | *01/28/19 19:09* | *1* |
| *Toluene-d8 (Surr)* | *110* | | *80 - 125* | | *01/28/19 19:09* | *1* |

**Lab Sample ID: LCS 280-445753/4** **Client Sample ID: Lab Control Sample**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445753**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 5.00 | 5.71 | | ug/L | | 114 | 65 - 135 |
| 1,1,2,2-Tetrachloroethane | 5.00 | 5.12 | | ug/L | | 102 | 58 - 135 |
| 1,1,2-Trichloroethane | 5.00 | 5.20 | | ug/L | | 104 | 64 - 135 |
| 1,1,2-Trichlorotrifluoroethane | 5.00 | 5.61 | | ug/L | | 112 | 65 - 140 |
| 1,1-Dichloroethane | 5.00 | 5.75 | | ug/L | | 115 | 65 - 135 |
| 1,1-Dichloroethene | 5.00 | 5.39 | | ug/L | | 108 | 65 - 136 |
| 1,2,3-Trichlorobenzene | 5.00 | 5.20 | | ug/L | | 104 | 60 - 135 |
| 1,2,4-Trichlorobenzene | 5.00 | 5.09 | | ug/L | | 102 | 58 - 135 |
| 1,2-Dibromo-3-Chloropropane | 5.00 | 4.16 | J | ug/L | | 83 | 57 - 135 |
| 1,2-Dibromoethane | 5.00 | 4.71 | | ug/L | | 94 | 65 - 135 |
| 1,2-Dichlorobenzene | 5.00 | 5.04 | | ug/L | | 101 | 65 - 135 |
| 1,2-Dichloroethane | 5.00 | 5.58 | | ug/L | | 112 | 65 - 135 |
| 1,2-Dichloropropane | 5.00 | 5.58 | | ug/L | | 112 | 64 - 135 |
| 1,3,5-Trimethylbenzene | 5.00 | 5.32 | | ug/L | | 106 | 65 - 135 |
| 1,3-Dichlorobenzene | 5.00 | 5.10 | | ug/L | | 102 | 65 - 135 |
| 1,4-Dichlorobenzene | 5.00 | 5.12 | | ug/L | | 102 | 65 - 135 |
| 1,4-Dioxane | 100 | 106 | J | ug/L | | 106 | 31 - 147 |
| 2-Butanone (MEK) | 20.0 | 20.6 | | ug/L | | 103 | 44 - 177 |
| 2-Chloroethyl vinyl ether | 10.0 | 11.3 | | ug/L | | 113 | 10 - 159 |
| 2-Hexanone | 20.0 | 20.4 | | ug/L | | 102 | 57 - 139 |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 21.9 | | ug/L | | 109 | 60 - 150 |
| Acetone | 20.0 | 22.6 | | ug/L | | 113 | 39 - 156 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 280-445753/4** **Client Sample ID: Lab Control Sample**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445753**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 5.00 | 5.57 | | ug/L | | 111 | 65 - 135 |
| Bromoform | 5.00 | 4.20 | | ug/L | | 84 | 62 - 135 |
| Bromomethane | 5.00 | 6.61 | | ug/L | | 132 | 45 - 135 |
| Carbon disulfide | 5.00 | 5.33 | | ug/L | | 107 | 55 - 143 |
| Carbon tetrachloride | 5.00 | 5.62 | | ug/L | | 112 | 65 - 135 |
| Chlorobenzene | 5.00 | 5.27 | | ug/L | | 105 | 65 - 135 |
| Chlorobromomethane | 5.00 | 5.01 | | ug/L | | 100 | 65 - 135 |
| Chlorodibromomethane | 5.00 | 4.62 | | ug/L | | 92 | 65 - 135 |
| Chloroethane | 5.00 | 7.01 | * | ug/L | | 140 | 46 - 136 |
| Chloroform | 5.00 | 5.54 | | ug/L | | 111 | 65 - 135 |
| Chloromethane | 5.00 | 6.53 | | ug/L | | 131 | 34 - 145 |
| cis-1,2-Dichloroethene | 5.00 | 5.23 | | ug/L | | 105 | 65 - 135 |
| cis-1,3-Dichloropropene | 5.00 | 5.01 | | ug/L | | 100 | 65 - 135 |
| Cyclohexane | 5.00 | 5.93 | | ug/L | | 119 | 62 - 135 |
| Dichlorobromomethane | 5.00 | 5.17 | | ug/L | | 103 | 65 - 135 |
| Dichlorodifluoromethane | 5.00 | 7.28 | * | ug/L | | 146 | 43 - 142 |
| Ethylbenzene | 5.00 | 5.23 | | ug/L | | 105 | 65 - 135 |
| Isopropylbenzene | 5.00 | 4.84 | | ug/L | | 97 | 65 - 135 |
| Methyl acetate | 10.0 | 10.2 | | ug/L | | 102 | 52 - 135 |
| Methyl tert-butyl ether | 5.00 | 4.89 | J | ug/L | | 98 | 54 - 135 |
| Methylcyclohexane | 5.00 | 5.98 | | ug/L | | 120 | 63 - 135 |
| Methylene Chloride | 5.00 | 4.94 | | ug/L | | 99 | 54 - 141 |
| m-Xylene & p-Xylene | 5.00 | 5.21 | | ug/L | | 104 | 65 - 135 |
| o-Xylene | 5.00 | 5.26 | | ug/L | | 105 | 65 - 135 |
| Styrene | 5.00 | 4.79 | | ug/L | | 96 | 65 - 135 |
| Tetrachloroethene | 5.00 | 5.44 | | ug/L | | 109 | 65 - 135 |
| Toluene | 5.00 | 5.59 | | ug/L | | 112 | 65 - 135 |
| trans-1,2-Dichloroethene | 5.00 | 5.60 | | ug/L | | 112 | 65 - 135 |
| trans-1,3-Dichloropropene | 5.00 | 5.00 | | ug/L | | 100 | 65 - 135 |
| Trichloroethene | 5.00 | 5.33 | | ug/L | | 107 | 65 - 135 |
| Trichlorofluoromethane | 5.00 | 6.81 | | ug/L | | 136 | 53 - 137 |
| Vinyl chloride | 5.00 | 6.50 | | ug/L | | 130 | 40 - 137 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *114* | | *70 - 127* |
| *4-Bromofluorobenzene (Surr)* | *105* | | *78 - 120* |
| *Dibromofluoromethane (Surr)* | *109* | | *77 - 120* |
| *Toluene-d8 (Surr)* | *111* | | *80 - 125* |

**Lab Sample ID: LCS 280-445753/6** **Client Sample ID: Lab Control Sample**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445753**

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *114* | | *70 - 127* |
| *4-Bromofluorobenzene (Surr)* | *106* | | *78 - 120* |
| *Dibromofluoromethane (Surr)* | *110* | | *77 - 120* |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 280-445753/6**
**Matrix: Water**
**Analysis Batch: 445753**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| Toluene-d8 (Surr) | 111 | | 80 - 125 |

**Lab Sample ID: LCSD 280-445753/5**
**Matrix: Water**
**Analysis Batch: 445753**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | | | 5.00 | 5.42 | | ug/L | | 108 | 65 - 135 | 5 | 20 |
| 1,1,2,2-Tetrachloroethane | | | 5.00 | 4.94 | | ug/L | | 99 | 58 - 135 | 3 | 20 |
| 1,1,2-Trichloroethane | | | 5.00 | 5.10 | | ug/L | | 102 | 64 - 135 | 2 | 27 |
| 1,1,2-Trichlorotrifluoroethane | | | 5.00 | 5.24 | | ug/L | | 105 | 65 - 140 | 7 | 20 |
| 1,1-Dichloroethane | | | 5.00 | 5.53 | | ug/L | | 111 | 65 - 135 | 4 | 21 |
| 1,1-Dichloroethene | | | 5.00 | 5.18 | | ug/L | | 104 | 65 - 136 | 4 | 20 |
| 1,2,3-Trichlorobenzene | | | 5.00 | 5.15 | | ug/L | | 103 | 60 - 135 | 1 | 36 |
| 1,2,4-Trichlorobenzene | | | 5.00 | 4.92 | | ug/L | | 98 | 58 - 135 | 4 | 25 |
| 1,2-Dibromo-3-Chloropropane | | | 5.00 | 4.08 | J | ug/L | | 82 | 57 - 135 | 2 | 22 |
| 1,2-Dibromoethane | | | 5.00 | 4.60 | | ug/L | | 92 | 65 - 135 | 2 | 27 |
| 1,2-Dichlorobenzene | | | 5.00 | 4.86 | | ug/L | | 97 | 65 - 135 | 4 | 20 |
| 1,2-Dichloroethane | | | 5.00 | 5.42 | | ug/L | | 108 | 65 - 135 | 3 | 20 |
| 1,2-Dichloropropane | | | 5.00 | 5.41 | | ug/L | | 108 | 64 - 135 | 3 | 20 |
| 1,3,5-Trimethylbenzene | | | 5.00 | 5.07 | | ug/L | | 101 | 65 - 135 | 5 | 20 |
| 1,3-Dichlorobenzene | | | 5.00 | 4.86 | | ug/L | | 97 | 65 - 135 | 5 | 20 |
| 1,4-Dichlorobenzene | | | 5.00 | 4.85 | | ug/L | | 97 | 65 - 135 | 6 | 23 |
| 1,4-Dioxane | | | 100 | 104 | J | ug/L | | 104 | 31 - 147 | 2 | 30 |
| 2-Butanone (MEK) | | | 20.0 | 20.7 | | ug/L | | 103 | 44 - 177 | 0 | 32 |
| 2-Chloroethyl vinyl ether | | | 10.0 | 11.2 | | ug/L | | 112 | 10 - 159 | 1 | 23 |
| 2-Hexanone | | | 20.0 | 20.1 | | ug/L | | 101 | 57 - 139 | 2 | 25 |
| 4-Methyl-2-pentanone (MIBK) | | | 20.0 | 21.7 | | ug/L | | 108 | 60 - 150 | 1 | 22 |
| Acetone | | | 20.0 | 22.0 | | ug/L | | 110 | 39 - 156 | 3 | 23 |
| Benzene | | | 5.00 | 5.33 | | ug/L | | 107 | 65 - 135 | 4 | 20 |
| Bromoform | | | 5.00 | 4.07 | | ug/L | | 81 | 62 - 135 | 3 | 27 |
| Bromomethane | | | 5.00 | 6.28 | | ug/L | | 126 | 45 - 135 | 5 | 33 |
| Carbon disulfide | | | 5.00 | 5.00 | | ug/L | | 100 | 55 - 143 | 6 | 20 |
| Carbon tetrachloride | | | 5.00 | 5.31 | | ug/L | | 106 | 65 - 135 | 6 | 21 |
| Chlorobenzene | | | 5.00 | 5.01 | | ug/L | | 100 | 65 - 135 | 5 | 20 |
| Chlorobromomethane | | | 5.00 | 4.88 | | ug/L | | 98 | 65 - 135 | 3 | 29 |
| Chlorodibromomethane | | | 5.00 | 4.48 | | ug/L | | 90 | 65 - 135 | 3 | 20 |
| Chloroethane | | | 5.00 | 6.65 | | ug/L | | 133 | 46 - 136 | 5 | 25 |
| Chloroform | | | 5.00 | 5.35 | | ug/L | | 107 | 65 - 135 | 4 | 20 |
| Chloromethane | | | 5.00 | 6.11 | | ug/L | | 122 | 34 - 145 | 7 | 24 |
| cis-1,2-Dichloroethene | | | 5.00 | 5.06 | | ug/L | | 101 | 65 - 135 | 3 | 20 |
| cis-1,3-Dichloropropene | | | 5.00 | 4.79 | | ug/L | | 96 | 65 - 135 | 5 | 26 |
| Cyclohexane | | | 5.00 | 5.67 | | ug/L | | 113 | 62 - 135 | 4 | 20 |
| Dichlorobromomethane | | | 5.00 | 4.98 | | ug/L | | 100 | 65 - 135 | 4 | 20 |
| Dichlorodifluoromethane | | | 5.00 | 6.92 | | ug/L | | 138 | 43 - 142 | 5 | 30 |
| Ethylbenzene | | | 5.00 | 5.02 | | ug/L | | 100 | 65 - 135 | 4 | 20 |
| Isopropylbenzene | | | 5.00 | 4.60 | | ug/L | | 92 | 65 - 135 | 5 | 20 |
| Methyl acetate | | | 10.0 | 10.2 | | ug/L | | 102 | 52 - 135 | 0 | 27 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 280-445753/5** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 445753**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | | | 5.00 | 4.82 | J | ug/L | | 96 | 54 - 135 | 1 | 21 |
| Methylcyclohexane | | | 5.00 | 5.58 | | ug/L | | 112 | 63 - 135 | 7 | 20 |
| Methylene Chloride | | | 5.00 | 4.70 | | ug/L | | 94 | 54 - 141 | 5 | 26 |
| m-Xylene & p-Xylene | | | 5.00 | 5.00 | | ug/L | | 100 | 65 - 135 | 4 | 20 |
| o-Xylene | | | 5.00 | 5.03 | | ug/L | | 101 | 65 - 135 | 5 | 20 |
| Styrene | | | 5.00 | 4.61 | | ug/L | | 92 | 65 - 135 | 4 | 26 |
| Tetrachloroethene | | | 5.00 | 5.10 | | ug/L | | 102 | 65 - 135 | 6 | 20 |
| Toluene | | | 5.00 | 5.40 | | ug/L | | 108 | 65 - 135 | 3 | 20 |
| trans-1,2-Dichloroethene | | | 5.00 | 5.38 | | ug/L | | 108 | 65 - 135 | 4 | 24 |
| trans-1,3-Dichloropropene | | | 5.00 | 4.88 | | ug/L | | 98 | 65 - 135 | 2 | 26 |
| Trichloroethene | | | 5.00 | 5.17 | | ug/L | | 103 | 65 - 135 | 3 | 20 |
| Trichlorofluoromethane | | | 5.00 | 6.54 | | ug/L | | 131 | 53 - 137 | 4 | 27 |
| Vinyl chloride | | | 5.00 | 6.15 | | ug/L | | 123 | 40 - 137 | 6 | 24 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *112* | | *70 - 127* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *78 - 120* |
| *Dibromofluoromethane (Surr)* | *107* | | *77 - 120* |
| *Toluene-d8 (Surr)* | *106* | | *80 - 125* |

**Lab Sample ID: LCSD 280-445753/7** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 445753**

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *114* | | *70 - 127* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *78 - 120* |
| *Dibromofluoromethane (Surr)* | *109* | | *77 - 120* |
| *Toluene-d8 (Surr)* | *108* | | *80 - 125* |

**Lab Sample ID: 280-119359-A-1 MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 445753**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 640 | U | 20000 | 20600 | | ug/L | | 103 | 65 - 135 | 5 | 20 |
| 1,1,2,2-Tetrachloroethane | 840 | U | 20000 | 19800 | | ug/L | | 99 | 58 - 135 | 6 | 20 |
| 1,1,2-Trichloroethane | 1100 | U | 20000 | 20000 | | ug/L | | 100 | 64 - 135 | 8 | 27 |
| 1,1,2-Trichlorotrifluoroethane | 1700 | U | 20000 | 19700 | | ug/L | | 99 | 65 - 140 | 4 | 20 |
| 1,1-Dichloroethane | 880 | U | 20000 | 20900 | | ug/L | | 105 | 65 - 135 | 7 | 21 |
| 1,1-Dichloroethene | 920 | U | 20000 | 19600 | | ug/L | | 98 | 65 - 136 | 4 | 20 |
| 1,2,3-Trichlorobenzene | 840 | U | 20000 | 19700 | | ug/L | | 99 | 60 - 135 | 5 | 36 |
| 1,2,4-Trichlorobenzene | 840 | U | 20000 | 19600 | | ug/L | | 98 | 58 - 135 | 3 | 25 |
| 1,2-Dibromo-3-Chloropropane | 1900 | U | 20000 | 17600 | J | ug/L | | 88 | 57 - 135 | 1 | 22 |
| 1,2-Dibromoethane | 720 | U | 20000 | 18100 | | ug/L | | 91 | 65 - 135 | 6 | 27 |
| 1,2-Dichlorobenzene | 5100 | | 20000 | 24900 | | ug/L | | 99 | 65 - 135 | 2 | 20 |
| 1,2-Dichloroethane | 520 | U | 20000 | 21000 | | ug/L | | 105 | 65 - 135 | 7 | 20 |
| 1,2-Dichloropropane | 720 | U | 20000 | 21000 | | ug/L | | 105 | 64 - 135 | 6 | 20 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 280-119359-A-1 MSD** **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445753**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,3,5-Trimethylbenzene | 640 | U | 20000 | 19700 | | ug/L | | 98 | 65 - 135 | 4 | 20 |
| 1,3-Dichlorobenzene | 520 | U | 20000 | 18900 | | ug/L | | 95 | 65 - 135 | 5 | 20 |
| 1,4-Dichlorobenzene | 640 | U | 20000 | 19100 | | ug/L | | 96 | 65 - 135 | 5 | 23 |
| 1,4-Dioxane | 230000 | U | 400000 | 376000 | J | ug/L | | 94 | 31 - 147 | 11 | 30 |
| 2-Butanone (MEK) | 8000 | U | 80000 | 77900 | | ug/L | | 97 | 44 - 177 | 8 | 32 |
| 2-Chloroethyl vinyl ether | 2800 | U | 40000 | 40900 | | ug/L | | 102 | 10 - 159 | 14 | 23 |
| 2-Hexanone | 6800 | U | 80000 | 78500 | | ug/L | | 98 | 57 - 139 | 8 | 25 |
| 4-Methyl-2-pentanone (MIBK) | 3900 | U | 80000 | 83000 | | ug/L | | 104 | 60 - 150 | 8 | 22 |
| Acetone | 7600 | U | 80000 | 82000 | | ug/L | | 102 | 39 - 156 | 1 | 23 |
| Benzene | 640 | U | 20000 | 20600 | | ug/L | | 103 | 65 - 135 | 6 | 20 |
| Bromoform | 760 | U | 20000 | 17400 | | ug/L | | 87 | 62 - 135 | 4 | 27 |
| Bromomethane | 840 | U | 20000 | 21200 | | ug/L | | 106 | 45 - 135 | 15 | 33 |
| Carbon disulfide | 1800 | U | 20000 | 18700 | | ug/L | | 93 | 55 - 143 | 6 | 20 |
| Carbon tetrachloride | 760 | U | 20000 | 20700 | | ug/L | | 104 | 65 - 135 | 3 | 21 |
| Chlorobenzene | 680 | U | 20000 | 19200 | | ug/L | | 96 | 65 - 135 | 7 | 20 |
| Chlorobromomethane | 400 | U | 20000 | 19100 | | ug/L | | 96 | 65 - 135 | 7 | 29 |
| Chlorodibromomethane | 680 | U | 20000 | 18300 | | ug/L | | 92 | 65 - 135 | 7 | 20 |
| Chloroethane | 1600 | U * | 20000 | 23000 | | ug/L | | 115 | 46 - 136 | 13 | 25 |
| Chloroform | 16000 | | 20000 | 37400 | | ug/L | | 109 | 65 - 135 | 0 | 20 |
| Chloromethane | 1200 | U | 20000 | 21400 | | ug/L | | 107 | 34 - 145 | 15 | 24 |
| cis-1,2-Dichloroethene | 600 | U | 20000 | 19800 | | ug/L | | 99 | 65 - 135 | 6 | 20 |
| cis-1,3-Dichloropropene | 640 | U | 20000 | 19100 | | ug/L | | 95 | 65 - 135 | 6 | 26 |
| Cyclohexane | 1100 | U | 20000 | 21300 | | ug/L | | 106 | 62 - 135 | 6 | 20 |
| Dichlorobromomethane | 680 | U | 20000 | 19500 | | ug/L | | 98 | 65 - 135 | 9 | 20 |
| Dichlorodifluoromethane | 1200 | U * | 20000 | 23800 | | ug/L | | 119 | 43 - 142 | 14 | 30 |
| Ethylbenzene | 640 | U | 20000 | 19100 | | ug/L | | 96 | 65 - 135 | 5 | 20 |
| Isopropylbenzene | 760 | U | 20000 | 17900 | | ug/L | | 90 | 65 - 135 | 2 | 20 |
| Methyl acetate | 6600 | U | 40000 | 38600 | | ug/L | | 96 | 52 - 135 | 9 | 27 |
| Methyl tert-butyl ether | 1000 | U | 20000 | 18800 | J | ug/L | | 94 | 54 - 135 | 7 | 21 |
| Methylcyclohexane | 1400 | U | 20000 | 21100 | | ug/L | | 106 | 63 - 135 | 6 | 20 |
| Methylene Chloride | 1700000 | E | 20000 | 1700000 | E 4 | ug/L | | -198 | 54 - 141 | 3 | 26 |
| m-Xylene & p-Xylene | 1400 | U | 20000 | 19200 | | ug/L | | 96 | 65 - 135 | 5 | 20 |
| o-Xylene | 760 | U | 20000 | 19500 | | ug/L | | 97 | 65 - 135 | 5 | 20 |
| Styrene | 680 | U | 20000 | 17600 | | ug/L | | 88 | 65 - 135 | 6 | 26 |
| Tetrachloroethene | 800 | U | 20000 | 19300 | | ug/L | | 96 | 65 - 135 | 6 | 20 |
| Toluene | 680 | U | 20000 | 20900 | | ug/L | | 104 | 65 - 135 | 6 | 20 |
| trans-1,2-Dichloroethene | 600 | U | 20000 | 20900 | | ug/L | | 104 | 65 - 135 | 5 | 24 |
| trans-1,3-Dichloropropene | 760 | U | 20000 | 19500 | | ug/L | | 98 | 65 - 135 | 9 | 26 |
| Trichloroethene | 640 | U | 20000 | 19700 | | ug/L | | 98 | 65 - 135 | 5 | 20 |
| Trichlorofluoromethane | 1200 | U | 20000 | 22100 | | ug/L | | 111 | 53 - 137 | 15 | 27 |
| Vinyl chloride | 400 | U | 20000 | 21900 | | ug/L | | 110 | 40 - 137 | 12 | 24 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *108* | | *70 - 127* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *78 - 120* |
| *Dibromofluoromethane (Surr)* | *103* | | *77 - 120* |
| *Toluene-d8 (Surr)* | *102* | | *80 - 125* |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 280-119359-A-1 MSD** **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445753**

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *70 - 127* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *78 - 120* |
| *Dibromofluoromethane (Surr)* | *105* | | *77 - 120* |
| *Toluene-d8 (Surr)* | *103* | | *80 - 125* |

**Lab Sample ID: 280-119359-C-1 MS** **Client Sample ID: Matrix Spike**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445753**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 640 | U | 20000 | 21700 | | ug/L | | 109 | 65 - 135 |
| 1,1,2,2-Tetrachloroethane | 840 | U | 20000 | 21000 | | ug/L | | 105 | 58 - 135 |
| 1,1,2-Trichloroethane | 1100 | U | 20000 | 21700 | | ug/L | | 109 | 64 - 135 |
| 1,1,2-Trichlorotrifluoroethane | 1700 | U | 20000 | 20500 | | ug/L | | 102 | 65 - 140 |
| 1,1-Dichloroethane | 880 | U | 20000 | 22500 | | ug/L | | 113 | 65 - 135 |
| 1,1-Dichloroethene | 920 | U | 20000 | 20300 | | ug/L | | 102 | 65 - 136 |
| 1,2,3-Trichlorobenzene | 840 | U | 20000 | 20700 | | ug/L | | 104 | 60 - 135 |
| 1,2,4-Trichlorobenzene | 840 | U | 20000 | 20100 | | ug/L | | 101 | 58 - 135 |
| 1,2-Dibromo-3-Chloropropane | 1900 | U | 20000 | 17500 | J | ug/L | | 87 | 57 - 135 |
| 1,2-Dibromoethane | 720 | U | 20000 | 19200 | | ug/L | | 96 | 65 - 135 |
| 1,2-Dichlorobenzene | 5100 | | 20000 | 25400 | | ug/L | | 101 | 65 - 135 |
| 1,2-Dichloroethane | 520 | U | 20000 | 22500 | | ug/L | | 113 | 65 - 135 |
| 1,2-Dichloropropane | 720 | U | 20000 | 22300 | | ug/L | | 111 | 64 - 135 |
| 1,3,5-Trimethylbenzene | 640 | U | 20000 | 20400 | | ug/L | | 102 | 65 - 135 |
| 1,3-Dichlorobenzene | 520 | U | 20000 | 19900 | | ug/L | | 99 | 65 - 135 |
| 1,4-Dichlorobenzene | 640 | U | 20000 | 20100 | | ug/L | | 100 | 65 - 135 |
| 1,4-Dioxane | 230000 | U | 400000 | 422000 | J | ug/L | | 106 | 31 - 147 |
| 2-Butanone (MEK) | 8000 | U | 80000 | 84000 | | ug/L | | 105 | 44 - 177 |
| 2-Chloroethyl vinyl ether | 2800 | U | 40000 | 47000 | | ug/L | | 118 | 10 - 159 |
| 2-Hexanone | 6800 | U | 80000 | 85000 | | ug/L | | 106 | 57 - 139 |
| 4-Methyl-2-pentanone (MIBK) | 3900 | U | 80000 | 89700 | | ug/L | | 112 | 60 - 150 |
| Acetone | 7600 | U | 80000 | 82800 | | ug/L | | 103 | 39 - 156 |
| Benzene | 640 | U | 20000 | 21800 | | ug/L | | 109 | 65 - 135 |
| Bromoform | 760 | U | 20000 | 18100 | | ug/L | | 91 | 62 - 135 |
| Bromomethane | 840 | U | 20000 | 24600 | | ug/L | | 123 | 45 - 135 |
| Carbon disulfide | 1800 | U | 20000 | 19700 | | ug/L | | 99 | 55 - 143 |
| Carbon tetrachloride | 760 | U | 20000 | 21400 | | ug/L | | 107 | 65 - 135 |
| Chlorobenzene | 680 | U | 20000 | 20500 | | ug/L | | 103 | 65 - 135 |
| Chlorobromomethane | 400 | U | 20000 | 20500 | | ug/L | | 102 | 65 - 135 |
| Chlorodibromomethane | 680 | U | 20000 | 19700 | | ug/L | | 99 | 65 - 135 |
| Chloroethane | 1600 | U * | 20000 | 26200 | | ug/L | | 131 | 46 - 136 |
| Chloroform | 16000 | | 20000 | 37600 | | ug/L | | 110 | 65 - 135 |
| Chloromethane | 1200 | U | 20000 | 24800 | | ug/L | | 124 | 34 - 145 |
| cis-1,2-Dichloroethene | 600 | U | 20000 | 21100 | | ug/L | | 105 | 65 - 135 |
| cis-1,3-Dichloropropene | 640 | U | 20000 | 20300 | | ug/L | | 101 | 65 - 135 |
| Cyclohexane | 1100 | U | 20000 | 22600 | | ug/L | | 113 | 62 - 135 |
| Dichlorobromomethane | 680 | U | 20000 | 21400 | | ug/L | | 107 | 65 - 135 |
| Dichlorodifluoromethane | 1200 | U * | 20000 | 27500 | | ug/L | | 137 | 43 - 142 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 280-119359-C-1 MS** **Client Sample ID: Matrix Spike**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445753**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 640 | U | 20000 | 20100 | | ug/L | | 101 | 65 - 135 |
| Isopropylbenzene | 760 | U | 20000 | 18400 | | ug/L | | 92 | 65 - 135 |
| Methyl acetate | 6600 | U | 40000 | 42400 | | ug/L | | 106 | 52 - 135 |
| Methyl tert-butyl ether | 1000 | U | 20000 | 20100 | | ug/L | | 101 | 54 - 135 |
| Methylcyclohexane | 1400 | U | 20000 | 22400 | | ug/L | | 112 | 63 - 135 |
| Methylene Chloride | 1700000 | E | 20000 | 1750000 | E 4 | ug/L | | 60 | 54 - 141 |
| m-Xylene & p-Xylene | 1400 | U | 20000 | 20200 | | ug/L | | 101 | 65 - 135 |
| o-Xylene | 760 | U | 20000 | 20500 | | ug/L | | 103 | 65 - 135 |
| Styrene | 680 | U | 20000 | 18800 | | ug/L | | 94 | 65 - 135 |
| Tetrachloroethene | 800 | U | 20000 | 20400 | | ug/L | | 102 | 65 - 135 |
| Toluene | 680 | U | 20000 | 22300 | | ug/L | | 111 | 65 - 135 |
| trans-1,2-Dichloroethene | 600 | U | 20000 | 21900 | | ug/L | | 110 | 65 - 135 |
| trans-1,3-Dichloropropene | 760 | U | 20000 | 21300 | | ug/L | | 106 | 65 - 135 |
| Trichloroethene | 640 | U | 20000 | 20700 | | ug/L | | 103 | 65 - 135 |
| Trichlorofluoromethane | 1200 | U | 20000 | 25900 | | ug/L | | 129 | 53 - 137 |
| Vinyl chloride | 400 | U | 20000 | 24800 | | ug/L | | 124 | 40 - 137 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *112* | | *70 - 127* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *78 - 120* |
| *Dibromofluoromethane (Surr)* | *108* | | *77 - 120* |
| *Toluene-d8 (Surr)* | *105* | | *80 - 125* |

**Lab Sample ID: 280-119359-C-1 MS** **Client Sample ID: Matrix Spike**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445753**

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 127* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *78 - 120* |
| *Dibromofluoromethane (Surr)* | *102* | | *77 - 120* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 125* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 280-444835/1-A** **Client Sample ID: Method Blank**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445019** **Prep Batch: 444835**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1'-Biphenyl | 0.41 | U | 10 | 0.41 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 1,2,4,5-Tetrachlorobenzene | 2.0 | U | 10 | 2.0 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 1,2,4-Trichlorobenzene | 2.0 | U | 5.0 | 2.0 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 1,2-Dichlorobenzene | 2.0 | U | 5.0 | 2.0 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 1,2-Diphenylhydrazine(as Azobenzene) | 0.54 | U | 10 | 0.54 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 1,3-Dichlorobenzene | 2.0 | U | 10 | 2.0 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 1,3-Dinitrobenzene | 0.97 | U | 10 | 0.97 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 280-444835/1-A** **Client Sample ID: Method Blank**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445019** **Prep Batch: 444835**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | 2.0 | U | 5.0 | 2.0 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 1,4-Dioxane | 0.71 | U | 20 | 0.71 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 1-Methylnaphthalene | 0.35 | U | 4.0 | 0.35 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2,3,4,6-Tetrachlorophenol | 0.96 | U | 50 | 0.96 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2,4,5-Trichlorophenol | 0.52 | U | 10 | 0.52 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2,4,6-Trichlorophenol | 0.74 | U | 10 | 0.74 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2,4-Dichlorophenol | 0.68 | U | 10 | 0.68 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2,4-Dimethylphenol | 0.67 | U | 10 | 0.67 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2,4-Dinitrophenol | 7.5 | U | 30 | 7.5 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2,4-Dinitrotoluene | 0.93 | U | 10 | 0.93 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2,6-Dichlorophenol | 0.75 | U | 10 | 0.75 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2,6-Dinitrotoluene | 0.72 | U | 10 | 0.72 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2-Chloronaphthalene | 0.46 | U | 4.0 | 0.46 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2-Chlorophenol | 0.43 | U | 10 | 0.43 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2-Methylnaphthalene | 0.41 | U | 4.0 | 0.41 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2-Methylphenol | 0.56 | U | 10 | 0.56 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2-Nitroaniline | 0.90 | U | 10 | 0.90 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 2-Nitrophenol | 0.62 | U | 10 | 0.62 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 3 & 4 Methylphenol | 0.40 | U | 10 | 0.40 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 3,3'-Dichlorobenzidine | 0.83 | U | 50 | 0.83 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 3-Methylphenol | 0.40 | U | 10 | 0.40 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 3-Nitroaniline | 0.78 | U | 10 | 0.78 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 4,6-Dinitro-2-methylphenol | 5.9 | U | 50 | 5.9 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 4-Bromophenyl phenyl ether | 0.41 | U | 10 | 0.41 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 4-Chloro-3-methylphenol | 0.45 | U | 10 | 0.45 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 4-Chloroaniline | 0.56 | U | 10 | 0.56 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 4-Chlorophenyl phenyl ether | 0.63 | U | 10 | 0.63 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 4-Methylphenol | 0.40 | U | 10 | 0.40 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 4-Nitroaniline | 0.84 | U | 10 | 0.84 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| 4-Nitrophenol | 1.0 | U | 10 | 1.0 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Acenaphthene | 0.45 | U | 4.0 | 0.45 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Acenaphthylene | 0.50 | U | 4.0 | 0.50 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Acetophenone | 0.52 | U | 10 | 0.52 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Aniline | 0.88 | U | 10 | 0.88 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Anthracene | 0.45 | U | 4.0 | 0.45 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Azobenzene | 0.54 | U | 4.0 | 0.54 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Benzaldehyde | 0.53 | U | 10 | 0.53 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Benzidine | 4.4 | U | 100 | 4.4 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Benzo[a]anthracene | 0.58 | U | 4.0 | 0.58 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Benzo[a]pyrene | 0.64 | U | 4.0 | 0.64 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Benzo[b]fluoranthene | 0.53 | U | 4.0 | 0.53 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Benzo[g,h,i]perylene | 0.79 | U | 4.0 | 0.79 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Benzo[k]fluoranthene | 0.56 | U | 4.0 | 0.56 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Benzoic acid | 5.7 | U | 25 | 5.7 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Benzyl alcohol | 0.35 | U | 10 | 0.35 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| bis (2-chloroisopropyl) ether | 0.42 | U | 10 | 0.42 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Bis(2-chloroethoxy)methane | 0.61 | U | 10 | 0.61 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Bis(2-chloroethyl)ether | 0.49 | U | 10 | 0.49 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 280-444835/1-A** **Client Sample ID: Method Blank**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445019** **Prep Batch: 444835**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bis(2-ethylhexyl) phthalate | 1.1 | U | 10 | 1.1 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Butyl benzyl phthalate | 2.0 | U | 5.0 | 2.0 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Caprolactam | 1.2 | U | 10 | 1.2 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Carbazole | 0.45 | U | 4.0 | 0.45 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Chrysene | 0.52 | U | 4.0 | 0.52 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Dibenz(a,h)anthracene | 0.65 | U | 4.0 | 0.65 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Dibenzofuran | 0.36 | U | 4.0 | 0.36 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Diethyl phthalate | 0.75 | U | 4.0 | 0.75 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Dimethyl phthalate | 0.53 | U | 4.0 | 0.53 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Di-n-butyl phthalate | 0.88 | U | 4.0 | 0.88 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Di-n-octyl phthalate | 1.6 | U | 5.0 | 1.6 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Diphenylamine | 0.49 | U | 10 | 0.49 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Famphur | 2.0 | U | 100 | 2.0 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Fluoranthene | 0.64 | U | 4.0 | 0.64 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Fluorene | 0.49 | U | 4.0 | 0.49 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Hexachlorobenzene | 0.96 | U | 10 | 0.96 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Hexachlorobutadiene | 7.5 | U | 30 | 7.5 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Hexachlorocyclopentadiene | 6.6 | U | 50 | 6.6 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Hexachloroethane | 7.6 | U | 30 | 7.6 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Hexadecane | 0.35 | U | 10 | 0.35 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Indeno[1,2,3-cd]pyrene | 1.6 | U | 4.0 | 1.6 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Isophorone | 0.67 | U | 10 | 0.67 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Naphthalene | 0.40 | U | 4.0 | 0.40 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Nitrobenzene | 0.43 | U | 10 | 0.43 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| N-Nitrosodimethylamine | 0.62 | U | 10 | 0.62 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| N-Nitrosodi-n-propylamine | 0.56 | U | 10 | 0.56 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| N-Nitrosodiphenylamine | 0.61 | U | 10 | 0.61 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Pentachlorophenol | 5.5 | U | 50 | 5.5 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Phenanthrene | 0.28 | U | 4.0 | 0.28 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Phenol | 0.56 | U | 10 | 0.56 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Pyrene | 0.43 | U | 10 | 0.43 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |
| Pyridine | 1.8 | U | 20 | 1.8 | ug/L | | 01/21/19 06:56 | 01/22/19 17:40 | 1 |

| *Tentatively Identified Compound* | *MB Est. Result* | *MB Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | *01/21/19 06:56* | *01/22/19 17:40* | *1* |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol (Surr)* | *73* | | *52 - 123* | *01/21/19 06:56* | *01/22/19 17:40* | *1* |
| *2-Fluorobiphenyl* | *56* | | *47 - 119* | *01/21/19 06:56* | *01/22/19 17:40* | *1* |
| *2-Fluorophenol (Surr)* | *44* | | *17 - 71* | *01/21/19 06:56* | *01/22/19 17:40* | *1* |
| *Nitrobenzene-d5 (Surr)* | *59* | | *45 - 113* | *01/21/19 06:56* | *01/22/19 17:40* | *1* |
| *Phenol-d5 (Surr)* | *30* | | *10 - 52* | *01/21/19 06:56* | *01/22/19 17:40* | *1* |
| *Terphenyl-d14 (Surr)* | *81* | | *50 - 123* | *01/21/19 06:56* | *01/22/19 17:40* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 280-444835/2-A** **Client Sample ID: Lab Control Sample**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445019** **Prep Batch: 444835**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1'-Biphenyl | 80.0 | 65.2 | | ug/L | | 81 | 53 - 116 |
| 1,2,4,5-Tetrachlorobenzene | 80.0 | 67.4 | | ug/L | | 84 | 52 - 110 |
| 1,2,4-Trichlorobenzene | 80.0 | 62.7 | | ug/L | | 78 | 47 - 103 |
| 1,2-Dichlorobenzene | 80.0 | 56.8 | | ug/L | | 71 | 44 - 103 |
| 1,2-Diphenylhydrazine(as Azobenzene) | 80.9 | 67.5 | | ug/L | | 83 | 59 - 116 |
| 1,3-Dichlorobenzene | 80.0 | 56.1 | | ug/L | | 70 | 42 - 100 |
| 1,3-Dinitrobenzene | 80.0 | 69.6 | | ug/L | | 87 | 66 - 124 |
| 1,4-Dichlorobenzene | 80.0 | 56.9 | | ug/L | | 71 | 43 - 101 |
| 1,4-Dioxane | 80.0 | 31.8 | | ug/L | | 40 | 20 - 63 |
| 1-Methylnaphthalene | 80.0 | 70.4 | | ug/L | | 88 | 57 - 108 |
| 2,3,4,6-Tetrachlorophenol | 80.0 | 69.3 | | ug/L | | 87 | 53 - 129 |
| 2,4,5-Trichlorophenol | 80.0 | 67.2 | | ug/L | | 84 | 58 - 121 |
| 2,4,6-Trichlorophenol | 80.0 | 70.1 | | ug/L | | 88 | 52 - 132 |
| 2,4-Dichlorophenol | 80.0 | 68.8 | | ug/L | | 86 | 60 - 108 |
| 2,4-Dimethylphenol | 80.0 | 66.7 | | ug/L | | 83 | 54 - 105 |
| 2,4-Dinitrophenol | 160 | 126 | | ug/L | | 79 | 38 - 125 |
| 2,4-Dinitrotoluene | 80.0 | 68.9 | | ug/L | | 86 | 63 - 124 |
| 2,6-Dichlorophenol | 80.0 | 69.6 | | ug/L | | 87 | 56 - 114 |
| 2,6-Dinitrotoluene | 80.0 | 68.8 | | ug/L | | 86 | 64 - 123 |
| 2-Chloronaphthalene | 80.0 | 63.9 | | ug/L | | 80 | 52 - 116 |
| 2-Chlorophenol | 80.0 | 58.5 | | ug/L | | 73 | 50 - 105 |
| 2-Methylnaphthalene | 80.0 | 68.6 | | ug/L | | 86 | 55 - 107 |
| 2-Methylphenol | 80.0 | 54.1 | | ug/L | | 68 | 43 - 94 |
| 2-Nitroaniline | 80.0 | 65.3 | | ug/L | | 82 | 59 - 121 |
| 2-Nitrophenol | 80.0 | 66.7 | | ug/L | | 83 | 58 - 110 |
| 3 & 4 Methylphenol | 80.0 | 49.8 | | ug/L | | 62 | 34 - 88 |
| 3,3'-Dichlorobenzidine | 160 | 148 | | ug/L | | 93 | 38 - 118 |
| 3-Nitroaniline | 80.0 | 55.7 | | ug/L | | 70 | 40 - 108 |
| 4,6-Dinitro-2-methylphenol | 160 | 167 | | ug/L | | 104 | 48 - 126 |
| 4-Bromophenyl phenyl ether | 80.0 | 72.8 | | ug/L | | 91 | 60 - 115 |
| 4-Chloro-3-methylphenol | 80.0 | 69.5 | | ug/L | | 87 | 63 - 107 |
| 4-Chloroaniline | 80.0 | 60.6 | | ug/L | | 76 | 41 - 93 |
| 4-Chlorophenyl phenyl ether | 80.0 | 66.5 | | ug/L | | 83 | 57 - 120 |
| 4-Methylphenol | 80.0 | 49.8 | | ug/L | | 62 | 34 - 88 |
| 4-Nitroaniline | 80.0 | 65.6 | | ug/L | | 82 | 55 - 123 |
| 4-Nitrophenol | 160 | 52.3 | | ug/L | | 33 | 15 - 60 |
| Acenaphthene | 80.0 | 66.1 | | ug/L | | 83 | 52 - 122 |
| Acenaphthylene | 80.0 | 65.3 | | ug/L | | 82 | 58 - 112 |
| Acetophenone | 80.0 | 64.3 | | ug/L | | 80 | 58 - 108 |
| Aniline | 80.0 | 51.2 | | ug/L | | 64 | 29 - 87 |
| Anthracene | 80.0 | 75.1 | | ug/L | | 94 | 62 - 113 |
| Azobenzene | 80.0 | 66.7 | | ug/L | | 83 | 59 - 115 |
| Benzaldehyde | 80.0 | 38.2 | | ug/L | | 48 | 31 - 91 |
| Benzidine | 160 | 64.7 | J | ug/L | | 40 | 5 - 82 |
| Benzo[a]anthracene | 80.0 | 68.1 | | ug/L | | 85 | 61 - 115 |
| Benzo[a]pyrene | 80.0 | 74.7 | | ug/L | | 93 | 61 - 114 |
| Benzo[b]fluoranthene | 80.0 | 75.4 | | ug/L | | 94 | 61 - 117 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 280-444835/2-A** **Client Sample ID: Lab Control Sample**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445019** **Prep Batch: 444835**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzo[g,h,i]perylene | 80.0 | 75.4 | | ug/L | | 94 | 67 - 111 |
| Benzo[k]fluoranthene | 80.0 | 75.7 | | ug/L | | 95 | 69 - 119 |
| Benzoic acid | 80.0 | 20.9 | J | ug/L | | 26 | 10 - 54 |
| Benzyl alcohol | 80.0 | 52.5 | | ug/L | | 66 | 40 - 91 |
| bis (2-chloroisopropyl) ether | 80.0 | 60.7 | | ug/L | | 76 | 49 - 114 |
| Bis(2-chloroethoxy)methane | 80.0 | 67.8 | | ug/L | | 85 | 61 - 107 |
| Bis(2-chloroethyl)ether | 80.0 | 64.9 | | ug/L | | 81 | 56 - 112 |
| Bis(2-ethylhexyl) phthalate | 80.0 | 72.7 | | ug/L | | 91 | 60 - 116 |
| Butyl benzyl phthalate | 80.0 | 70.3 | | ug/L | | 88 | 66 - 111 |
| Caprolactam | 80.0 | 14.6 | | ug/L | | 18 | 10 - 50 |
| Carbazole | 80.0 | 74.4 | | ug/L | | 93 | 69 - 109 |
| Chrysene | 80.0 | 72.4 | | ug/L | | 90 | 63 - 118 |
| Dibenz(a,h)anthracene | 80.0 | 76.4 | | ug/L | | 96 | 65 - 111 |
| Dibenzofuran | 80.0 | 67.0 | | ug/L | | 84 | 58 - 116 |
| Diethyl phthalate | 80.0 | 68.1 | | ug/L | | 85 | 65 - 121 |
| Dimethyl phthalate | 80.0 | 67.4 | | ug/L | | 84 | 63 - 120 |
| Di-n-butyl phthalate | 80.0 | 74.6 | | ug/L | | 93 | 68 - 110 |
| Di-n-octyl phthalate | 80.0 | 73.0 | | ug/L | | 91 | 60 - 111 |
| Diphenylamine | 68.0 | 57.9 | | ug/L | | 85 | 62 - 118 |
| Fluoranthene | 80.0 | 74.3 | | ug/L | | 93 | 68 - 111 |
| Fluorene | 80.0 | 67.8 | | ug/L | | 85 | 48 - 130 |
| Hexachlorobenzene | 80.0 | 75.7 | | ug/L | | 95 | 64 - 112 |
| Hexachlorobutadiene | 80.0 | 62.6 | | ug/L | | 78 | 41 - 102 |
| Hexachlorocyclopentadiene | 160 | 114 | | ug/L | | 71 | 27 - 107 |
| Hexachloroethane | 80.0 | 53.2 | | ug/L | | 66 | 39 - 100 |
| Hexadecane | 80.0 | 64.8 | | ug/L | | 81 | 54 - 112 |
| Indeno[1,2,3-cd]pyrene | 80.0 | 72.2 | | ug/L | | 90 | 56 - 111 |
| Isophorone | 80.0 | 66.8 | | ug/L | | 84 | 59 - 100 |
| Naphthalene | 80.0 | 64.9 | | ug/L | | 81 | 53 - 105 |
| Nitrobenzene | 80.0 | 65.2 | | ug/L | | 82 | 56 - 106 |
| N-Nitrosodimethylamine | 80.0 | 33.3 | | ug/L | | 42 | 22 - 70 |
| N-Nitrosodi-n-propylamine | 80.0 | 65.6 | | ug/L | | 82 | 59 - 106 |
| N-Nitrosodiphenylamine | 80.0 | 75.9 | | ug/L | | 95 | 64 - 112 |
| Pentachlorophenol | 160 | 147 | | ug/L | | 92 | 41 - 121 |
| Phenanthrene | 80.0 | 74.8 | | ug/L | | 93 | 63 - 113 |
| Phenol | 80.0 | 22.9 | | ug/L | | 29 | 11 - 52 |
| Pyrene | 80.0 | 72.4 | | ug/L | | 91 | 62 - 114 |
| Pyridine | 160 | 59.1 | | ug/L | | 37 | 10 - 69 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *2,4,6-Tribromophenol (Surr)* | *86* | | *52 - 123* |
| *2-Fluorobiphenyl* | *80* | | *47 - 119* |
| *2-Fluorophenol (Surr)* | *42* | | *17 - 71* |
| *Nitrobenzene-d5 (Surr)* | *82* | | *45 - 113* |
| *Phenol-d5 (Surr)* | *26* | | *10 - 52* |
| *Terphenyl-d14 (Surr)* | *82* | | *50 - 123* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 280-444835/3-A** **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445019** **Prep Batch: 444835**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1'-Biphenyl | 80.0 | 60.9 | | ug/L | | 76 | 53 - 116 | 7 | 30 |
| 1,2,4,5-Tetrachlorobenzene | 80.0 | 60.7 | | ug/L | | 76 | 52 - 110 | 11 | 30 |
| 1,2,4-Trichlorobenzene | 80.0 | 56.6 | | ug/L | | 71 | 47 - 103 | 10 | 30 |
| 1,2-Dichlorobenzene | 80.0 | 51.7 | | ug/L | | 65 | 44 - 103 | 9 | 30 |
| 1,2-Diphenylhydrazine(as Azobenzene) | 80.9 | 66.1 | | ug/L | | 82 | 59 - 116 | 2 | 30 |
| 1,3-Dichlorobenzene | 80.0 | 49.8 | | ug/L | | 62 | 42 - 100 | 12 | 30 |
| 1,3-Dinitrobenzene | 80.0 | 66.9 | | ug/L | | 84 | 66 - 124 | 4 | 30 |
| 1,4-Dichlorobenzene | 80.0 | 51.0 | | ug/L | | 64 | 43 - 101 | 11 | 30 |
| 1,4-Dioxane | 80.0 | 25.1 | | ug/L | | 31 | 20 - 63 | 23 | 30 |
| 1-Methylnaphthalene | 80.0 | 64.2 | | ug/L | | 80 | 57 - 108 | 9 | 30 |
| 2,3,4,6-Tetrachlorophenol | 80.0 | 66.2 | | ug/L | | 83 | 53 - 129 | 5 | 30 |
| 2,4,5-Trichlorophenol | 80.0 | 64.6 | | ug/L | | 81 | 58 - 121 | 4 | 30 |
| 2,4,6-Trichlorophenol | 80.0 | 65.6 | | ug/L | | 82 | 52 - 132 | 7 | 30 |
| 2,4-Dichlorophenol | 80.0 | 61.0 | | ug/L | | 76 | 60 - 108 | 12 | 30 |
| 2,4-Dimethylphenol | 80.0 | 59.3 | | ug/L | | 74 | 54 - 105 | 12 | 30 |
| 2,4-Dinitrophenol | 160 | 124 | | ug/L | | 77 | 38 - 125 | 2 | 30 |
| 2,4-Dinitrotoluene | 80.0 | 66.5 | | ug/L | | 83 | 63 - 124 | 4 | 30 |
| 2,6-Dichlorophenol | 80.0 | 62.9 | | ug/L | | 79 | 56 - 114 | 10 | 50 |
| 2,6-Dinitrotoluene | 80.0 | 65.9 | | ug/L | | 82 | 64 - 123 | 4 | 30 |
| 2-Chloronaphthalene | 80.0 | 59.4 | | ug/L | | 74 | 52 - 116 | 7 | 30 |
| 2-Chlorophenol | 80.0 | 55.2 | | ug/L | | 69 | 50 - 105 | 6 | 30 |
| 2-Methylnaphthalene | 80.0 | 63.0 | | ug/L | | 79 | 55 - 107 | 9 | 30 |
| 2-Methylphenol | 80.0 | 55.2 | | ug/L | | 69 | 43 - 94 | 2 | 30 |
| 2-Nitroaniline | 80.0 | 63.3 | | ug/L | | 79 | 59 - 121 | 3 | 30 |
| 2-Nitrophenol | 80.0 | 61.5 | | ug/L | | 77 | 58 - 110 | 8 | 30 |
| 3 & 4 Methylphenol | 80.0 | 55.5 | | ug/L | | 69 | 34 - 88 | 11 | 30 |
| 3,3'-Dichlorobenzidine | 160 | 147 | | ug/L | | 92 | 38 - 118 | 1 | 30 |
| 3-Nitroaniline | 80.0 | 57.9 | | ug/L | | 72 | 40 - 108 | 4 | 30 |
| 4,6-Dinitro-2-methylphenol | 160 | 160 | | ug/L | | 100 | 48 - 126 | 4 | 30 |
| 4-Bromophenyl phenyl ether | 80.0 | 70.8 | | ug/L | | 88 | 60 - 115 | 3 | 30 |
| 4-Chloro-3-methylphenol | 80.0 | 65.9 | | ug/L | | 82 | 63 - 107 | 5 | 30 |
| 4-Chloroaniline | 80.0 | 32.4 | * | ug/L | | 40 | 41 - 93 | 61 | 30 |
| 4-Chlorophenyl phenyl ether | 80.0 | 64.1 | | ug/L | | 80 | 57 - 120 | 4 | 30 |
| 4-Methylphenol | 80.0 | 55.5 | | ug/L | | 69 | 34 - 88 | 11 | 30 |
| 4-Nitroaniline | 80.0 | 63.8 | | ug/L | | 80 | 55 - 123 | 3 | 30 |
| 4-Nitrophenol | 160 | 79.5 | * | ug/L | | 50 | 15 - 60 | 41 | 30 |
| Acenaphthene | 80.0 | 61.9 | | ug/L | | 77 | 52 - 122 | 7 | 30 |
| Acenaphthylene | 80.0 | 61.7 | | ug/L | | 77 | 58 - 112 | 6 | 30 |
| Acetophenone | 80.0 | 59.3 | | ug/L | | 74 | 58 - 108 | 8 | 30 |
| Aniline | 80.0 | 2.37 | J * | ug/L | | 3 | 29 - 87 | 182 | 30 |
| Anthracene | 80.0 | 73.4 | | ug/L | | 92 | 62 - 113 | 2 | 30 |
| Azobenzene | 80.0 | 65.4 | | ug/L | | 82 | 59 - 115 | 2 | 30 |
| Benzaldehyde | 80.0 | 48.5 | | ug/L | | 61 | 31 - 91 | 24 | 50 |
| Benzidine | 160 | 13.9 | J * | ug/L | | 9 | 5 - 82 | 129 | 50 |
| Benzo[a]anthracene | 80.0 | 65.5 | | ug/L | | 82 | 61 - 115 | 4 | 30 |
| Benzo[a]pyrene | 80.0 | 72.3 | | ug/L | | 90 | 61 - 114 | 3 | 30 |
| Benzo[b]fluoranthene | 80.0 | 72.6 | | ug/L | | 91 | 61 - 117 | 4 | 30 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 280-444835/3-A** **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 445019** **Prep Batch: 444835**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[g,h,i]perylene | 80.0 | 74.2 | | ug/L | | 93 | 67 - 111 | 2 | 30 |
| Benzo[k]fluoranthene | 80.0 | 73.7 | | ug/L | | 92 | 69 - 119 | 3 | 30 |
| Benzoic acid | 80.0 | 30.3 | * | ug/L | | 38 | 10 - 54 | 36 | 30 |
| Benzyl alcohol | 80.0 | 46.1 | | ug/L | | 58 | 40 - 91 | 13 | 30 |
| bis (2-chloroisopropyl) ether | 80.0 | 55.3 | | ug/L | | 69 | 49 - 114 | 9 | 30 |
| Bis(2-chloroethoxy)methane | 80.0 | 61.2 | | ug/L | | 77 | 61 - 107 | 10 | 30 |
| Bis(2-chloroethyl)ether | 80.0 | 58.5 | | ug/L | | 73 | 56 - 112 | 10 | 30 |
| Bis(2-ethylhexyl) phthalate | 80.0 | 72.0 | | ug/L | | 90 | 60 - 116 | 1 | 30 |
| Butyl benzyl phthalate | 80.0 | 68.9 | | ug/L | | 86 | 66 - 111 | 2 | 30 |
| Caprolactam | 80.0 | 13.1 | | ug/L | | 16 | 10 - 50 | 11 | 30 |
| Carbazole | 80.0 | 71.9 | | ug/L | | 90 | 69 - 109 | 3 | 30 |
| Chrysene | 80.0 | 70.2 | | ug/L | | 88 | 63 - 118 | 3 | 30 |
| Dibenz(a,h)anthracene | 80.0 | 74.5 | | ug/L | | 93 | 65 - 111 | 3 | 30 |
| Dibenzofuran | 80.0 | 63.5 | | ug/L | | 79 | 58 - 116 | 5 | 30 |
| Diethyl phthalate | 80.0 | 66.8 | | ug/L | | 84 | 65 - 121 | 2 | 30 |
| Dimethyl phthalate | 80.0 | 65.7 | | ug/L | | 82 | 63 - 120 | 3 | 30 |
| Di-n-butyl phthalate | 80.0 | 72.6 | | ug/L | | 91 | 68 - 110 | 3 | 30 |
| Di-n-octyl phthalate | 80.0 | 71.2 | | ug/L | | 89 | 60 - 111 | 3 | 30 |
| Diphenylamine | 68.0 | 55.6 | | ug/L | | 82 | 62 - 118 | 4 | 50 |
| Fluoranthene | 80.0 | 70.6 | | ug/L | | 88 | 68 - 111 | 5 | 30 |
| Fluorene | 80.0 | 65.0 | | ug/L | | 81 | 48 - 130 | 4 | 30 |
| Hexachlorobenzene | 80.0 | 72.6 | | ug/L | | 91 | 64 - 112 | 4 | 30 |
| Hexachlorobutadiene | 80.0 | 56.1 | | ug/L | | 70 | 41 - 102 | 11 | 30 |
| Hexachlorocyclopentadiene | 160 | 105 | | ug/L | | 66 | 27 - 107 | 8 | 50 |
| Hexachloroethane | 80.0 | 46.9 | | ug/L | | 59 | 39 - 100 | 12 | 30 |
| Hexadecane | 80.0 | 61.4 | | ug/L | | 77 | 54 - 112 | 5 | 30 |
| Indeno[1,2,3-cd]pyrene | 80.0 | 71.0 | | ug/L | | 89 | 56 - 111 | 2 | 30 |
| Isophorone | 80.0 | 60.8 | | ug/L | | 76 | 59 - 100 | 9 | 30 |
| Naphthalene | 80.0 | 60.0 | | ug/L | | 75 | 53 - 105 | 8 | 30 |
| Nitrobenzene | 80.0 | 59.8 | | ug/L | | 75 | 56 - 106 | 9 | 30 |
| N-Nitrosodimethylamine | 80.0 | 28.1 | | ug/L | | 35 | 22 - 70 | 17 | 34 |
| N-Nitrosodi-n-propylamine | 80.0 | 59.6 | | ug/L | | 74 | 59 - 106 | 10 | 30 |
| N-Nitrosodiphenylamine | 80.0 | 73.0 | | ug/L | | 91 | 64 - 112 | 4 | 30 |
| Pentachlorophenol | 160 | 147 | | ug/L | | 92 | 41 - 121 | 0 | 30 |
| Phenanthrene | 80.0 | 72.7 | | ug/L | | 91 | 63 - 113 | 3 | 30 |
| Phenol | 80.0 | 31.7 | * | ug/L | | 40 | 11 - 52 | 32 | 30 |
| Pyrene | 80.0 | 70.4 | | ug/L | | 88 | 62 - 114 | 3 | 30 |
| Pyridine | 160 | 1.8 | U * | ug/L | | 0 | 10 - 69 | 200 | 41 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *2,4,6-Tribromophenol (Surr)* | *84* | | *52 - 123* |
| *2-Fluorobiphenyl* | *74* | | *47 - 119* |
| *2-Fluorophenol (Surr)* | *54* | | *17 - 71* |
| *Nitrobenzene-d5 (Surr)* | *75* | | *45 - 113* |
| *Phenol-d5 (Surr)* | *38* | | *10 - 52* |
| *Terphenyl-d14 (Surr)* | *82* | | *50 - 123* |

## Method: 8081B - Organochlorine Pesticides (GC)

**Lab Sample ID: MB 280-444680/1-A** **Client Sample ID: Method Blank**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 444894** **Prep Batch: 444680**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.0077 | U | 0.050 | 0.0077 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| 4,4'-DDE | 0.0075 | U | 0.050 | 0.0075 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| 4,4'-DDT | 0.015 | U | 0.050 | 0.015 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Aldrin | 0.0059 | U | 0.050 | 0.0059 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| alpha-BHC | 0.0053 | U | 0.050 | 0.0053 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| alpha-Chlordane | 0.0053 | U | 0.050 | 0.0053 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| beta-BHC | 0.0087 | U | 0.050 | 0.0087 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| delta-BHC | 0.0058 | U | 0.050 | 0.0058 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Dieldrin | 0.0063 | U | 0.050 | 0.0063 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Endosulfan I | 0.0058 | U | 0.050 | 0.0058 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Endosulfan II | 0.0070 | U | 0.050 | 0.0070 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Endosulfan sulfate | 0.0057 | U | 0.050 | 0.0057 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Endrin | 0.0079 | U | 0.050 | 0.0079 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Endrin aldehyde | 0.0088 | U | 0.050 | 0.0088 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Endrin ketone | 0.0070 | U | 0.050 | 0.0070 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| gamma-BHC (Lindane) | 0.0069 | U | 0.050 | 0.0069 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| gamma-Chlordane | 0.0091 | U | 0.050 | 0.0091 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Heptachlor | 0.0077 | U | 0.050 | 0.0077 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Heptachlor epoxide | 0.0075 | U | 0.050 | 0.0075 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Methoxychlor | 0.013 | U | 0.10 | 0.013 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |
| Toxaphene | 0.37 | U | 2.0 | 0.37 | ug/L | | 01/18/19 12:03 | 01/23/19 01:19 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *70* | | *34 - 122* | *01/18/19 12:03* | *01/23/19 01:19* | *1* |
| *Tetrachloro-m-xylene* | *54* | | *28 - 115* | *01/18/19 12:03* | *01/23/19 01:19* | *1* |

**Lab Sample ID: LCS 280-444680/2-A** **Client Sample ID: Lab Control Sample**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 444894** **Prep Batch: 444680**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.457 | | ug/L | | 91 | 73 - 115 |
| 4,4'-DDE | 0.500 | 0.421 | | ug/L | | 84 | 71 - 112 |
| 4,4'-DDT | 0.500 | 0.407 | | ug/L | | 81 | 71 - 121 |
| Aldrin | 0.500 | 0.408 | | ug/L | | 82 | 50 - 114 |
| alpha-BHC | 0.500 | 0.433 | | ug/L | | 87 | 68 - 113 |
| alpha-Chlordane | 0.500 | 0.417 | | ug/L | | 83 | 70 - 113 |
| beta-BHC | 0.500 | 0.442 | | ug/L | | 88 | 54 - 113 |
| delta-BHC | 0.500 | 0.452 | | ug/L | | 90 | 72 - 113 |
| Dieldrin | 0.500 | 0.434 | | ug/L | | 87 | 74 - 116 |
| Endosulfan I | 0.500 | 0.398 | | ug/L | | 80 | 69 - 111 |
| Endosulfan II | 0.500 | 0.388 | | ug/L | | 78 | 69 - 109 |
| Endosulfan sulfate | 0.500 | 0.417 | | ug/L | | 83 | 71 - 116 |
| Endrin | 0.500 | 0.430 | | ug/L | | 86 | 69 - 128 |
| Endrin aldehyde | 0.500 | 0.376 | | ug/L | | 75 | 47 - 119 |
| Endrin ketone | 0.500 | 0.423 | | ug/L | | 85 | 65 - 113 |
| gamma-BHC (Lindane) | 0.500 | 0.459 | | ug/L | | 92 | 70 - 112 |
| gamma-Chlordane | 0.500 | 0.430 | | ug/L | | 86 | 65 - 121 |

## Method: 8081B - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID: LCS 280-444680/2-A** **Client Sample ID: Lab Control Sample**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 444894** **Prep Batch: 444680**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Heptachlor | 0.500 | 0.420 | | ug/L | | 84 | 61 - 115 |
| Heptachlor epoxide | 0.500 | 0.430 | | ug/L | | 86 | 72 - 114 |
| Methoxychlor | 0.500 | 0.432 | | ug/L | | 86 | 66 - 131 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *DCB Decachlorobiphenyl* | *86* | | *34 - 122* |
| *Tetrachloro-m-xylene* | *74* | | *28 - 115* |

**Lab Sample ID: LCSD 280-444680/3-A** **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 444894** **Prep Batch: 444680**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.504 | | ug/L | | 101 | 73 - 115 | 10 | 50 |
| 4,4'-DDE | 0.500 | 0.466 | | ug/L | | 93 | 71 - 112 | 10 | 50 |
| 4,4'-DDT | 0.500 | 0.444 | | ug/L | | 89 | 71 - 121 | 9 | 25 |
| Aldrin | 0.500 | 0.453 | | ug/L | | 91 | 50 - 114 | 10 | 33 |
| alpha-BHC | 0.500 | 0.474 | | ug/L | | 95 | 68 - 113 | 9 | 50 |
| alpha-Chlordane | 0.500 | 0.459 | | ug/L | | 92 | 70 - 113 | 10 | 50 |
| beta-BHC | 0.500 | 0.485 | | ug/L | | 97 | 54 - 113 | 9 | 50 |
| delta-BHC | 0.500 | 0.496 | | ug/L | | 99 | 72 - 113 | 9 | 50 |
| Dieldrin | 0.500 | 0.476 | | ug/L | | 95 | 74 - 116 | 9 | 22 |
| Endosulfan I | 0.500 | 0.438 | | ug/L | | 88 | 69 - 111 | 10 | 50 |
| Endosulfan II | 0.500 | 0.424 | | ug/L | | 85 | 69 - 109 | 9 | 50 |
| Endosulfan sulfate | 0.500 | 0.455 | | ug/L | | 91 | 71 - 116 | 9 | 50 |
| Endrin | 0.500 | 0.466 | | ug/L | | 93 | 69 - 128 | 8 | 39 |
| Endrin aldehyde | 0.500 | 0.406 | | ug/L | | 81 | 47 - 119 | 8 | 50 |
| Endrin ketone | 0.500 | 0.466 | | ug/L | | 93 | 65 - 113 | 10 | 50 |
| gamma-BHC (Lindane) | 0.500 | 0.507 | | ug/L | | 101 | 70 - 112 | 10 | 26 |
| gamma-Chlordane | 0.500 | 0.479 | | ug/L | | 96 | 65 - 121 | 11 | 50 |
| Heptachlor | 0.500 | 0.462 | | ug/L | | 92 | 61 - 115 | 10 | 27 |
| Heptachlor epoxide | 0.500 | 0.472 | | ug/L | | 94 | 72 - 114 | 9 | 50 |
| Methoxychlor | 0.500 | 0.468 | | ug/L | | 94 | 66 - 131 | 8 | 50 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *DCB Decachlorobiphenyl* | *95* | | *34 - 122* |
| *Tetrachloro-m-xylene* | *85* | | *28 - 115* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Lab Sample ID: MB 280-444887/1-A** **Client Sample ID: Method Blank**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 446463** **Prep Batch: 444887**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | 0.21 | U | 1.0 | 0.21 | ug/L | | 01/21/19 11:30 | 02/05/19 14:49 | 1 |
| PCB-1016 | 0.12 | U | 1.0 | 0.12 | ug/L | | 01/21/19 11:30 | 02/05/19 14:49 | 1 |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

**Lab Sample ID: MB 280-444887/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 446463** — **Prep Batch: 444887**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | 0.17 | U | 1.0 | 0.17 | ug/L | | 01/21/19 11:30 | 02/05/19 14:49 | 1 |
| PCB-1242 | 0.10 | U | 1.0 | 0.10 | ug/L | | 01/21/19 11:30 | 02/05/19 14:49 | 1 |
| PCB-1248 | 0.092 | U | 1.0 | 0.092 | ug/L | | 01/21/19 11:30 | 02/05/19 14:49 | 1 |
| PCB-1254 | 0.11 | U | 1.0 | 0.11 | ug/L | | 01/21/19 11:30 | 02/05/19 14:49 | 1 |
| PCB-1260 | 0.16 | U | 1.0 | 0.16 | ug/L | | 01/21/19 11:30 | 02/05/19 14:49 | 1 |
| PCB-1262 | 0.085 | U | 1.0 | 0.085 | ug/L | | 01/21/19 11:30 | 02/05/19 14:49 | 1 |
| PCB-1268 | 0.36 | U | 1.0 | 0.36 | ug/L | | 01/21/19 11:30 | 02/05/19 14:49 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *73* | | *25 - 120* | *01/21/19 11:30* | *02/05/19 14:49* | *1* |
| *DCB Decachlorobiphenyl* | *77* | | *30 - 136* | *01/21/19 11:30* | *02/05/19 14:49* | *1* |

**Lab Sample ID: LCS 280-444887/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 446463** — **Prep Batch: 444887**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | | | 2.00 | 1.85 | | ug/L | | 92 | 71 - 128 | | |
| PCB-1260 | | | 2.00 | 1.92 | | ug/L | | 96 | 75 - 126 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Tetrachloro-m-xylene* | *90* | | *25 - 120* |
| *DCB Decachlorobiphenyl* | *84* | | *30 - 136* |

**Lab Sample ID: LCSD 280-444887/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 446463** — **Prep Batch: 444887**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | | | 2.00 | 1.85 | | ug/L | | 93 | 71 - 128 | 0 | 30 |
| PCB-1260 | | | 2.00 | 1.95 | | ug/L | | 97 | 75 - 126 | 2 | 30 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Tetrachloro-m-xylene* | *93* | | *25 - 120* |
| *DCB Decachlorobiphenyl* | *88* | | *30 - 136* |

## Method: 1613B - Dioxins and Furans (HRGC/HRMS)

**Lab Sample ID: MB 140-27087/10-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 27191** — **Prep Batch: 27087**

| Analyte | MB Result | MB Qualifier | RL | EDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 0.44 | U | 10 | 0.44 | pg/L | | 01/22/19 13:19 | 01/28/19 03:56 | 1 |

| *Isotope Dilution* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C-2,3,7,8-TCDD* | *84* | | *25 - 164* | *01/22/19 13:19* | *01/28/19 03:56* | *1* |

## Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

**Lab Sample ID: MB 140-27087/10-A** **Client Sample ID: Method Blank**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 27191** **Prep Batch: 27087**

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 37Cl4-2,3,7,8-TCDD | 97 | | 35 - 197 | 01/22/19 13:19 | 01/28/19 03:56 | 1 |

**Lab Sample ID: LCS 140-27087/11-A** **Client Sample ID: Lab Control Sample**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 27191** **Prep Batch: 27087**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | 200 | 183 | | pg/L | | 92 | 67 - 158 | | |

| Isotope Dilution | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 13C-2,3,7,8-TCDD | 83 | | 20 - 175 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 37Cl4-2,3,7,8-TCDD | 100 | | 31 - 191 |

# QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Former Carnotite Site - MW-1 Sampling

TestAmerica Job ID: 160-32649-1

## GC/MS VOA

### Analysis Batch: 445753

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 160-32649-1 | CRC-MW-1-011519 | Total/NA | Water | 8260B | |
| MB 280-445753/8 | Method Blank | Total/NA | Water | 8260B | |
| LCS 280-445753/4 | Lab Control Sample | Total/NA | Water | 8260B | |
| LCS 280-445753/6 | Lab Control Sample | Total/NA | Water | 8260B | |
| LCSD 280-445753/5 | Lab Control Sample Dup | Total/NA | Water | 8260B | |
| LCSD 280-445753/7 | Lab Control Sample Dup | Total/NA | Water | 8260B | |
| 280-119359-A-1 MSD | Matrix Spike Duplicate | Total/NA | Water | 8260B | |
| 280-119359-A-1 MSD | Matrix Spike Duplicate | Total/NA | Water | 8260B | |
| 280-119359-C-1 MS | Matrix Spike | Total/NA | Water | 8260B | |
| 280-119359-C-1 MS | Matrix Spike | Total/NA | Water | 8260B | |

## GC/MS Semi VOA

### Prep Batch: 444835

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 160-32649-1 | CRC-MW-1-011519 | Total/NA | Water | 3510C | |
| MB 280-444835/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 280-444835/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| LCSD 280-444835/3-A | Lab Control Sample Dup | Total/NA | Water | 3510C | |

### Analysis Batch: 445019

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 160-32649-1 | CRC-MW-1-011519 | Total/NA | Water | 8270D | 444835 |
| MB 280-444835/1-A | Method Blank | Total/NA | Water | 8270D | 444835 |
| LCS 280-444835/2-A | Lab Control Sample | Total/NA | Water | 8270D | 444835 |
| LCSD 280-444835/3-A | Lab Control Sample Dup | Total/NA | Water | 8270D | 444835 |

## GC Semi VOA

### Prep Batch: 444680

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 160-32649-1 | CRC-MW-1-011519 | Total/NA | Water | 3510C | |
| MB 280-444680/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 280-444680/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| LCSD 280-444680/3-A | Lab Control Sample Dup | Total/NA | Water | 3510C | |

### Prep Batch: 444887

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 160-32649-1 | CRC-MW-1-011519 | Total/NA | Water | 3510C | |
| MB 280-444887/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 280-444887/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| LCSD 280-444887/3-A | Lab Control Sample Dup | Total/NA | Water | 3510C | |

### Analysis Batch: 444894

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 160-32649-1 | CRC-MW-1-011519 | Total/NA | Water | 8081B | 444680 |
| MB 280-444680/1-A | Method Blank | Total/NA | Water | 8081B | 444680 |
| LCS 280-444680/2-A | Lab Control Sample | Total/NA | Water | 8081B | 444680 |
| LCSD 280-444680/3-A | Lab Control Sample Dup | Total/NA | Water | 8081B | 444680 |

## GC Semi VOA (Continued)

### Analysis Batch: 446463

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 160-32649-1 | CRC-MW-1-011519 | Total/NA | Water | 8082A | 444887 |
| MB 280-444887/1-A | Method Blank | Total/NA | Water | 8082A | 444887 |
| LCS 280-444887/2-A | Lab Control Sample | Total/NA | Water | 8082A | 444887 |
| LCSD 280-444887/3-A | Lab Control Sample Dup | Total/NA | Water | 8082A | 444887 |

## Specialty Organics

### Prep Batch: 27087

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 160-32649-1 | CRC-MW-1-011519 | Total/NA | Water | HRMS-Sepf | |
| MB 140-27087/10-A | Method Blank | Total/NA | Water | HRMS-Sepf | |
| LCS 140-27087/11-A | Lab Control Sample | Total/NA | Water | HRMS-Sepf | |

### Analysis Batch: 27191

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 140-27087/10-A | Method Blank | Total/NA | Water | 1613B | 27087 |
| LCS 140-27087/11-A | Lab Control Sample | Total/NA | Water | 1613B | 27087 |

### Analysis Batch: 27242

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 160-32649-1 | CRC-MW-1-011519 | Total/NA | Water | 1613B | 27087 |

# Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Former Carnotite Site - MW-1 Sampling

TestAmerica Job ID: 160-32649-1

## Client Sample ID: CRC-MW-1-011519

**Date Collected: 01/15/19 12:30**
**Date Received: 01/16/19 09:10**

## Lab Sample ID: 160-32649-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 445753 | 01/28/19 23:21 | FCN | TAL DEN |
| Total/NA | Prep | 3510C | | | 444835 | 01/21/19 06:56 | JT | TAL DEN |
| Total/NA | Analysis | 8270D | | 1 | 445019 | 01/22/19 22:36 | DCK | TAL DEN |
| Total/NA | Prep | 3510C | | | 444680 | 01/18/19 12:03 | KJS | TAL DEN |
| Total/NA | Analysis | 8081B | | 1 | 444894 | 01/23/19 03:22 | TEB | TAL DEN |
| Total/NA | Prep | 3510C | | | 444887 | 01/21/19 11:30 | AAG | TAL DEN |
| Total/NA | Analysis | 8082A | | 1 | 446463 | 02/05/19 16:14 | TEM | TAL DEN |
| Total/NA | Prep | HRMS-Sepf | | | 27087 | 01/22/19 13:19 | SMA | TAL KNX |
| Total/NA | Analysis | 1613B | | 1 | 27242 | 01/29/19 12:43 | MSD | TAL KNX |

**Laboratory References:**

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

# Accreditation/Certification Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 160-32649-1
Project/Site: Former Carnotite Site - MW-1 Sampling

## Laboratory: TestAmerica St. Louis

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Louisiana | NELAP | 6 | 04080 | 06-30-19 |

## Laboratory: TestAmerica Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| A2LA | DoD ELAP | | 2907.01 | 10-31-19 |
| A2LA | ISO/IEC 17025 | | 2907.01 | 10-31-19 |
| Alabama | State Program | 4 | 40730 | 09-30-12 * |
| Alaska (UST) | State Program | 10 | UST-30 | 02-28-19 |
| Arizona | State Program | 9 | AZ0713 | 12-20-19 |
| Arkansas DEQ | State Program | 6 | 88-0687 | 06-01-19 |
| California | State Program | 9 | 2513 | 01-18-19 * |
| Connecticut | State Program | 1 | PH-0686 | 09-30-20 |
| Florida | NELAP | 4 | E87667 | 06-30-19 |
| Georgia | State Program | 4 | N/A | 01-08-20 |
| Illinois | NELAP | 5 | 200017 | 04-30-19 |
| Iowa | State Program | 7 | 370 | 12-01-20 |
| Kansas | NELAP | 7 | E-10166 | 04-30-19 |
| Louisiana | NELAP | 6 | 02096 | 06-30-19 |
| Maine | State Program | 1 | CO0002 | 03-03-19 |
| Minnesota | NELAP | 5 | 8-999-405 | 12-31-19 |
| Nevada | State Program | 9 | CO0026 | 07-31-19 |
| New Hampshire | NELAP | 1 | 205310 | 04-28-19 |
| New Jersey | NELAP | 2 | CO004 | 06-30-19 |
| New York | NELAP | 2 | 11964 | 04-01-19 |
| North Carolina (WW/SW) | State Program | 4 | 358 | 12-31-19 |
| North Dakota | State Program | 8 | R-034 | 01-08-20 |
| Oklahoma | State Program | 6 | 8614 | 08-31-19 |
| Oregon | NELAP | 10 | 4025 | 01-08-20 |
| Pennsylvania | NELAP | 3 | 68-00664 | 07-31-19 |
| South Carolina | State Program | 4 | 72002001 | 01-08-19 * |
| Texas | NELAP | 6 | T104704183-18-15 | 09-30-19 |
| US Fish & Wildlife | Federal | | | 07-31-19 |
| USDA | Federal | | | 03-26-21 |
| Utah | NELAP | 8 | CO00026 | 07-31-19 |
| Virginia | NELAP | 3 | 460232 | 06-14-19 |
| Washington | State Program | 10 | C583 | 08-03-19 |
| West Virginia DEP | State Program | 3 | 354 | 11-30-19 |
| Wisconsin | State Program | 5 | 999615430 | 08-31-19 * |
| Wyoming (UST) | A2LA | 8 | 2907.01 | 10-31-19 |

## Laboratory: TestAmerica Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| | AFCEE | | N/A | |
| ANAB | DoD ELAP | | L2311 | 02-13-19 |
| Arkansas DEQ | State Program | 6 | 88-0688 | 06-16-19 |
| California | State Program | 9 | 2423 | 06-30-19 |
| Colorado | State Program | 8 | TN00009 | 02-28-19 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Accreditation/Certification Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 160-32649-1
Project/Site: Former Carnotite Site - MW-1 Sampling

## Laboratory: TestAmerica Knoxville (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Connecticut | State Program | 1 | PH-0223 | 09-30-19 |
| Florida | NELAP | 4 | E87177 | 06-30-19 |
| Georgia | State Program | 4 | 906 | 04-13-20 |
| Hawaii | State Program | 9 | N/A | 04-13-19 |
| Kansas | NELAP | 7 | E-10349 | 10-31-19 |
| Kentucky (DW) | State Program | 4 | 90101 | 12-31-18 * |
| Louisiana | NELAP | 6 | 83979 | 06-30-19 |
| Louisiana (DW) | NELAP | 6 | LA160005 | 12-31-19 |
| Maryland | State Program | 3 | 277 | 03-31-19 |
| Michigan | State Program | 5 | 9933 | 04-13-20 |
| Nevada | State Program | 9 | TN00009 | 07-31-19 |
| New Hampshire | NELAP | 1 | 2999 | 01-17-20 |
| New Jersey | NELAP | 2 | TN001 | 06-30-19 |
| New York | NELAP | 2 | 10781 | 03-31-19 |
| North Carolina (DW) | State Program | 4 | 21705 | 07-31-19 |
| North Carolina (WW/SW) | State Program | 4 | 64 | 12-31-19 |
| Ohio VAP | State Program | 5 | CL0059 | 08-28-20 |
| Oklahoma | State Program | 6 | 9415 | 08-31-19 |
| Oregon | NELAP | 10 | TNI0189 | 06-30-19 |
| Pennsylvania | NELAP | 3 | 68-00576 | 12-31-19 |
| Tennessee | State Program | 4 | 2014 | 04-13-20 |
| Texas | NELAP | 6 | T104704380-16-9 | 08-31-19 |
| US Fish & Wildlife | Federal | | LE-058448-0 | 07-31-19 |
| USDA | Federal | | P330-16-00262 | 08-20-19 |
| Utah | NELAP | 8 | TN00009 | 07-31-19 |
| Virginia | NELAP | 3 | 460176 | 09-14-19 |
| Washington | State Program | 10 | C593 | 01-19-20 |
| West Virginia (DW) | State Program | 3 | 9955C | 12-31-19 |
| West Virginia DEP | State Program | 3 | 345 | 04-30-19 |
| Wisconsin | State Program | 5 | 998044300 | 08-31-19 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 160-32649-1
Project/Site: Former Carnotite Site - MW-1 Sampling

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL DEN |
| 8270D | Semivolatile Organic Compounds (GC/MS) | SW846 | TAL DEN |
| 8081B | Organochlorine Pesticides (GC) | SW846 | TAL DEN |
| 8082A | Polychlorinated Biphenyls (PCBs) by Gas Chromatography | SW846 | TAL DEN |
| 1613B | Dioxins and Furans (HRGC/HRMS) | 40CFR136A | TAL KNX |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | TAL DEN |
| 5030B | Purge and Trap | SW846 | TAL DEN |
| HRMS-Sepf | Separatory Funnel (Liquid-Liquid) Extraction | EPA | TAL KNX |

**Protocol References:**

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

# Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Former Carnotite Site - MW-1 Sampling

TestAmerica Job ID: 160-32649-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 160-32649-1 | CRC-MW-1-011519 | Water | 01/15/19 12:30 | 01/16/19 09:10 |

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: VMS_MS1 Analysis Batch Number: 443512

Lab Sample ID: ICV 280-443512/26 Client Sample ID:

Date Analyzed: 01/08/19 14:55 Lab File ID: MS1_1084.D GC Column: DB-624 (60.25 ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Tetrahydrothiophene | | Invalid Compound ID | wickhamt | 01/09/19 06:36 |

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: VMS_MS1 Analysis Batch Number: 444687

Lab Sample ID: STD 280-444687/12 IC Client Sample ID:

Date Analyzed: 01/18/19 11:48 Lab File ID: MS1_1421.D GC Column: DB-624 (60.25 ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Toluene-d8 (Surr) | | Invalid Compound ID | ornelasg | 01/22/19 17:07 |

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: VMS_MS1 Analysis Batch Number: 445753

Lab Sample ID: MB 280-445753/8 Client Sample ID:

Date Analyzed: 01/28/19 19:09 Lab File ID: MS1_1907.D GC Column: DB-624 (60.25 ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Acetonitrile | | Invalid Compound ID | nwangumaf | 01/28/19 19:29 |

Lab Sample ID: 160-32649-1 Client Sample ID: CRC-MW-1-011519

Date Analyzed: 01/28/19 23:21 Lab File ID: MS1_1919.D GC Column: DB-624 (60.25 ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Acetonitrile | | Invalid Compound ID | nwangumaf | 01/28/19 23:41 |

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SMS_D Analysis Batch Number: 443607

Lab Sample ID: ICIS 280-443607/3 Client Sample ID:

Date Analyzed: 01/08/19 14:43 Lab File ID: D31076.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Phenol | 4.25 | Wrong peak | kiekeld | 01/08/19 15:47 |
| Aniline | 4.28 | Wrong peak | kiekeld | 01/08/19 15:47 |
| Bis(2-chloroethyl)ether | 4.32 | Wrong peak | kiekeld | 01/08/19 15:47 |
| 3 & 4 Methylphenol | 4.96 | Wrong peak | kiekeld | 01/08/19 15:48 |
| Isophorone | 5.36 | Wrong peak | kiekeld | 01/08/19 15:48 |
| Bis(2-chloroethoxy)methane | 5.56 | Wrong peak | kiekeld | 01/08/19 15:48 |
| Benzoic acid | 5.61 | Wrong peak | kiekeld | 01/08/19 15:48 |
| Naphthalene | 5.85 | Wrong peak | kiekeld | 01/08/19 15:48 |
| 1-Methylnaphthalene | 6.63 | Wrong peak | kiekeld | 01/08/19 15:49 |
| 2,4-Dinitrophenol | 7.62 | Wrong peak | kiekeld | 01/08/19 15:49 |
| 4-Nitrophenol | 7.70 | Wrong peak | kiekeld | 01/08/19 15:49 |
| Benzo[a]anthracene | 13.10 | Wrong peak | kiekeld | 01/08/19 15:49 |
| Chrysene | 13.19 | Wrong peak | kiekeld | 01/08/19 15:49 |
| Indeno[1,2,3-cd]pyrene | 20.18 | Wrong peak | kiekeld | 01/08/19 15:50 |

Lab Sample ID: STD004 280-443607/4 IC Client Sample ID:

Date Analyzed: 01/08/19 15:12 Lab File ID: D31077.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| 3-Nitroaniline | 7.51 | Assign Peak | kiekeld | 01/08/19 15:51 |

Lab Sample ID: STD010 280-443607/5 IC Client Sample ID:

Date Analyzed: 01/08/19 15:42 Lab File ID: D31078.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Benzoic acid | 5.54 | Wrong peak | kiekeld | 01/09/19 10:01 |

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SMS_D Analysis Batch Number: 443607

Lab Sample ID: STD020 280-443607/6 IC Client Sample ID:

Date Analyzed: 01/08/19 16:11 Lab File ID: D31079.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Benzoic acid | 5.56 | Wrong peak | kiekeld | 01/09/19 10:02 |

Lab Sample ID: STD050 280-443607/7 IC Client Sample ID:

Date Analyzed: 01/08/19 16:40 Lab File ID: D31080.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Benzoic acid | 5.59 | Wrong peak | kiekeld | 01/09/19 10:03 |

Lab Sample ID: STD120 280-443607/8 IC Client Sample ID:

Date Analyzed: 01/08/19 17:10 Lab File ID: D31081.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Caprolactam | 6.25 | Split Peak | kiekeld | 01/09/19 10:04 |

Lab Sample ID: STD160 280-443607/9 IC Client Sample ID:

Date Analyzed: 01/08/19 17:39 Lab File ID: D31082.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Caprolactam | 6.26 | Split Peak | kiekeld | 01/09/19 10:05 |
| Indeno[1,2,3-cd]pyrene | 20.22 | Shouldering | kiekeld | 01/09/19 10:05 |

Lab Sample ID: STD200 280-443607/10 IC Client Sample ID:

Date Analyzed: 01/08/19 18:08 Lab File ID: D31083.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Caprolactam | 6.27 | Split Peak | kiekeld | 01/09/19 10:06 |
| Indeno[1,2,3-cd]pyrene | 20.22 | Shouldering | kiekeld | 01/09/19 10:06 |

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SMS_D Analysis Batch Number: 443607

Lab Sample ID: ICV 280-443607/11 Client Sample ID:

Date Analyzed: 01/08/19 18:38 Lab File ID: D31084.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| N-Nitrosodi-n-propylamine | 4.97 | Assign Peak | kiekeld | 01/09/19 10:17 |

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SMS_D Analysis Batch Number: 445019

Lab Sample ID: CCV 280-445019/3 Client Sample ID:

Date Analyzed: 01/22/19 13:59 Lab File ID: D31281.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Caprolactam | 6.15 | Split Peak | kiekeld | 01/22/19 14:27 |

Lab Sample ID: LCSD 280-444835/3-A Client Sample ID:

Date Analyzed: 01/22/19 18:40 Lab File ID: D31291.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Caprolactam | 6.12 | Split Peak | kiekeld | 01/23/19 09:18 |

Lab Sample ID: 160-32649-1 Client Sample ID: CRC-MW-1-011519

Date Analyzed: 01/22/19 22:36 Lab File ID: D31299.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Fluoranthene | | Invalid Compound ID | kiekeld | 01/23/19 09:17 |

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_C Analysis Batch Number: 444894

Lab Sample ID: CCV 280-444894/45 Client Sample ID:

Date Analyzed: 01/22/19 21:32 Lab File ID: 039F4501.D GC Column: Rxi-35Sil MS ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Toxaphene Peak 1 | 4.86 | Baseline Smoothing | bacat | 01/23/19 11:10 |
| Toxaphene Peak 2 | 6.24 | Baseline Smoothing | bacat | 01/23/19 11:10 |
| Toxaphene Peak 3 | 6.85 | Baseline Smoothing | bacat | 01/23/19 11:10 |
| Toxaphene Peak 4 | 7.40 | Baseline Smoothing | bacat | 01/23/19 11:10 |
| Toxaphene Peak 5 | 7.54 | Baseline Smoothing | bacat | 01/23/19 11:10 |

Lab Sample ID: CCV 280-444894/45 Client Sample ID:

Date Analyzed: 01/22/19 21:32 Lab File ID: 039F4501.D GC Column: Rxi-XLB ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| Toxaphene Peak 1 | 6.06 | Baseline Smoothing | bacat | 01/23/19 11:10 |
| Toxaphene Peak 2 | 6.55 | Baseline Smoothing | bacat | 01/23/19 11:10 |
| Toxaphene Peak 3 | 6.87 | Baseline Smoothing | bacat | 01/23/19 11:10 |
| Toxaphene Peak 4 | 7.59 | Baseline Smoothing | bacat | 01/23/19 11:10 |
| Toxaphene Peak 5 | 8.16 | Baseline Smoothing | bacat | 01/23/19 11:10 |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 445745

Lab Sample ID: STD4 280-445745/6 IC Client Sample ID:

Date Analyzed: 01/29/19 15:57 Lab File ID: 01290006.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1248 Peak 1 | 4.53 | Baseline Smoothing | mooret | 01/30/19 11:44 |
| PCB-1248 Peak 2 | 4.76 | Baseline Smoothing | mooret | 01/30/19 11:44 |

Lab Sample ID: STD5 280-445745/7 IC Client Sample ID:

Date Analyzed: 01/29/19 16:18 Lab File ID: 01290007.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1248 Peak 1 | 4.53 | Baseline Smoothing | mooret | 01/30/19 11:45 |

Lab Sample ID: STD6 280-445745/8 IC Client Sample ID:

Date Analyzed: 01/29/19 16:39 Lab File ID: 01290008.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1248 Peak 1 | 4.53 | Baseline Smoothing | mooret | 01/30/19 11:46 |

Lab Sample ID: STD7 280-445745/9 IC Client Sample ID:

Date Analyzed: 01/29/19 17:00 Lab File ID: 01290009.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1248 Peak 1 | 4.53 | Baseline Smoothing | mooret | 01/30/19 12:40 |

Lab Sample ID: STD1 280-445745/11 IC Client Sample ID:

Date Analyzed: 01/29/19 17:42 Lab File ID: 01290011.D GC Column: CLP2 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| 1-Bromo-2-nitrobenzene | 1.79 | Incomplete Integration | mooret | 01/30/19 12:58 |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 445745

Lab Sample ID: STD5 280-445745/23 ICIS Client Sample ID:

Date Analyzed: 01/29/19 21:55 Lab File ID: 01290023.D GC Column: CLP2 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1016 Peak 1 | 3.71 | Baseline Smoothing | mooret | 01/30/19 14:29 |
| PCB-1016 Peak 2 | 4.18 | Baseline Smoothing | mooret | 01/30/19 14:30 |
| PCB-1016 Peak 3 | 4.32 | Baseline Smoothing | mooret | 01/30/19 14:30 |
| PCB-1016 Peak 4 | 4.56 | Baseline Smoothing | mooret | 01/30/19 14:30 |
| PCB-1016 Peak 5 | 4.85 | Baseline Smoothing | mooret | 01/30/19 14:30 |

Lab Sample ID: STD3 280-445745/29 IC Client Sample ID:

Date Analyzed: 01/30/19 00:02 Lab File ID: 01290029.D GC Column: CLP2 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1232 Peak 2 | 3.71 | Baseline Smoothing | mooret | 01/30/19 14:46 |
| PCB-1232 Peak 3 | 4.18 | Baseline Smoothing | mooret | 01/30/19 14:46 |
| PCB-1232 Peak 4 | 4.32 | Baseline Smoothing | mooret | 01/30/19 14:46 |
| PCB-1232 Peak 5 | 4.85 | Baseline Smoothing | mooret | 01/30/19 14:46 |

Lab Sample ID: STD4 280-445745/30 IC Client Sample ID:

Date Analyzed: 01/30/19 00:23 Lab File ID: 01290030.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1232 Peak 2 | 3.65 | Baseline Smoothing | mooret | 01/30/19 14:38 |
| PCB-1232 Peak 3 | 4.14 | Baseline Smoothing | mooret | 01/30/19 14:38 |
| PCB-1232 Peak 4 | 4.29 | Baseline Smoothing | mooret | 01/30/19 14:38 |
| PCB-1232 Peak 5 | 4.76 | Baseline Smoothing | mooret | 01/30/19 14:38 |
| PCB-1262 Peak 1 | 6.66 | Baseline Smoothing | mooret | 01/30/19 14:38 |
| PCB-1262 Peak 2 | 7.20 | Baseline Smoothing | mooret | 01/30/19 14:38 |
| PCB-1262 Peak 3 | 7.53 | Baseline Smoothing | mooret | 01/30/19 14:38 |
| PCB-1262 Peak 4 | 7.98 | Baseline Smoothing | mooret | 01/30/19 14:38 |
| PCB-1262 Peak 5 | 8.37 | Baseline Smoothing | mooret | 01/30/19 14:38 |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 445745

Lab Sample ID: STD5 280-445745/31 IC Client Sample ID:

Date Analyzed: 01/30/19 00:44 Lab File ID: 01290031.D GC Column: CLP2 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1232 Peak 1 | 3.32 | Baseline Smoothing | mooret | 01/30/19 14:39 |
| PCB-1232 Peak 2 | 3.71 | Baseline Smoothing | mooret | 01/30/19 14:39 |
| PCB-1232 Peak 3 | 4.18 | Baseline Smoothing | mooret | 01/30/19 14:39 |
| PCB-1232 Peak 4 | 4.32 | Baseline Smoothing | mooret | 01/30/19 14:39 |
| PCB-1232 Peak 5 | 4.85 | Baseline Smoothing | mooret | 01/30/19 14:39 |

Lab Sample ID: STD7 280-445745/33 IC Client Sample ID:

Date Analyzed: 01/30/19 01:26 Lab File ID: 01290033.D GC Column: CLP2 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1232 Peak 1 | 3.32 | Baseline Smoothing | mooret | 01/30/19 14:39 |
| PCB-1232 Peak 2 | 3.71 | Baseline Smoothing | mooret | 01/30/19 14:39 |
| PCB-1232 Peak 3 | 4.17 | Baseline Smoothing | mooret | 01/30/19 14:39 |
| PCB-1232 Peak 4 | 4.32 | Baseline Smoothing | mooret | 01/30/19 14:39 |
| PCB-1232 Peak 5 | 4.85 | Baseline Smoothing | mooret | 01/30/19 14:39 |

Lab Sample ID: ICV 280-445745/34 Client Sample ID:

Date Analyzed: 01/30/19 01:48 Lab File ID: 01290034.D GC Column: CLP2 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1232 Peak 1 | 3.32 | Baseline Smoothing | mooret | 01/30/19 14:48 |
| PCB-1232 Peak 2 | 3.71 | Baseline Smoothing | mooret | 01/30/19 14:48 |
| PCB-1232 Peak 3 | 4.18 | Baseline Smoothing | mooret | 01/30/19 14:48 |
| PCB-1232 Peak 4 | 4.32 | Baseline Smoothing | mooret | 01/30/19 14:48 |
| PCB-1232 Peak 5 | 4.85 | Baseline Smoothing | mooret | 01/30/19 14:48 |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 445745

Lab Sample ID: STD1 280-445745/35 IC Client Sample ID:

Date Analyzed: 01/30/19 02:09 Lab File ID: 01290035.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1242 Peak 2 | 4.14 | Baseline Smoothing | mooret | 01/30/19 14:49 |
| PCB-1242 Peak 3 | 4.76 | Baseline Smoothing | mooret | 01/30/19 14:49 |
| PCB-1242 Peak 4 | 5.27 | Baseline Smoothing | mooret | 01/30/19 14:49 |
| PCB-1242 Peak 5 | 5.30 | Baseline Smoothing | mooret | 01/30/19 14:49 |

Lab Sample ID: STD3 280-445745/37 IC Client Sample ID:

Date Analyzed: 01/30/19 02:51 Lab File ID: 01290037.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1242 Peak 2 | 4.14 | Baseline Smoothing | mooret | 01/30/19 14:50 |
| PCB-1242 Peak 3 | 4.76 | Baseline Smoothing | mooret | 01/30/19 14:50 |
| PCB-1242 Peak 4 | 5.27 | Baseline Smoothing | mooret | 01/30/19 14:50 |
| PCB-1242 Peak 5 | 5.29 | Baseline Smoothing | mooret | 01/30/19 14:50 |

Lab Sample ID: STD4 280-445745/38 IC Client Sample ID:

Date Analyzed: 01/30/19 03:12 Lab File ID: 01290038.D GC Column: CLP2 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1242 Peak 1 | 3.71 | Baseline Smoothing | mooret | 01/30/19 14:54 |
| PCB-1242 Peak 4 | 4.85 | Baseline Smoothing | mooret | 01/30/19 14:54 |
| PCB-1242 Peak 5 | 4.99 | Baseline Smoothing | mooret | 01/30/19 14:54 |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 445745

Lab Sample ID: STD5 280-445745/39 IC Client Sample ID:

Date Analyzed: 01/30/19 03:33 Lab File ID: 01290039.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1242 Peak 4 | 5.28 | Split Peak | mooret | 01/30/19 14:50 |
| PCB-1242 Peak 5 | 5.30 | Unspecified | mooret | 01/30/19 14:51 |

Lab Sample ID: STD6 280-445745/40 IC Client Sample ID:

Date Analyzed: 01/30/19 03:54 Lab File ID: 01290040.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1242 Peak 4 | 5.28 | Split Peak | mooret | 01/30/19 14:51 |
| PCB-1242 Peak 5 | 5.30 | Split Peak | mooret | 01/30/19 14:52 |

Lab Sample ID: STD7 280-445745/41 IC Client Sample ID:

Date Analyzed: 01/30/19 04:15 Lab File ID: 01290041.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1242 Peak 4 | 5.28 | Split Peak | mooret | 01/30/19 14:52 |
| PCB-1242 Peak 5 | 5.30 | Split Peak | mooret | 01/30/19 14:52 |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 446463

Lab Sample ID: MB 280-444887/1-A Client Sample ID:

Date Analyzed: 02/05/19 14:49 Lab File ID: 02040008.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1016 | | Unspecified | | |
| PCB-1221 | | Unspecified | | |
| PCB-1232 | | Unspecified | | |
| PCB-1242 | | Unspecified | | |
| PCB-1248 | | Unspecified | | |
| PCB-1254 | | Unspecified | | |
| PCB-1260 | | Unspecified | | |
| PCB-1262 | | Unspecified | | |
| PCB-1268 | | Unspecified | | |
| PCB-1016 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1016 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1016 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1016 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1016 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1221 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1221 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1221 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1232 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1232 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1232 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1232 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1232 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1242 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1242 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1242 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1242 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1242 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1248 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1248 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1248 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:45 |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 446463

Lab Sample ID: MB 280-444887/1-A Client Sample ID:

Date Analyzed: 02/05/19 14:49 Lab File ID: 02040008.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1248 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1248 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1254 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1254 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1254 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1254 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1254 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1260 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1260 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1260 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1260 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1260 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1262 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1262 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1262 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1262 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1262 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1268 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1268 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1268 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1268 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:45 |
| PCB-1268 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:45 |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 446463

Lab Sample ID: MB 280-444887/1-A Client Sample ID:

Date Analyzed: 02/05/19 14:49 Lab File ID: 02040008.D GC Column: CLP2 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1016 | | Unspecified | | |
| PCB-1221 | | Unspecified | | |
| PCB-1232 | | Unspecified | | |
| PCB-1242 | | Unspecified | | |
| PCB-1248 | | Unspecified | | |
| PCB-1254 | | Unspecified | | |
| PCB-1260 | | Unspecified | | |
| PCB-1262 | | Unspecified | | |
| PCB-1268 | | Unspecified | | |
| PCB-1016 Peak 1 | | Unspecified | | |
| PCB-1016 Peak 2 | | Unspecified | | |
| PCB-1016 Peak 3 | | Unspecified | | |
| PCB-1016 Peak 4 | | Unspecified | | |
| PCB-1016 Peak 5 | | Unspecified | | |
| PCB-1221 Peak 1 | | Unspecified | | |
| PCB-1221 Peak 2 | | Unspecified | | |
| PCB-1221 Peak 3 | | Unspecified | | |
| PCB-1232 Peak 1 | | Unspecified | | |
| PCB-1232 Peak 2 | | Unspecified | | |
| PCB-1232 Peak 3 | | Unspecified | | |
| PCB-1232 Peak 4 | | Unspecified | | |
| PCB-1232 Peak 5 | | Unspecified | | |
| PCB-1242 Peak 1 | | Unspecified | | |
| PCB-1242 Peak 2 | | Unspecified | | |
| PCB-1242 Peak 3 | | Unspecified | | |
| PCB-1242 Peak 4 | | Unspecified | | |
| PCB-1242 Peak 5 | | Unspecified | | |
| PCB-1248 Peak 1 | | Unspecified | | |
| PCB-1248 Peak 2 | | Unspecified | | |
| PCB-1248 Peak 3 | | Unspecified | | |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 446463

Lab Sample ID: MB 280-444887/1-A Client Sample ID:

Date Analyzed: 02/05/19 14:49 Lab File ID: 02040008.D GC Column: CLP2 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1248 Peak 4 | | Unspecified | | |
| PCB-1248 Peak 5 | | Unspecified | | |
| PCB-1254 Peak 1 | | Unspecified | | |
| PCB-1254 Peak 2 | | Unspecified | | |
| PCB-1254 Peak 3 | | Unspecified | | |
| PCB-1254 Peak 4 | | Unspecified | | |
| PCB-1254 Peak 5 | | Unspecified | | |
| PCB-1260 Peak 1 | | Unspecified | | |
| PCB-1260 Peak 2 | | Unspecified | | |
| PCB-1260 Peak 3 | | Unspecified | | |
| PCB-1260 Peak 4 | | Unspecified | | |
| PCB-1260 Peak 5 | | Unspecified | | |
| PCB-1262 Peak 1 | | Unspecified | | |
| PCB-1262 Peak 2 | | Unspecified | | |
| PCB-1262 Peak 3 | | Unspecified | | |
| PCB-1262 Peak 4 | | Unspecified | | |
| PCB-1262 Peak 5 | | Unspecified | | |
| PCB-1268 Peak 1 | | Unspecified | | |
| PCB-1268 Peak 2 | | Unspecified | | |
| PCB-1268 Peak 3 | | Unspecified | | |
| PCB-1268 Peak 4 | | Unspecified | | |
| PCB-1268 Peak 5 | | Unspecified | | |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 446463

Lab Sample ID: 160-32649-1 Client Sample ID: CRC-MW-1-011519

Date Analyzed: 02/05/19 16:14 Lab File ID: 02040012.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1016 | | Unspecified | | |
| PCB-1221 | | Unspecified | | |
| PCB-1232 | | Unspecified | | |
| PCB-1242 | | Unspecified | | |
| PCB-1248 | | Unspecified | | |
| PCB-1254 | | Unspecified | | |
| PCB-1260 | | Unspecified | | |
| PCB-1262 | | Unspecified | | |
| PCB-1268 | | Unspecified | | |
| PCB-1016 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1016 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1016 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1016 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1016 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1221 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1221 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1221 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1232 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1232 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1232 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1232 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1232 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1242 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1242 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1242 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1242 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1242 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1248 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1248 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1248 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:46 |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 446463

Lab Sample ID: 160-32649-1 Client Sample ID: CRC-MW-1-011519

Date Analyzed: 02/05/19 16:14 Lab File ID: 02040012.D GC Column: CLP1 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1248 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1248 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1254 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1254 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1254 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1254 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1254 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1260 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1260 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1260 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1260 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1260 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1262 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1262 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1262 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1262 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1262 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1268 Peak 1 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1268 Peak 2 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1268 Peak 3 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1268 Peak 4 | | Invalid Compound ID | mooret | 02/06/19 10:46 |
| PCB-1268 Peak 5 | | Invalid Compound ID | mooret | 02/06/19 10:46 |

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 446463

Lab Sample ID: 160-32649-1 Client Sample ID: CRC-MW-1-011519

Date Analyzed: 02/05/19 16:14 Lab File ID: 02040012.D GC Column: CLP2 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1016 | | Unspecified | | |
| PCB-1221 | | Unspecified | | |
| PCB-1232 | | Unspecified | | |
| PCB-1242 | | Unspecified | | |
| PCB-1248 | | Unspecified | | |
| PCB-1254 | | Unspecified | | |
| PCB-1260 | | Unspecified | | |
| PCB-1262 | | Unspecified | | |
| PCB-1268 | | Unspecified | | |
| PCB-1016 Peak 1 | | Unspecified | | |
| PCB-1016 Peak 2 | | Unspecified | | |
| PCB-1016 Peak 3 | | Unspecified | | |
| PCB-1016 Peak 4 | | Unspecified | | |
| PCB-1016 Peak 5 | | Unspecified | | |
| PCB-1221 Peak 1 | | Unspecified | | |
| PCB-1221 Peak 2 | | Unspecified | | |
| PCB-1221 Peak 3 | | Unspecified | | |
| PCB-1232 Peak 1 | | Unspecified | | |
| PCB-1232 Peak 2 | | Unspecified | | |
| PCB-1232 Peak 3 | | Unspecified | | |
| PCB-1232 Peak 4 | | Unspecified | | |
| PCB-1232 Peak 5 | | Unspecified | | |
| PCB-1242 Peak 1 | | Unspecified | | |
| PCB-1242 Peak 2 | | Unspecified | | |
| PCB-1242 Peak 3 | | Unspecified | | |
| PCB-1242 Peak 4 | | Unspecified | | |
| PCB-1242 Peak 5 | | Unspecified | | |
| PCB-1248 Peak 1 | | Unspecified | | |
| PCB-1248 Peak 2 | | Unspecified | | |
| PCB-1248 Peak 3 | | Unspecified | | |

8082A

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 446463

Lab Sample ID: 160-32649-1 Client Sample ID: CRC-MW-1-011519

Date Analyzed: 02/05/19 16:14 Lab File ID: 02040012.D GC Column: CLP2 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| PCB-1248 Peak 4 | | Unspecified | | |
| PCB-1248 Peak 5 | | Unspecified | | |
| PCB-1254 Peak 1 | | Unspecified | | |
| PCB-1254 Peak 2 | | Unspecified | | |
| PCB-1254 Peak 3 | | Unspecified | | |
| PCB-1254 Peak 4 | | Unspecified | | |
| PCB-1254 Peak 5 | | Unspecified | | |
| PCB-1260 Peak 1 | | Unspecified | | |
| PCB-1260 Peak 2 | | Unspecified | | |
| PCB-1260 Peak 3 | | Unspecified | | |
| PCB-1260 Peak 4 | | Unspecified | | |
| PCB-1260 Peak 5 | | Unspecified | | |
| PCB-1262 Peak 1 | | Unspecified | | |
| PCB-1262 Peak 2 | | Unspecified | | |
| PCB-1262 Peak 3 | | Unspecified | | |
| PCB-1262 Peak 4 | | Unspecified | | |
| PCB-1262 Peak 5 | | Unspecified | | |
| PCB-1268 Peak 1 | | Unspecified | | |
| PCB-1268 Peak 2 | | Unspecified | | |
| PCB-1268 Peak 3 | | Unspecified | | |
| PCB-1268 Peak 4 | | Unspecified | | |
| PCB-1268 Peak 5 | | Unspecified | | |

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

Instrument ID: D2A Analysis Batch Number: 7768

Lab Sample ID: IC 140-7768/2 Client Sample ID:

Date Analyzed: 05/16/14 14:26 Lab File ID: d3140516i1.d GC Column: RTX-5 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| 2,3,7,8-TCDF | 29.76 | Baseline | davidsonm | 01/11/17 16:11 |
| 2,3,7,8-TCDD | 31.87 | Baseline | davidsonm | 01/11/17 16:11 |
| 1,2,3,7,8-PeCDD | 41.02 | Shouldering | davidsonm | 01/11/17 16:11 |
| 1,2,3,7,8,9-HxCDD | 45.76 | Shouldering | davidsonm | 01/11/17 16:11 |
| 1,2,3,7,8,9-HxCDF | 46.03 | Shouldering | davidsonm | 01/11/17 16:11 |
| OCDD | 54.30 | Shouldering | davidsonm | 01/11/17 16:11 |

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

Instrument ID: D2A Analysis Batch Number: 27191

Lab Sample ID: WDMCCV 140-27191/1 Client Sample ID:

Date Analyzed: 01/28/19 01:01 Lab File ID: d3190128s1.d GC Column: RTX-5 ID: 0.32(mm)

| COMPOUND NAME | RETENTION TIME | MANUAL INTEGRATION | | |
|---|---|---|---|---|
| | | REASON | ANALYST | DATE |
| 1,2,3,7,8-PeCDD | 40.66 | Baseline | mcwhirter l | 01/28/19 02:04 |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| **8081 LCS_00460** | 01/21/19 | 01/14/19 | P&T Methanol, Lot MethanolP&T_00221 | 50 mL | 8081HCBPrim_00002 | 0.5 mL | Hexachlorobenzene | 0.5 ug/mL |
| | | | | | 8081LCSPrim_00044 | 0.5 mL | 4,4'-DDD | 0.5 ug/mL |
| | | | | | | | 4,4'-DDE | 0.5 ug/mL |
| | | | | | | | 4,4'-DDT | 0.5 ug/mL |
| | | | | | | | Aldrin | 0.5 ug/mL |
| | | | | | | | alpha-BHC | 0.5 ug/mL |
| | | | | | | | alpha-Chlordane | 0.5 ug/mL |
| | | | | | | | beta-BHC | 0.5 ug/mL |
| | | | | | | | delta-BHC | 0.5 ug/mL |
| | | | | | | | Dieldrin | 0.5 ug/mL |
| | | | | | | | Endosulfan I | 0.5 ug/mL |
| | | | | | | | Endosulfan II | 0.5 ug/mL |
| | | | | | | | Endosulfan sulfate | 0.5 ug/mL |
| | | | | | | | Endrin | 0.5 ug/mL |
| | | | | | | | Endrin aldehyde | 0.5 ug/mL |
| | | | | | | | Endrin ketone | 0.5 ug/mL |
| | | | | | | | gamma-BHC (Lindane) | 0.5 ug/mL |
| | | | | | | | gamma-Chlordane | 0.5 ug/mL |
| | | | | | | | Heptachlor | 0.5 ug/mL |
| | | | | | | | Heptachlor epoxide | 0.5 ug/mL |
| | | | | | | | Methoxychlor | 0.5 ug/mL |
| .8081HCBPrim_00002 | 05/08/19 | 11/08/18 | Hexane, Lot Hexane Cycl 00053 | 10 mL | 8081HCBStkSS_00038 | 0.5 mL | Hexachlorobenzene | 50 ug/mL |
| ..8081HCBStkSS_00038 | 11/08/19 | Ultra Scientific, Lot CR-5129 | | | (Purchased Reagent) | | Hexachlorobenzene | 1000 ug/mL |
| .8081LCSPrim_00044 | 04/30/19 | 10/30/18 | Hexane, Lot Hexane_Cycl_00053 | 10 mL | 8081ABResPS_00030 | 0.25 mL | 4,4'-DDD | 50 ug/mL |
| | | | | | | | 4,4'-DDE | 50 ug/mL |
| | | | | | | | 4,4'-DDT | 50 ug/mL |
| | | | | | | | Aldrin | 50 ug/mL |
| | | | | | | | alpha-BHC | 50 ug/mL |
| | | | | | | | alpha-Chlordane | 50 ug/mL |
| | | | | | | | beta-BHC | 50 ug/mL |
| | | | | | | | delta-BHC | 50 ug/mL |
| | | | | | | | Dieldrin | 50 ug/mL |
| | | | | | | | Endosulfan I | 50 ug/mL |
| | | | | | | | Endosulfan II | 50 ug/mL |
| | | | | | | | Endosulfan sulfate | 50 ug/mL |
| | | | | | | | Endrin | 50 ug/mL |
| | | | | | | | Endrin aldehyde | 50 ug/mL |
| | | | | | | | Endrin ketone | 50 ug/mL |
| | | | | | | | gamma-BHC (Lindane) | 50 ug/mL |
| | | | | | | | gamma-Chlordane | 50 ug/mL |
| | | | | | | | Heptachlor | 50 ug/mL |
| | | | | | | | Heptachlor epoxide | 50 ug/mL |
| | | | | | | | Methoxychlor | 50 ug/mL |
| ..8081ABResPS_00030 | 10/30/19 | Restek, Lot A0133751 | | | (Purchased Reagent) | | 4,4'-DDD | 2000 ug/mL |
| | | | | | | | 4,4'-DDE | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4,4'-DDT | 2000 ug/mL |
| | | | | | | | Aldrin | 2000 ug/mL |
| | | | | | | | alpha-BHC | 2000 ug/mL |
| | | | | | | | alpha-Chlordane | 2000 ug/mL |
| | | | | | | | beta-BHC | 2000 ug/mL |
| | | | | | | | delta-BHC | 2000 ug/mL |
| | | | | | | | Dieldrin | 2000 ug/mL |
| | | | | | | | Endosulfan I | 2000 ug/mL |
| | | | | | | | Endosulfan II | 2000 ug/mL |
| | | | | | | | Endosulfan sulfate | 2000 ug/mL |
| | | | | | | | Endrin | 2000 ug/mL |
| | | | | | | | Endrin aldehyde | 2000 ug/mL |
| | | | | | | | Endrin ketone | 2000 ug/mL |
| | | | | | | | gamma-BHC (Lindane) | 2000 ug/mL |
| | | | | | | | gamma-Chlordane | 2000 ug/mL |
| | | | | | | | Heptachlor | 2000 ug/mL |
| | | | | | | | Heptachlor epoxide | 2000 ug/mL |
| | | | | | | | Methoxychlor | 2000 ug/mL |
| **8081/82 Surr_00106** | 03/25/19 | 12/18/18 | ACETONE, Lot Acetone_00232 | 1000 mL | AR_SURR_RES_00099 | 1 mL | DCB Decachlorobiphenyl | 0.2 ug/mL |
| | | | | | | | Tetrachloro-m-xylene | 0.2 ug/mL |
| .AR_SURR_RES_00099 | 11/30/24 | | RESTEK, Lot A0141110 | | (Purchased Reagent) | | DCB Decachlorobiphenyl | 200 ug/mL |
| | | | | | | | Tetrachloro-m-xylene | 200 ug/mL |
| **8081_EvalBPEM_00013** | 02/27/19 | 08/27/18 | Hexane, Lot 173156 | 100 mL | 8081EvalBStk2_00020 | 20 uL | 4,4'-DDT | 0.04 ug/mL |
| | | | | | | | Endrin | 0.04 ug/mL |
| .8081EvalBStk2_00020 | 02/27/19 | | AccuStandard, Inc, Lot 217101288 | | (Purchased Reagent) | | 4,4'-DDT | 200 ug/mL |
| | | | | | | | Endrin | 200 ug/mL |
| **8081_IS_00010** | 06/02/19 | 12/03/18 | Hexane, Lot 189035 | 500 mL | BNB stock_00016 | 1 mL | 1-Bromo-2-nitrobenzene | 2 ug/mL |
| .BNB stock_00016 | 08/31/20 | | Restek, Lot A0127264 | | (Purchased Reagent) | | 1-Bromo-2-nitrobenzene | 1000 ug/mL |
| **8081IcalL4_00033** | 06/20/19 | 12/21/18 | Hexane, Lot 194963 | 500 mL | 8081ABCalStk_00035 | 25 mL | 4,4'-DDD | 50 ng/mL |
| | | | | | | | 4,4'-DDE | 50 ng/mL |
| | | | | | | | 4,4'-DDT | 50 ng/mL |
| | | | | | | | Aldrin | 50 ng/mL |
| | | | | | | | alpha-BHC | 50 ng/mL |
| | | | | | | | alpha-Chlordane | 50 ng/mL |
| | | | | | | | beta-BHC | 50 ng/mL |
| | | | | | | | delta-BHC | 50 ng/mL |
| | | | | | | | Dieldrin | 50 ng/mL |
| | | | | | | | Endosulfan I | 50 ng/mL |
| | | | | | | | Endosulfan II | 50 ng/mL |
| | | | | | | | Endosulfan sulfate | 50 ng/mL |
| | | | | | | | Endrin | 50 ng/mL |
| | | | | | | | Endrin aldehyde | 50 ng/mL |
| | | | | | | | Endrin ketone | 50 ng/mL |
| | | | | | | | gamma-BHC (Lindane) | 50 ng/mL |
| | | | | | | | gamma-Chlordane | 50 ng/mL |
| | | | | | | | Heptachlor | 50 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Heptachlor epoxide | 50 ng/mL |
| | | | | | | | Methoxychlor | 50 ng/mL |
| | | | | | | | DCB Decachlorobiphenyl | 50 ng/mL |
| | | | | | | | Tetrachloro-m-xylene | 50 ng/mL |
| .8081ABCalStk_00035 | 06/20/19 | 12/21/18 | Hexane, Lot 194963 | 100 mL | 8081ABResPS_00027 | 0.05 mL | 4,4'-DDD | 1000 ng/mL |
| | | | | | | | 4,4'-DDE | 1000 ng/mL |
| | | | | | | | 4,4'-DDT | 1000 ng/mL |
| | | | | | | | Aldrin | 1000 ng/mL |
| | | | | | | | alpha-BHC | 1000 ng/mL |
| | | | | | | | alpha-Chlordane | 1000 ng/mL |
| | | | | | | | beta-BHC | 1000 ng/mL |
| | | | | | | | delta-BHC | 1000 ng/mL |
| | | | | | | | Dieldrin | 1000 ng/mL |
| | | | | | | | Endosulfan I | 1000 ng/mL |
| | | | | | | | Endosulfan II | 1000 ng/mL |
| | | | | | | | Endosulfan sulfate | 1000 ng/mL |
| | | | | | | | Endrin | 1000 ng/mL |
| | | | | | | | Endrin aldehyde | 1000 ng/mL |
| | | | | | | | Endrin ketone | 1000 ng/mL |
| | | | | | | | gamma-BHC (Lindane) | 1000 ng/mL |
| | | | | | | | gamma-Chlordane | 1000 ng/mL |
| | | | | | | | Heptachlor | 1000 ng/mL |
| | | | | | | | Heptachlor epoxide | 1000 ng/mL |
| | | | | | | | Methoxychlor | 1000 ng/mL |
| | | | | | AR_SURR_RES_00101 | 0.5 mL | DCB Decachlorobiphenyl | 1000 ng/mL |
| | | | | | | | Tetrachloro-m-xylene | 1000 ng/mL |
| ..8081ABResPS_00027 | 07/31/21 | | Restek, Lot A0129369 | | (Purchased Reagent) | | 4,4'-DDD | 2000 ug/mL |
| | | | | | | | 4,4'-DDE | 2000 ug/mL |
| | | | | | | | 4,4'-DDT | 2000 ug/mL |
| | | | | | | | Aldrin | 2000 ug/mL |
| | | | | | | | alpha-BHC | 2000 ug/mL |
| | | | | | | | alpha-Chlordane | 2000 ug/mL |
| | | | | | | | beta-BHC | 2000 ug/mL |
| | | | | | | | delta-BHC | 2000 ug/mL |
| | | | | | | | Dieldrin | 2000 ug/mL |
| | | | | | | | Endosulfan I | 2000 ug/mL |
| | | | | | | | Endosulfan II | 2000 ug/mL |
| | | | | | | | Endosulfan sulfate | 2000 ug/mL |
| | | | | | | | Endrin | 2000 ug/mL |
| | | | | | | | Endrin aldehyde | 2000 ug/mL |
| | | | | | | | Endrin ketone | 2000 ug/mL |
| | | | | | | | gamma-BHC (Lindane) | 2000 ug/mL |
| | | | | | | | gamma-Chlordane | 2000 ug/mL |
| | | | | | | | Heptachlor | 2000 ug/mL |
| | | | | | | | Heptachlor epoxide | 2000 ug/mL |
| | | | | | | | Methoxychlor | 2000 ug/mL |
| ..AR_SURR_RES_00101 | 11/30/24 | | RESTEK, Lot A0141110 | | (Purchased Reagent) | | DCB Decachlorobiphenyl | 200 ug/mL |
| | | | | | | | Tetrachloro-m-xylene | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| **8081TOXCCVL4_00015** | 05/12/19 | 11/12/18 | Hexane, Lot 189045 | 250 mL | 8081ToxPS_00039 | 0.1 mL | Toxaphene | 2000 ng/mL |
| .8081ToxPS_00039 | 05/12/19 | | Restek, Lot A0128388 | | (Purchased Reagent) | | Toxaphene | 5000 ug/mL |
| **8082 LCS_00050** | 03/25/19 | 09/25/18 | ACETONE, Lot Acetone_00234 | 500 mL | 8082LCSSTOCK_00038 | 0.9 mL | PCB-1016 | 2 ug/mL |
| | | | | | | | PCB-1260 | 2 ug/mL |
| | | | | | 8082LCSSTOCK_00039 | 0.1 mL | PCB-1016 | 2 ug/mL |
| | | | | | | | PCB-1260 | 2 ug/mL |
| .8082LCSSTOCK_00038 | 09/25/19 | | RESTEK, Lot A0119290 | | (Purchased Reagent) | | PCB-1016 | 1000 ug/mL |
| | | | | | | | PCB-1260 | 1000 ug/mL |
| .8082LCSSTOCK_00039 | 09/25/19 | | RESTEK, Lot A0119290 | | (Purchased Reagent) | | PCB-1016 | 1000 ug/mL |
| | | | | | | | PCB-1260 | 1000 ug/mL |
| **8270_LCS_Main_00060** | 05/31/19 | 12/06/18 | P&T Methanol, Lot MethanolP&T_00214 | 500 mL | 571995_00054 | 5 mL | 1,1'-Biphenyl | 80 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 80 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 80.878 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dioxane | 80 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 80 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 80 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 80 ug/mL |
| | | | | | | | 2-Chlorophenol | 80 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2-Methylphenol | 80 ug/mL |
| | | | | | | | 2-Nitroaniline | 80 ug/mL |
| | | | | | | | 2-Nitrophenol | 80 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 80 ug/mL |
| | | | | | | | 3-Methylphenol | 80 ug/mL |
| | | | | | | | 3-Nitroaniline | 80 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 160 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 80 ug/mL |
| | | | | | | | 4-Chloroaniline | 80 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Methylphenol | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Nitroaniline | 80 ug/mL |
| | | | | | | | 4-Nitrophenol | 160 ug/mL |
| | | | | | | | Acenaphthene | 80 ug/mL |
| | | | | | | | Acenaphthylene | 80 ug/mL |
| | | | | | | | Acetophenone | 80 ug/mL |
| | | | | | | | Aniline | 80 ug/mL |
| | | | | | | | Anthracene | 80 ug/mL |
| | | | | | | | Azobenzene | 80 ug/mL |
| | | | | | | | Benzo[a]anthracene | 80 ug/mL |
| | | | | | | | Benzo[a]pyrene | 80 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 80 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 80 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 80 ug/mL |
| | | | | | | | Benzyl alcohol | 80 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 80 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 80 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 80 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 80 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 80 ug/mL |
| | | | | | | | Carbazole | 80 ug/mL |
| | | | | | | | Chrysene | 80 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 80 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 80 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 80 ug/mL |
| | | | | | | | Dibenzofuran | 80 ug/mL |
| | | | | | | | Diethyl phthalate | 80 ug/mL |
| | | | | | | | Dimethyl phthalate | 80 ug/mL |
| | | | | | | | Diphenylamine | 68 ug/mL |
| | | | | | | | Fluoranthene | 80 ug/mL |
| | | | | | | | Fluorene | 80 ug/mL |
| | | | | | | | Hexachlorobenzene | 80 ug/mL |
| | | | | | | | Hexachlorobutadiene | 80 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 160 ug/mL |
| | | | | | | | Hexachloroethane | 80 ug/mL |
| | | | | | | | Hexadecane | 80 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 80 ug/mL |
| | | | | | | | Isophorone | 80 ug/mL |
| | | | | | | | n-Decane | 80 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 80 ug/mL |
| | | | | | | | n-Octadecane | 80 ug/mL |
| | | | | | | | Naphthalene | 80 ug/mL |
| | | | | | | | Nitrobenzene | 80 ug/mL |
| | | | | | | | Pentachlorophenol | 160 ug/mL |
| | | | | | | | Phenanthrene | 80 ug/mL |
| | | | | | | | Phenol | 80 ug/mL |
| | | | | | | | Pyrene | 80 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Pyridine | 160 ug/mL |
| | | | | | 571995_00057 | 5 mL | 1,1'-Biphenyl | 80 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 80 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 80.878 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dioxane | 80 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 80 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 80 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 80 ug/mL |
| | | | | | | | 2-Chlorophenol | 80 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2-Methylphenol | 80 ug/mL |
| | | | | | | | 2-Nitroaniline | 80 ug/mL |
| | | | | | | | 2-Nitrophenol | 80 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 80 ug/mL |
| | | | | | | | 3-Methylphenol | 80 ug/mL |
| | | | | | | | 3-Nitroaniline | 80 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 160 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 80 ug/mL |
| | | | | | | | 4-Chloroaniline | 80 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Methylphenol | 80 ug/mL |
| | | | | | | | 4-Nitroaniline | 80 ug/mL |
| | | | | | | | 4-Nitrophenol | 160 ug/mL |
| | | | | | | | Acenaphthene | 80 ug/mL |
| | | | | | | | Acenaphthylene | 80 ug/mL |
| | | | | | | | Acetophenone | 80 ug/mL |
| | | | | | | | Aniline | 80 ug/mL |
| | | | | | | | Anthracene | 80 ug/mL |
| | | | | | | | Azobenzene | 80 ug/mL |
| | | | | | | | Benzo[a]anthracene | 80 ug/mL |
| | | | | | | | Benzo[a]pyrene | 80 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 80 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Benzo[k]fluoranthene | 80 ug/mL |
| | | | | | | | Benzyl alcohol | 80 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 80 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 80 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 80 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 80 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 80 ug/mL |
| | | | | | | | Carbazole | 80 ug/mL |
| | | | | | | | Chrysene | 80 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 80 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 80 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 80 ug/mL |
| | | | | | | | Dibenzofuran | 80 ug/mL |
| | | | | | | | Diethyl phthalate | 80 ug/mL |
| | | | | | | | Dimethyl phthalate | 80 ug/mL |
| | | | | | | | Diphenylamine | 68 ug/mL |
| | | | | | | | Fluoranthene | 80 ug/mL |
| | | | | | | | Fluorene | 80 ug/mL |
| | | | | | | | Hexachlorobenzene | 80 ug/mL |
| | | | | | | | Hexachlorobutadiene | 80 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 160 ug/mL |
| | | | | | | | Hexachloroethane | 80 ug/mL |
| | | | | | | | Hexadecane | 80 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 80 ug/mL |
| | | | | | | | Isophorone | 80 ug/mL |
| | | | | | | | n-Decane | 80 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 80 ug/mL |
| | | | | | | | n-Octadecane | 80 ug/mL |
| | | | | | | | Naphthalene | 80 ug/mL |
| | | | | | | | Nitrobenzene | 80 ug/mL |
| | | | | | | | Pentachlorophenol | 160 ug/mL |
| | | | | | | | Phenanthrene | 80 ug/mL |
| | | | | | | | Phenol | 80 ug/mL |
| | | | | | | | Pyrene | 80 ug/mL |
| | | | | | | | Pyridine | 160 ug/mL |
| | | | | | 571995_00062 | 5 mL | 1,1'-Biphenyl | 80 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 80 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 80.878 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dioxane | 80 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 80 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 80 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 80 ug/mL |
| | | | | | | | 2-Chlorophenol | 80 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2-Methylphenol | 80 ug/mL |
| | | | | | | | 2-Nitroaniline | 80 ug/mL |
| | | | | | | | 2-Nitrophenol | 80 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 80 ug/mL |
| | | | | | | | 3-Methylphenol | 80 ug/mL |
| | | | | | | | 3-Nitroaniline | 80 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 160 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 80 ug/mL |
| | | | | | | | 4-Chloroaniline | 80 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Methylphenol | 80 ug/mL |
| | | | | | | | 4-Nitroaniline | 80 ug/mL |
| | | | | | | | 4-Nitrophenol | 160 ug/mL |
| | | | | | | | Acenaphthene | 80 ug/mL |
| | | | | | | | Acenaphthylene | 80 ug/mL |
| | | | | | | | Acetophenone | 80 ug/mL |
| | | | | | | | Aniline | 80 ug/mL |
| | | | | | | | Anthracene | 80 ug/mL |
| | | | | | | | Azobenzene | 80 ug/mL |
| | | | | | | | Benzo[a]anthracene | 80 ug/mL |
| | | | | | | | Benzo[a]pyrene | 80 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 80 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 80 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 80 ug/mL |
| | | | | | | | Benzyl alcohol | 80 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 80 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 80 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 80 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 80 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 80 ug/mL |
| | | | | | | | Carbazole | 80 ug/mL |
| | | | | | | | Chrysene | 80 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 80 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 80 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 80 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Dibenzofuran | 80 ug/mL |
| | | | | | | | Diethyl phthalate | 80 ug/mL |
| | | | | | | | Dimethyl phthalate | 80 ug/mL |
| | | | | | | | Diphenylamine | 68 ug/mL |
| | | | | | | | Fluoranthene | 80 ug/mL |
| | | | | | | | Fluorene | 80 ug/mL |
| | | | | | | | Hexachlorobenzene | 80 ug/mL |
| | | | | | | | Hexachlorobutadiene | 80 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 160 ug/mL |
| | | | | | | | Hexachloroethane | 80 ug/mL |
| | | | | | | | Hexadecane | 80 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 80 ug/mL |
| | | | | | | | Isophorone | 80 ug/mL |
| | | | | | | | n-Decane | 80 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 80 ug/mL |
| | | | | | | | n-Octadecane | 80 ug/mL |
| | | | | | | | Naphthalene | 80 ug/mL |
| | | | | | | | Nitrobenzene | 80 ug/mL |
| | | | | | | | Pentachlorophenol | 160 ug/mL |
| | | | | | | | Phenanthrene | 80 ug/mL |
| | | | | | | | Phenol | 80 ug/mL |
| | | | | | | | Pyrene | 80 ug/mL |
| | | | | | | | Pyridine | 160 ug/mL |
| | | | | | 571995_00063 | 5 mL | 1,1'-Biphenyl | 80 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 80 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 80.878 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dioxane | 80 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 80 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 80 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 80 ug/mL |
| | | | | | | | 2-Chlorophenol | 80 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 80 ug/mL |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2-Methylphenol | 80 ug/mL |
| | | | | | | | 2-Nitroaniline | 80 ug/mL |
| | | | | | | | 2-Nitrophenol | 80 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 80 ug/mL |
| | | | | | | | 3-Methylphenol | 80 ug/mL |
| | | | | | | | 3-Nitroaniline | 80 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 160 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 80 ug/mL |
| | | | | | | | 4-Chloroaniline | 80 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Methylphenol | 80 ug/mL |
| | | | | | | | 4-Nitroaniline | 80 ug/mL |
| | | | | | | | 4-Nitrophenol | 160 ug/mL |
| | | | | | | | Acenaphthene | 80 ug/mL |
| | | | | | | | Acenaphthylene | 80 ug/mL |
| | | | | | | | Acetophenone | 80 ug/mL |
| | | | | | | | Aniline | 80 ug/mL |
| | | | | | | | Anthracene | 80 ug/mL |
| | | | | | | | Azobenzene | 80 ug/mL |
| | | | | | | | Benzo[a]anthracene | 80 ug/mL |
| | | | | | | | Benzo[a]pyrene | 80 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 80 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 80 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 80 ug/mL |
| | | | | | | | Benzyl alcohol | 80 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 80 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 80 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 80 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 80 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 80 ug/mL |
| | | | | | | | Carbazole | 80 ug/mL |
| | | | | | | | Chrysene | 80 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 80 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 80 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 80 ug/mL |
| | | | | | | | Dibenzofuran | 80 ug/mL |
| | | | | | | | Diethyl phthalate | 80 ug/mL |
| | | | | | | | Dimethyl phthalate | 80 ug/mL |
| | | | | | | | Diphenylamine | 68 ug/mL |
| | | | | | | | Fluoranthene | 80 ug/mL |
| | | | | | | | Fluorene | 80 ug/mL |
| | | | | | | | Hexachlorobenzene | 80 ug/mL |
| | | | | | | | Hexachlorobutadiene | 80 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 160 ug/mL |
| | | | | | | | Hexachloroethane | 80 ug/mL |
| | | | | | | | Hexadecane | 80 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Isophorone | 80 ug/mL |
| | | | | | | | n-Decane | 80 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 80 ug/mL |
| | | | | | | | n-Octadecane | 80 ug/mL |
| | | | | | | | Naphthalene | 80 ug/mL |
| | | | | | | | Nitrobenzene | 80 ug/mL |
| | | | | | | | Pentachlorophenol | 160 ug/mL |
| | | | | | | | Phenanthrene | 80 ug/mL |
| | | | | | | | Phenol | 80 ug/mL |
| | | | | | | | Pyrene | 80 ug/mL |
| | | | | | | | Pyridine | 160 ug/mL |
| | | | | | 571995_00064 | 5 mL | 1,1'-Biphenyl | 80 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 80 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 80.878 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dioxane | 80 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 80 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 80 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 80 ug/mL |
| | | | | | | | 2-Chlorophenol | 80 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2-Methylphenol | 80 ug/mL |
| | | | | | | | 2-Nitroaniline | 80 ug/mL |
| | | | | | | | 2-Nitrophenol | 80 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 80 ug/mL |
| | | | | | | | 3-Methylphenol | 80 ug/mL |
| | | | | | | | 3-Nitroaniline | 80 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 160 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 80 ug/mL |
| | | | | | | | 4-Chloroaniline | 80 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Methylphenol | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Nitroaniline | 80 ug/mL |
| | | | | | | | 4-Nitrophenol | 160 ug/mL |
| | | | | | | | Acenaphthene | 80 ug/mL |
| | | | | | | | Acenaphthylene | 80 ug/mL |
| | | | | | | | Acetophenone | 80 ug/mL |
| | | | | | | | Aniline | 80 ug/mL |
| | | | | | | | Anthracene | 80 ug/mL |
| | | | | | | | Azobenzene | 80 ug/mL |
| | | | | | | | Benzo[a]anthracene | 80 ug/mL |
| | | | | | | | Benzo[a]pyrene | 80 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 80 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 80 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 80 ug/mL |
| | | | | | | | Benzyl alcohol | 80 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 80 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 80 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 80 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 80 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 80 ug/mL |
| | | | | | | | Carbazole | 80 ug/mL |
| | | | | | | | Chrysene | 80 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 80 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 80 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 80 ug/mL |
| | | | | | | | Dibenzofuran | 80 ug/mL |
| | | | | | | | Diethyl phthalate | 80 ug/mL |
| | | | | | | | Dimethyl phthalate | 80 ug/mL |
| | | | | | | | Diphenylamine | 68 ug/mL |
| | | | | | | | Fluoranthene | 80 ug/mL |
| | | | | | | | Fluorene | 80 ug/mL |
| | | | | | | | Hexachlorobenzene | 80 ug/mL |
| | | | | | | | Hexachlorobutadiene | 80 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 160 ug/mL |
| | | | | | | | Hexachloroethane | 80 ug/mL |
| | | | | | | | Hexadecane | 80 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 80 ug/mL |
| | | | | | | | Isophorone | 80 ug/mL |
| | | | | | | | n-Decane | 80 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 80 ug/mL |
| | | | | | | | n-Octadecane | 80 ug/mL |
| | | | | | | | Naphthalene | 80 ug/mL |
| | | | | | | | Nitrobenzene | 80 ug/mL |
| | | | | | | | Pentachlorophenol | 160 ug/mL |
| | | | | | | | Phenanthrene | 80 ug/mL |
| | | | | | | | Phenol | 80 ug/mL |
| | | | | | | | Pyrene | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Pyridine | 160 ug/mL |
| | | | | | 571995_00065 | 2.5 mL | 1,1'-Biphenyl | 80 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 80 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 80.878 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dioxane | 80 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 80 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 80 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 80 ug/mL |
| | | | | | | | 2-Chlorophenol | 80 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2-Methylphenol | 80 ug/mL |
| | | | | | | | 2-Nitroaniline | 80 ug/mL |
| | | | | | | | 2-Nitrophenol | 80 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 80 ug/mL |
| | | | | | | | 3-Methylphenol | 80 ug/mL |
| | | | | | | | 3-Nitroaniline | 80 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 160 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 80 ug/mL |
| | | | | | | | 4-Chloroaniline | 80 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Methylphenol | 80 ug/mL |
| | | | | | | | 4-Nitroaniline | 80 ug/mL |
| | | | | | | | 4-Nitrophenol | 160 ug/mL |
| | | | | | | | Acenaphthene | 80 ug/mL |
| | | | | | | | Acenaphthylene | 80 ug/mL |
| | | | | | | | Acetophenone | 80 ug/mL |
| | | | | | | | Aniline | 80 ug/mL |
| | | | | | | | Anthracene | 80 ug/mL |
| | | | | | | | Azobenzene | 80 ug/mL |
| | | | | | | | Benzo[a]anthracene | 80 ug/mL |
| | | | | | | | Benzo[a]pyrene | 80 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 80 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Benzo[k]fluoranthene | 80 ug/mL |
| | | | | | | | Benzyl alcohol | 80 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 80 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 80 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 80 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 80 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 80 ug/mL |
| | | | | | | | Carbazole | 80 ug/mL |
| | | | | | | | Chrysene | 80 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 80 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 80 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 80 ug/mL |
| | | | | | | | Dibenzofuran | 80 ug/mL |
| | | | | | | | Diethyl phthalate | 80 ug/mL |
| | | | | | | | Dimethyl phthalate | 80 ug/mL |
| | | | | | | | Diphenylamine | 68 ug/mL |
| | | | | | | | Fluoranthene | 80 ug/mL |
| | | | | | | | Fluorene | 80 ug/mL |
| | | | | | | | Hexachlorobenzene | 80 ug/mL |
| | | | | | | | Hexachlorobutadiene | 80 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 160 ug/mL |
| | | | | | | | Hexachloroethane | 80 ug/mL |
| | | | | | | | Hexadecane | 80 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 80 ug/mL |
| | | | | | | | Isophorone | 80 ug/mL |
| | | | | | | | n-Decane | 80 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 80 ug/mL |
| | | | | | | | n-Octadecane | 80 ug/mL |
| | | | | | | | Naphthalene | 80 ug/mL |
| | | | | | | | Nitrobenzene | 80 ug/mL |
| | | | | | | | Pentachlorophenol | 160 ug/mL |
| | | | | | | | Phenanthrene | 80 ug/mL |
| | | | | | | | Phenol | 80 ug/mL |
| | | | | | | | Pyrene | 80 ug/mL |
| | | | | | | | Pyridine | 160 ug/mL |
| | | | | | 571995_00068 | 5 mL | 1,1'-Biphenyl | 80 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 80 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 80.878 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dioxane | 80 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 80 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 80 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 80 ug/mL |
| | | | | | | | 2-Chlorophenol | 80 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2-Methylphenol | 80 ug/mL |
| | | | | | | | 2-Nitroaniline | 80 ug/mL |
| | | | | | | | 2-Nitrophenol | 80 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 80 ug/mL |
| | | | | | | | 3-Methylphenol | 80 ug/mL |
| | | | | | | | 3-Nitroaniline | 80 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 160 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 80 ug/mL |
| | | | | | | | 4-Chloroaniline | 80 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Methylphenol | 80 ug/mL |
| | | | | | | | 4-Nitroaniline | 80 ug/mL |
| | | | | | | | 4-Nitrophenol | 160 ug/mL |
| | | | | | | | Acenaphthene | 80 ug/mL |
| | | | | | | | Acenaphthylene | 80 ug/mL |
| | | | | | | | Acetophenone | 80 ug/mL |
| | | | | | | | Aniline | 80 ug/mL |
| | | | | | | | Anthracene | 80 ug/mL |
| | | | | | | | Azobenzene | 80 ug/mL |
| | | | | | | | Benzo[a]anthracene | 80 ug/mL |
| | | | | | | | Benzo[a]pyrene | 80 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 80 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 80 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 80 ug/mL |
| | | | | | | | Benzyl alcohol | 80 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 80 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 80 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 80 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 80 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 80 ug/mL |
| | | | | | | | Carbazole | 80 ug/mL |
| | | | | | | | Chrysene | 80 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 80 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 80 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 80 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Dibenzofuran | 80 ug/mL |
| | | | | | | | Diethyl phthalate | 80 ug/mL |
| | | | | | | | Dimethyl phthalate | 80 ug/mL |
| | | | | | | | Diphenylamine | 68 ug/mL |
| | | | | | | | Fluoranthene | 80 ug/mL |
| | | | | | | | Fluorene | 80 ug/mL |
| | | | | | | | Hexachlorobenzene | 80 ug/mL |
| | | | | | | | Hexachlorobutadiene | 80 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 160 ug/mL |
| | | | | | | | Hexachloroethane | 80 ug/mL |
| | | | | | | | Hexadecane | 80 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 80 ug/mL |
| | | | | | | | Isophorone | 80 ug/mL |
| | | | | | | | n-Decane | 80 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 80 ug/mL |
| | | | | | | | n-Octadecane | 80 ug/mL |
| | | | | | | | Naphthalene | 80 ug/mL |
| | | | | | | | Nitrobenzene | 80 ug/mL |
| | | | | | | | Pentachlorophenol | 160 ug/mL |
| | | | | | | | Phenanthrene | 80 ug/mL |
| | | | | | | | Phenol | 80 ug/mL |
| | | | | | | | Pyrene | 80 ug/mL |
| | | | | | | | Pyridine | 160 ug/mL |
| | | | | | 571995_00069 | 5 mL | 1,1'-Biphenyl | 80 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 80 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 80.878 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dioxane | 80 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 80 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 80 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 80 ug/mL |
| | | | | | | | 2-Chlorophenol | 80 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2-Methylphenol | 80 ug/mL |
| | | | | | | | 2-Nitroaniline | 80 ug/mL |
| | | | | | | | 2-Nitrophenol | 80 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 80 ug/mL |
| | | | | | | | 3-Methylphenol | 80 ug/mL |
| | | | | | | | 3-Nitroaniline | 80 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 160 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 80 ug/mL |
| | | | | | | | 4-Chloroaniline | 80 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Methylphenol | 80 ug/mL |
| | | | | | | | 4-Nitroaniline | 80 ug/mL |
| | | | | | | | 4-Nitrophenol | 160 ug/mL |
| | | | | | | | Acenaphthene | 80 ug/mL |
| | | | | | | | Acenaphthylene | 80 ug/mL |
| | | | | | | | Acetophenone | 80 ug/mL |
| | | | | | | | Aniline | 80 ug/mL |
| | | | | | | | Anthracene | 80 ug/mL |
| | | | | | | | Azobenzene | 80 ug/mL |
| | | | | | | | Benzo[a]anthracene | 80 ug/mL |
| | | | | | | | Benzo[a]pyrene | 80 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 80 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 80 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 80 ug/mL |
| | | | | | | | Benzyl alcohol | 80 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 80 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 80 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 80 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 80 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 80 ug/mL |
| | | | | | | | Carbazole | 80 ug/mL |
| | | | | | | | Chrysene | 80 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 80 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 80 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 80 ug/mL |
| | | | | | | | Dibenzofuran | 80 ug/mL |
| | | | | | | | Diethyl phthalate | 80 ug/mL |
| | | | | | | | Dimethyl phthalate | 80 ug/mL |
| | | | | | | | Diphenylamine | 68 ug/mL |
| | | | | | | | Fluoranthene | 80 ug/mL |
| | | | | | | | Fluorene | 80 ug/mL |
| | | | | | | | Hexachlorobenzene | 80 ug/mL |
| | | | | | | | Hexachlorobutadiene | 80 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 160 ug/mL |
| | | | | | | | Hexachloroethane | 80 ug/mL |
| | | | | | | | Hexadecane | 80 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Isophorone | 80 ug/mL |
| | | | | | | | n-Decane | 80 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 80 ug/mL |
| | | | | | | | n-Octadecane | 80 ug/mL |
| | | | | | | | Naphthalene | 80 ug/mL |
| | | | | | | | Nitrobenzene | 80 ug/mL |
| | | | | | | | Pentachlorophenol | 160 ug/mL |
| | | | | | | | Phenanthrene | 80 ug/mL |
| | | | | | | | Phenol | 80 ug/mL |
| | | | | | | | Pyrene | 80 ug/mL |
| | | | | | | | Pyridine | 160 ug/mL |
| | | | | | 571995_00090 | 2.5 mL | 1,1'-Biphenyl | 80 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 80 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 80.878 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dioxane | 80 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 80 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 80 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 80 ug/mL |
| | | | | | | | 2-Chlorophenol | 80 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2-Methylphenol | 80 ug/mL |
| | | | | | | | 2-Nitroaniline | 80 ug/mL |
| | | | | | | | 2-Nitrophenol | 80 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 80 ug/mL |
| | | | | | | | 3-Methylphenol | 80 ug/mL |
| | | | | | | | 3-Nitroaniline | 80 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 160 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 80 ug/mL |
| | | | | | | | 4-Chloroaniline | 80 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Methylphenol | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Nitroaniline | 80 ug/mL |
| | | | | | | | 4-Nitrophenol | 160 ug/mL |
| | | | | | | | Acenaphthene | 80 ug/mL |
| | | | | | | | Acenaphthylene | 80 ug/mL |
| | | | | | | | Acetophenone | 80 ug/mL |
| | | | | | | | Aniline | 80 ug/mL |
| | | | | | | | Anthracene | 80 ug/mL |
| | | | | | | | Azobenzene | 80 ug/mL |
| | | | | | | | Benzo[a]anthracene | 80 ug/mL |
| | | | | | | | Benzo[a]pyrene | 80 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 80 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 80 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 80 ug/mL |
| | | | | | | | Benzyl alcohol | 80 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 80 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 80 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 80 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 80 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 80 ug/mL |
| | | | | | | | Carbazole | 80 ug/mL |
| | | | | | | | Chrysene | 80 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 80 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 80 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 80 ug/mL |
| | | | | | | | Dibenzofuran | 80 ug/mL |
| | | | | | | | Diethyl phthalate | 80 ug/mL |
| | | | | | | | Dimethyl phthalate | 80 ug/mL |
| | | | | | | | Diphenylamine | 68 ug/mL |
| | | | | | | | Fluoranthene | 80 ug/mL |
| | | | | | | | Fluorene | 80 ug/mL |
| | | | | | | | Hexachlorobenzene | 80 ug/mL |
| | | | | | | | Hexachlorobutadiene | 80 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 160 ug/mL |
| | | | | | | | Hexachloroethane | 80 ug/mL |
| | | | | | | | Hexadecane | 80 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 80 ug/mL |
| | | | | | | | Isophorone | 80 ug/mL |
| | | | | | | | n-Decane | 80 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 80 ug/mL |
| | | | | | | | n-Octadecane | 80 ug/mL |
| | | | | | | | Naphthalene | 80 ug/mL |
| | | | | | | | Nitrobenzene | 80 ug/mL |
| | | | | | | | Pentachlorophenol | 160 ug/mL |
| | | | | | | | Phenanthrene | 80 ug/mL |
| | | | | | | | Phenol | 80 ug/mL |
| | | | | | | | Pyrene | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Pyridine | 160 ug/mL |
| | | | | | MS-569731_00101 | 5 mL | Benzoic acid | 80 ug/mL |
| | | | | | | | Indene | 80 ug/mL |
| | | | | | MS-569731_00103 | 5 mL | Benzoic acid | 80 ug/mL |
| | | | | | | | Indene | 80 ug/mL |
| | | | | | MS-569731_00104 | 5 mL | Benzoic acid | 80 ug/mL |
| | | | | | | | Indene | 80 ug/mL |
| | | | | | MS-569731_00105 | 5 mL | Benzoic acid | 80 ug/mL |
| | | | | | | | Indene | 80 ug/mL |
| | | | | | OP-572556_00020 | 5 mL | Hexachlorocyclopentadiene | 160 ug/mL |
| | | | | | OP-572556_00027 | 5 mL | Hexachlorocyclopentadiene | 160 ug/mL |
| .571995_00054 | 01/31/20 | | Restek, Lot A0140111 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | n-Octadecane | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .571995_00057 | 01/31/20 | | Restek, Lot A0140111 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | n-Octadecane | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .571995_00062 | 01/31/20 | | Restek, Lot A0140111 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | n-Octadecane | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .571995_00063 | 01/31/20 | | Restek, Lot A0140111 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | n-Octadecane | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .571995_00064 | 01/31/20 | | Restek, Lot A0140111 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | n-Octadecane | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .571995_00065 | 01/31/20 | | Restek, Lot A0140111 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | n-Octadecane | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .571995_00068 | 01/31/20 | | Restek, Lot A0140111 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | n-Octadecane | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .571995_00069 | 01/31/20 | | Restek, Lot A0140111 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | n-Octadecane | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .571995_00090 | 09/30/19 | | Restek, Lot A0136052 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | n-Octadecane | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .MS-569731_00101 | 10/31/19 | | Restek, Lot A0136865 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Indene | 2000 ug/mL |
| .MS-569731_00103 | 10/31/19 | | Restek, Lot A0136865 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| | | | | | | | Indene | 2000 ug/mL |
| .MS-569731_00104 | 10/31/19 | | Restek, Lot A0136865 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| | | | | | | | Indene | 2000 ug/mL |
| .MS-569731_00105 | 10/31/19 | | Restek, Lot A0136865 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| | | | | | | | Indene | 2000 ug/mL |
| .OP-572556_00020 | 11/30/22 | | Restek, Lot A0143533 | | (Purchased Reagent) | | Hexachlorocyclopentadiene | 4000 ug/mL |
| .OP-572556_00027 | 11/30/22 | | Restek, Lot A0143533 | | (Purchased Reagent) | | Hexachlorocyclopentadiene | 4000 ug/mL |
| **8270_LCS_Supp_00324** | 01/23/19 | 01/16/19 | P&T Methanol, Lot MethanolP&T_00220 | 50 mL | OP-569730_00006 | 1.5 mL | 3,3'-Dichlorobenzidine | 160 ug/mL |
| | | | | | | | Benzidine | 160 ug/mL |
| | | | | | OP-569730_00009 | 2.5 mL | 3,3'-Dichlorobenzidine | 160 ug/mL |
| | | | | | | | Benzidine | 160 ug/mL |
| | | | | | OP-569732_00009 | 2 mL | Atrazine | 80 ug/mL |
| | | | | | | | Benzaldehyde | 80 ug/mL |
| | | | | | | | Caprolactam | 80 ug/mL |
| .OP-569730_00006 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| | | | | | | | Benzidine | 2000 ug/mL |
| .OP-569730_00009 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| | | | | | | | Benzidine | 2000 ug/mL |
| .OP-569732_00009 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Atrazine | 2000 ug/mL |
| | | | | | | | Benzaldehyde | 2000 ug/mL |
| | | | | | | | Caprolactam | 2000 ug/mL |
| **8270Surrogate_00130** | 12/12/19 | 12/17/18 | ACETONE, Lot Acetone_00250 | 1000 mL | 8270SurStkHL_00299 | 5 mL | 2,4,6 - Tribromophenol | 100 ug/mL |
| | | | | | | | 2,4,6-Tribromophenol (Surr) | 100 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 100 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 100 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 100 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 100 ug/mL |
| | | | | | | | Phenol-d6 | 100 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 100 ug/mL |
| | | | | | 8270SurStkHL_00300 | 5 mL | 2,4,6 - Tribromophenol | 100 ug/mL |
| | | | | | | | 2,4,6-Tribromophenol (Surr) | 100 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 100 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 100 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 100 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 100 ug/mL |
| | | | | | | | Phenol-d6 | 100 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 100 ug/mL |
| | | | | | 8270SurStkHL_00305 | 5 mL | 2,4,6 - Tribromophenol | 100 ug/mL |
| | | | | | | | 2,4,6-Tribromophenol (Surr) | 100 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 100 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 100 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 100 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 100 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenol-d6 | 100 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 100 ug/mL |
| | | | | | 8270SurStkHL_00306 | 5 mL | 2,4,6 - Tribromophenol | 100 ug/mL |
| | | | | | | | 2,4,6-Tribromophenol (Surr) | 100 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 100 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 100 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 100 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 100 ug/mL |
| | | | | | | | Phenol-d6 | 100 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 100 ug/mL |
| .8270SurStkHL_00299 | 09/30/23 | | Restek, Lot A01411581 | | (Purchased Reagent) | | 2,4,6 - Tribromophenol | 5000 ug/mL |
| | | | | | | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d6 | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| .8270SurStkHL_00300 | 09/30/23 | | Restek, Lot A01411581 | | (Purchased Reagent) | | 2,4,6 - Tribromophenol | 5000 ug/mL |
| | | | | | | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d6 | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| .8270SurStkHL_00305 | 09/30/23 | | Restek, Lot A01411581 | | (Purchased Reagent) | | 2,4,6 - Tribromophenol | 5000 ug/mL |
| | | | | | | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d6 | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| .8270SurStkHL_00306 | 09/30/23 | | Restek, Lot A01411581 | | (Purchased Reagent) | | 2,4,6 - Tribromophenol | 5000 ug/mL |
| | | | | | | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d6 | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| **AR_1248_ICV_00014** | 06/06/19 | 12/06/18 | Hexane, Lot 186983 | 100 mL | AR_1248_RESss_00011 | 25 uL | PCB-1248 | 250 ng/mL |
| .AR_1248_RESss_00011 | 12/06/19 | | RESTEK, Lot A0124143 | | (Purchased Reagent) | | PCB-1248 | 1000 ug/mL |
| **AR_1248_L7_00018** | 07/08/19 | 01/08/19 | Hexane, Lot 192742 | 100 mL | AR_1248_RES_00013 | 100 uL | PCB-1248 Peak 1 | 1 ug/mL |
| | | | | | | | PCB-1248 Peak 2 | 1 ug/mL |
| | | | | | | | PCB-1248 Peak 3 | 1 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | PCB-1248 Peak 4 | 1 ug/mL |
| | | | | | | | PCB-1248 Peak 5 | 1 ug/mL |
| .AR_1248_RES_00013 | 07/08/19 | | RESTEK, Lot A0130978 | | (Purchased Reagent) | | PCB-1248 Peak 1 | 1000 ug/mL |
| | | | | | | | PCB-1248 Peak 2 | 1000 ug/mL |
| | | | | | | | PCB-1248 Peak 3 | 1000 ug/mL |
| | | | | | | | PCB-1248 Peak 4 | 1000 ug/mL |
| | | | | | | | PCB-1248 Peak 5 | 1000 ug/mL |
| **AR_1660_ICV_00015** | 06/06/19 | 12/06/18 | Hexane, Lot 186983 | 100 mL | AR_1660_RESss_00011 | 25 uL | PCB-1016 | 250 ng/mL |
| | | | | | | | PCB-1260 | 250 ng/mL |
| .AR_1660_RESss_00011 | 12/06/19 | | RESTEK, Lot A0133256 | | (Purchased Reagent) | | PCB-1016 | 1000 ug/mL |
| | | | | | | | PCB-1260 | 1000 ug/mL |
| **AR_1660_L7_00028** | 07/08/19 | 01/08/19 | Hexane, Lot 192742 | 100 mL | AR_1660_RES_00002 | 100 uL | PCB-1016 Peak 1 | 1 ug/mL |
| | | | | | | | PCB-1016 Peak 2 | 1 ug/mL |
| | | | | | | | PCB-1016 Peak 3 | 1 ug/mL |
| | | | | | | | PCB-1016 Peak 4 | 1 ug/mL |
| | | | | | | | PCB-1016 Peak 5 | 1 ug/mL |
| | | | | | | | PCB-1260 Peak 1 | 1 ug/mL |
| | | | | | | | PCB-1260 Peak 2 | 1 ug/mL |
| | | | | | | | PCB-1260 Peak 3 | 1 ug/mL |
| | | | | | | | PCB-1260 Peak 4 | 1 ug/mL |
| | | | | | | | PCB-1260 Peak 5 | 1 ug/mL |
| | | | | | AR_SURR_RES_00102 | 25 uL | DCB Decachlorobiphenyl | 0.05 ug/mL |
| | | | | | | | Tetrachloro-m-xylene | 0.05 ug/mL |
| .AR_1660_RES_00002 | 07/08/19 | | RESTEK, Lot A0134815 | | (Purchased Reagent) | | PCB-1016 Peak 1 | 1000 ug/mL |
| | | | | | | | PCB-1016 Peak 2 | 1000 ug/mL |
| | | | | | | | PCB-1016 Peak 3 | 1000 ug/mL |
| | | | | | | | PCB-1016 Peak 4 | 1000 ug/mL |
| | | | | | | | PCB-1016 Peak 5 | 1000 ug/mL |
| | | | | | | | PCB-1260 Peak 1 | 1000 ug/mL |
| | | | | | | | PCB-1260 Peak 2 | 1000 ug/mL |
| | | | | | | | PCB-1260 Peak 3 | 1000 ug/mL |
| | | | | | | | PCB-1260 Peak 4 | 1000 ug/mL |
| | | | | | | | PCB-1260 Peak 5 | 1000 ug/mL |
| .AR_SURR_RES_00102 | 07/08/20 | | RESTEK, Lot A0141110 | | (Purchased Reagent) | | DCB Decachlorobiphenyl | 200 ug/mL |
| | | | | | | | Tetrachloro-m-xylene | 200 ug/mL |
| **AR_1660_L7_00028** | 07/08/19 | 01/08/19 | Hexane, Lot 192742 | 100 mL | AR_1660_RES_00002 | 100 uL | PCB-1016 | 1 ug/mL |
| | | | | | | | PCB-1260 | 1 ug/mL |
| .AR_1660_RES_00002 | 07/08/19 | | RESTEK, Lot A0134815 | | (Purchased Reagent) | | PCB-1016 | 1000 ug/mL |
| | | | | | | | PCB-1260 | 1000 ug/mL |
| **AR_2154_ICV_00015** | 06/06/19 | 12/06/18 | Hexane, Lot 186983 | 100 mL | AR_2154_RESss_00002 | 25 uL | PCB-1221 | 250 ng/mL |
| | | | | | | | PCB-1254 | 250 ng/mL |
| .AR_2154_RESss_00002 | 12/06/19 | | RESTEK, Lot A0131779 | | (Purchased Reagent) | | PCB-1221 | 1000 ug/mL |
| | | | | | | | PCB-1254 | 1000 ug/mL |
| **AR_2154_L7_00022** | 07/08/19 | 01/08/19 | Hexane, Lot 192742 | 100 mL | AR_2154_RES_00002 | 100 uL | PCB-1221 Peak 1 | 1 ug/mL |
| | | | | | | | PCB-1221 Peak 2 | 1 ug/mL |
| | | | | | | | PCB-1221 Peak 3 | 1 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | PCB-1254 Peak 1 | 1 ug/mL |
| | | | | | | | PCB-1254 Peak 2 | 1 ug/mL |
| | | | | | | | PCB-1254 Peak 3 | 1 ug/mL |
| | | | | | | | PCB-1254 Peak 4 | 1 ug/mL |
| | | | | | | | PCB-1254 Peak 5 | 1 ug/mL |
| .AR_2154_RES_00002 | 07/08/19 | | RESTEK, Lot A0131802 | | (Purchased Reagent) | | PCB-1221 Peak 1 | 1000 ug/mL |
| | | | | | | | PCB-1221 Peak 2 | 1000 ug/mL |
| | | | | | | | PCB-1221 Peak 3 | 1000 ug/mL |
| | | | | | | | PCB-1254 Peak 1 | 1000 ug/mL |
| | | | | | | | PCB-1254 Peak 2 | 1000 ug/mL |
| | | | | | | | PCB-1254 Peak 3 | 1000 ug/mL |
| | | | | | | | PCB-1254 Peak 4 | 1000 ug/mL |
| | | | | | | | PCB-1254 Peak 5 | 1000 ug/mL |
| **AR_3262_ICV_00014** | 06/06/19 | 12/06/18 | Hexane, Lot 186983 | 100 mL | AR_3262_RESss_00001 | 25 uL | PCB-1232 | 250 ng/mL |
| | | | | | | | PCB-1262 | 250 ng/mL |
| .AR_3262_RESss_00001 | 12/06/19 | | RESTEK, Lot A0134307 | | (Purchased Reagent) | | PCB-1232 | 1000 ug/mL |
| | | | | | | | PCB-1262 | 1000 ug/mL |
| **AR_3262_L7_00018** | 07/08/19 | 01/08/19 | Hexane, Lot 192742 | 100 mL | AR_3262_RES_00002 | 100 uL | PCB-1232 Peak 1 | 1 ug/mL |
| | | | | | | | PCB-1232 Peak 2 | 1 ug/mL |
| | | | | | | | PCB-1232 Peak 3 | 1 ug/mL |
| | | | | | | | PCB-1232 Peak 4 | 1 ug/mL |
| | | | | | | | PCB-1232 Peak 5 | 1 ug/mL |
| | | | | | | | PCB-1262 Peak 1 | 1 ug/mL |
| | | | | | | | PCB-1262 Peak 2 | 1 ug/mL |
| | | | | | | | PCB-1262 Peak 3 | 1 ug/mL |
| | | | | | | | PCB-1262 Peak 4 | 1 ug/mL |
| | | | | | | | PCB-1262 Peak 5 | 1 ug/mL |
| .AR_3262_RES_00002 | 07/08/19 | | RESTEK, Lot A0132023 | | (Purchased Reagent) | | PCB-1232 Peak 1 | 1000 ug/mL |
| | | | | | | | PCB-1232 Peak 2 | 1000 ug/mL |
| | | | | | | | PCB-1232 Peak 3 | 1000 ug/mL |
| | | | | | | | PCB-1232 Peak 4 | 1000 ug/mL |
| | | | | | | | PCB-1232 Peak 5 | 1000 ug/mL |
| | | | | | | | PCB-1262 Peak 1 | 1000 ug/mL |
| | | | | | | | PCB-1262 Peak 2 | 1000 ug/mL |
| | | | | | | | PCB-1262 Peak 3 | 1000 ug/mL |
| | | | | | | | PCB-1262 Peak 4 | 1000 ug/mL |
| | | | | | | | PCB-1262 Peak 5 | 1000 ug/mL |
| **AR_4268_ICV_00014** | 06/06/19 | 12/06/18 | Hexane, Lot 186983 | 100 mL | AR_4268_RESss_00001 | 25 uL | PCB-1242 | 250 ng/mL |
| | | | | | | | PCB-1268 | 250 ng/mL |
| .AR_4268_RESss_00001 | 12/06/19 | | RESTEK, Lot A0133202 | | (Purchased Reagent) | | PCB-1242 | 1000 ug/mL |
| | | | | | | | PCB-1268 | 1000 ug/mL |
| **AR_4268_L7_00017** | 07/08/19 | 01/08/19 | Hexane, Lot 192742 | 100 mL | AR_4268_RES_00002 | 100 uL | PCB-1242 Peak 1 | 1 ug/mL |
| | | | | | | | PCB-1242 Peak 2 | 1 ug/mL |
| | | | | | | | PCB-1242 Peak 3 | 1 ug/mL |
| | | | | | | | PCB-1242 Peak 4 | 1 ug/mL |
| | | | | | | | PCB-1242 Peak 5 | 1 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | PCB-1268 Peak 1 | 1 ug/mL |
| | | | | | | | PCB-1268 Peak 2 | 1 ug/mL |
| | | | | | | | PCB-1268 Peak 3 | 1 ug/mL |
| | | | | | | | PCB-1268 Peak 4 | 1 ug/mL |
| | | | | | | | PCB-1268 Peak 5 | 1 ug/mL |
| .AR_4268_RES_00002 | 07/08/19 | | RESTEK, Lot A0133093 | | (Purchased Reagent) | | PCB-1242 Peak 1 | 1000 ug/mL |
| | | | | | | | PCB-1242 Peak 2 | 1000 ug/mL |
| | | | | | | | PCB-1242 Peak 3 | 1000 ug/mL |
| | | | | | | | PCB-1242 Peak 4 | 1000 ug/mL |
| | | | | | | | PCB-1242 Peak 5 | 1000 ug/mL |
| | | | | | | | PCB-1268 Peak 1 | 1000 ug/mL |
| | | | | | | | PCB-1268 Peak 2 | 1000 ug/mL |
| | | | | | | | PCB-1268 Peak 3 | 1000 ug/mL |
| | | | | | | | PCB-1268 Peak 4 | 1000 ug/mL |
| | | | | | | | PCB-1268 Peak 5 | 1000 ug/mL |
| **BNB IS_00013** | 07/04/19 | 01/04/19 | Hexane, Lot 192742 | 500 mL | BNB stock_00017 | 0.5 mL | 1-Bromo-2-nitrobenzene | 1000 ng/mL |
| .BNB stock_00017 | 07/04/19 | | Restek, Lot A0127264 | | (Purchased Reagent) | | 1-Bromo-2-nitrobenzene | 1000 ug/mL |
| **MS-AFCA010_00017** | 04/04/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-AFCA_STK_00014 | 25 uL | Benzidine | 10 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-AFCA_STK_00014 | 10/31/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569730 AFC_00007 | 1 mL | Benzidine | 200 ug/mL |
| ..MS-569730 AFC_00007 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | Benzidine | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-AFCA020_00018** | 04/04/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-AFCA_STK_00014 | 50 uL | Benzidine | 20 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-AFCA_STK_00014 | 10/31/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569730 AFC_00007 | 1 mL | Benzidine | 200 ug/mL |
| ..MS-569730 AFC_00007 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | Benzidine | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-AFCA050_00017** | 04/04/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-AFCA_STK_00014 | 125 uL | Benzidine | 50 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-AFCA_STK_00014 | 10/31/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569730 AFC_00007 | 1 mL | Benzidine | 200 ug/mL |
| ..MS-569730 AFC_00007 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | Benzidine | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-AFCA080_00022** | 04/04/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-AFCA_STK_00014 | 200 uL | Benzidine | 80 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-AFCA_STK_00014 | 10/31/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569730 AFC_00007 | 1 mL | Benzidine | 200 ug/mL |
| ..MS-569730 AFC_00007 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | Benzidine | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-AFCA120_00017** | 04/04/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-AFCA_STK_00014 | 300 uL | Benzidine | 120 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-AFCA_STK_00014 | 10/31/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569730 AFC_00007 | 1 mL | Benzidine | 200 ug/mL |
| ..MS-569730 AFC_00007 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | Benzidine | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-AFCA160_00018** | 04/04/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-AFCA_STK_00014 | 400 uL | Benzidine | 160 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-AFCA_STK_00014 | 10/31/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569730 AFC_00007 | 1 mL | Benzidine | 200 ug/mL |
| ..MS-569730 AFC_00007 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | Benzidine | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-AFCA200_00017** | 04/04/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-AFCA_STK_00014 | 500 uL | Benzidine | 200 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-AFCA_STK_00014 | 10/31/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569730 AFC_00007 | 1 mL | Benzidine | 200 ug/mL |
| ..MS-569730 AFC_00007 | 10/31/19 | Restek, Lot A0137351 | | | (Purchased Reagent) | | Benzidine | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | Restek, Lot A0112833 | | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | Restek, Lot A0129635 | | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-AFCACCV080_00080** | 04/04/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-AFCACCV080_00080** | 04/04/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-AFCA_STK_00014 | 200 uL | Benzidine | 80 ug/mL |
| .MS-AFCA_STK_00014 | 10/31/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569730 AFC_00007 | 1 mL | Benzidine | 200 ug/mL |
| ..MS-569730 AFC_00007 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | Benzidine | 2000 ug/mL |
| **MS-AFCBSSV100_00021** | 04/04/19 | 11/19/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-AFCB_STK_00007 | 250 uL | Benzidine | 100 ug/mL |
| .MS-AFCB_STK_00007 | 04/30/19 | 06/22/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-569730SECa_00004 | 1 mL | Benzidine | 200 ug/mL |
| ..MS-569730SECa_00004 | 04/30/19 | | Restek, Lot A0131614 | | (Purchased Reagent) | | Benzidine | 2000 ug/mL |
| **MS-BZHDA-CCV_00052** | 04/04/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | Restek, Lot A0129635 | | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-BZHDA-CCV_00052** | 04/04/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-BZHDA_STK_00016 | 200 uL | Benzaldehyde | 80 ug/mL |
| .MS-BZHDA_STK_00016 | 10/31/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569732 BZH_00008 | 1 mL | Benzaldehyde | 200 ug/mL |
| ..MS-569732 BZH_00008 | 10/31/19 | Restek, Lot A0137125 | | | (Purchased Reagent) | | Benzaldehyde | 2000 ug/mL |
| **MS-BZHDA010_00019** | 04/04/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-BZHDA_STK_00016 | 25 uL | Benzaldehyde | 10 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-BZHDA_STK_00016 | 10/31/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569732 BZH_00008 | 1 mL | Benzaldehyde | 200 ug/mL |
| ..MS-569732 BZH_00008 | 10/31/19 | Restek, Lot A0137125 | | | (Purchased Reagent) | | Benzaldehyde | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | Restek, Lot A0112833 | | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | Restek, Lot A0129635 | | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-BZHDA020_00019** | 04/04/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-BZHDA_STK_00016 | 50 uL | Benzaldehyde | 20 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-BZHDA_STK_00016 | 10/31/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569732 BZH_00008 | 1 mL | Benzaldehyde | 200 ug/mL |
| ..MS-569732 BZH_00008 | 10/31/19 | Restek, Lot A0137125 | | | (Purchased Reagent) | | Benzaldehyde | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | Restek, Lot A0112833 | | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | Restek, Lot A0129635 | | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-BZHDA050_00018** | 04/04/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-BZHDA_STK_00016 | 125 uL | Benzaldehyde | 50 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-BZHDA_STK_00016 | 10/31/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569732 BZH_00008 | 1 mL | Benzaldehyde | 200 ug/mL |
| ..MS-569732 BZH_00008 | 10/31/19 | Restek, Lot A0137125 | | | (Purchased Reagent) | | Benzaldehyde | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-BZHDA080_00018** | 04/04/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-BZHDA_STK_00016 | 200 uL | Benzaldehyde | 80 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-BZHDA_STK_00016 | 10/31/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569732 BZH_00008 | 1 mL | Benzaldehyde | 200 ug/mL |
| ..MS-569732 BZH_00008 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Benzaldehyde | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-BZHDA120_00018** | 04/04/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-BZHDA_STK_00016 | 300 uL | Benzaldehyde | 120 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-BZHDA_STK_00016 | 10/31/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569732 BZH_00008 | 1 mL | Benzaldehyde | 200 ug/mL |
| ..MS-569732 BZH_00008 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Benzaldehyde | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-BZHDA160_00018** | 04/04/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-BZHDA_STK_00016 | 400 uL | Benzaldehyde | 160 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-BZHDA_STK_00016 | 10/31/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569732 BZH_00008 | 1 mL | Benzaldehyde | 200 ug/mL |
| ..MS-569732 BZH_00008 | 10/31/19 | Restek, Lot A0137125 | | | (Purchased Reagent) | | Benzaldehyde | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | Restek, Lot A0112833 | | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | Restek, Lot A0129635 | | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-BZHDA200_00018** | 04/04/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-BZHDA_STK_00016 | 500 uL | Benzaldehyde | 200 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-BZHDA_STK_00016 | 10/31/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-569732 BZH_00008 | 1 mL | Benzaldehyde | 200 ug/mL |
| ..MS-569732 BZH_00008 | 10/31/19 | Restek, Lot A0137125 | | | (Purchased Reagent) | | Benzaldehyde | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-BZHDB-SSV_00023** | 02/28/19 | 11/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-BZHDB_STK_00010 | 250 uL | Benzaldehyde | 100 ug/mL |
| .MS-BZHDB_STK_00010 | 02/28/19 | 07/12/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-569732SEC_00005 | 1 mL | Benzaldehyde | 200 ug/mL |
| ..MS-569732SEC_00005 | 02/28/19 | | Restek, Lot A0130332 | | (Purchased Reagent) | | Benzaldehyde | 2000 ug/mL |
| **MS-DFTPP_00047** | 01/25/19 | 09/04/18 | Methylene Chloride, Lot 187286 | 20 mL | MS-47548-U_00015 | 1 mL | DFTPP | 50 ug/mL |
| .MS-47548-U_00015 | 03/31/19 | | Supelco, Lot XA19099V | | (Purchased Reagent) | | DFTPP | 1000 ug/mL |
| **MS-FAM CCV_00002** | 04/04/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-FAM CCV_00002** | 04/04/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-FAM_STK_00001 | 200 uL | Famphur | 80 ug/mL |
| .MS-FAM_STK_00001 | 11/21/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-568023_00044 | 1 mL | Famphur | 200 ug/mL |
| ..MS-568023_00044 | 07/31/20 | | Restek, Lot A0139949 | | (Purchased Reagent) | | Famphur | 2000 ug/mL |
| **MS-FAM004_00001** | 04/04/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-FAM_STK_00001 | 10 uL | Famphur | 4 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-FAM_STK_00001 | 11/21/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-568023_00044 | 1 mL | Famphur | 200 ug/mL |
| ..MS-568023_00044 | 07/31/20 | | Restek, Lot A0139949 | | (Purchased Reagent) | | Famphur | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-FAM010_00001** | 04/04/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-FAM_STK_00001 | 25 uL | Famphur | 10 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-FAM_STK_00001 | 11/21/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-568023_00044 | 1 mL | Famphur | 200 ug/mL |
| ..MS-568023_00044 | 07/31/20 | | Restek, Lot A0139949 | | (Purchased Reagent) | | Famphur | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-FAM020_00001** | 04/04/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-FAM_STK_00001 | 50 uL | Famphur | 20 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-FAM_STK_00001 | 11/21/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-568023_00044 | 1 mL | Famphur | 200 ug/mL |
| ..MS-568023_00044 | 07/31/20 | | Restek, Lot A0139949 | | (Purchased Reagent) | | Famphur | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-FAM050_00001** | 04/04/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-FAM_STK_00001 | 125 uL | Famphur | 50 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-FAM_STK_00001 | 11/21/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-568023_00044 | 1 mL | Famphur | 200 ug/mL |
| ..MS-568023_00044 | 07/31/20 | | Restek, Lot A0139949 | | (Purchased Reagent) | | Famphur | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-FAM080_00001** | 04/04/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-FAM_STK_00001 | 200 uL | Famphur | 80 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-FAM_STK_00001 | 11/21/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-568023_00044 | 1 mL | Famphur | 200 ug/mL |
| ..MS-568023_00044 | 07/31/20 | | Restek, Lot A0139949 | | (Purchased Reagent) | | Famphur | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-FAM120_00001** | 04/04/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-FAM_STK_00001 | 300 uL | Famphur | 120 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-FAM_STK_00001 | 11/21/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-568023_00044 | 1 mL | Famphur | 200 ug/mL |
| ..MS-568023_00044 | 07/31/20 | | Restek, Lot A0139949 | | (Purchased Reagent) | | Famphur | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-FAM160_00001** | 04/04/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-FAM_STK_00001 | 400 uL | Famphur | 160 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-FAM_STK_00001 | 11/21/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-568023_00044 | 1 mL | Famphur | 200 ug/mL |
| ..MS-568023_00044 | 07/31/20 | | Restek, Lot A0139949 | | (Purchased Reagent) | | Famphur | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-FAM200_00001** | 04/04/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-FAM_STK_00001 | 500 uL | Famphur | 200 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-FAM_STK_00001 | 11/21/19 | 11/21/18 | Methylene Chloride, Lot 203837 | 10 mL | MS-568023_00044 | 1 mL | Famphur | 200 ug/mL |
| ..MS-568023_00044 | 07/31/20 | | Restek, Lot A0139949 | | (Purchased Reagent) | | Famphur | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-FAMSSV_100_00020** | 04/04/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-48379_00015 | 250 uL | Famphur | 100 ug/mL |
| .MS-48379_00015 | 08/31/21 | | Supelco, Lot LRAB9515 | | (Purchased Reagent) | | Famphur | 200 ug/mL |
| **MS-HSLA004_00041** | 01/30/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-HSLA_STK_00050 | 10 uL | 2,4,6-Tribromophenol (Surr) | 4 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 4 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 4 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 4 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 4 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 4 ug/mL |
| | | | | | | | 3,3'-Dichlorobenzidine | 4 ug/mL |
| | | | | | | | Benzoic acid | 8 ug/mL |
| | | | | | | | Atrazine | 4 ug/mL |
| | | | | | | | Caprolactam | 4 ug/mL |
| | | | | | | | 1,1'-Biphenyl | 4 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 4 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 4 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 4 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 4.0439 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 4 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 4 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 4 ug/mL |
| | | | | | | | 1,4-Dioxane | 4 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 4 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 4 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,4,5-Trichlorophenol | 4 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 4 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 4 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 4 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 8 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 4 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 4 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 4 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 4 ug/mL |
| | | | | | | | 2-Chlorophenol | 4 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 4 ug/mL |
| | | | | | | | 2-Methylphenol | 4 ug/mL |
| | | | | | | | 2-Nitroaniline | 4 ug/mL |
| | | | | | | | 2-Nitrophenol | 4 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 4 ug/mL |
| | | | | | | | 3-Methylphenol | 4 ug/mL |
| | | | | | | | 3-Nitroaniline | 4 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 8 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 4 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 4 ug/mL |
| | | | | | | | 4-Chloroaniline | 4 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 4 ug/mL |
| | | | | | | | 4-Methylphenol | 4 ug/mL |
| | | | | | | | 4-Nitroaniline | 4 ug/mL |
| | | | | | | | 4-Nitrophenol | 8 ug/mL |
| | | | | | | | Acenaphthene | 4 ug/mL |
| | | | | | | | Acenaphthylene | 4 ug/mL |
| | | | | | | | Acetophenone | 4 ug/mL |
| | | | | | | | Aniline | 4 ug/mL |
| | | | | | | | Anthracene | 4 ug/mL |
| | | | | | | | Azobenzene | 4 ug/mL |
| | | | | | | | Benzo[a]anthracene | 4 ug/mL |
| | | | | | | | Benzo[a]pyrene | 4 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 4 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 4 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 4 ug/mL |
| | | | | | | | Benzyl alcohol | 4 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 4 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 4 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 4 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 4 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 4 ug/mL |
| | | | | | | | Carbazole | 4 ug/mL |
| | | | | | | | Chrysene | 4 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 4 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 4 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 4 ug/mL |
| | | | | | | | Dibenzofuran | 4 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Diethyl phthalate | 4 ug/mL |
| | | | | | | | Dimethyl phthalate | 4 ug/mL |
| | | | | | | | Diphenylamine | 3.4 ug/mL |
| | | | | | | | Fluoranthene | 4 ug/mL |
| | | | | | | | Fluorene | 4 ug/mL |
| | | | | | | | Hexachlorobenzene | 4 ug/mL |
| | | | | | | | Hexachlorobutadiene | 4 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 4 ug/mL |
| | | | | | | | Hexachloroethane | 4 ug/mL |
| | | | | | | | Hexadecane | 4 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 4 ug/mL |
| | | | | | | | Isophorone | 4 ug/mL |
| | | | | | | | n-Decane | 4 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 4 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 4 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 4 ug/mL |
| | | | | | | | Naphthalene | 4 ug/mL |
| | | | | | | | Nitrobenzene | 4 ug/mL |
| | | | | | | | Pentachlorophenol | 8 ug/mL |
| | | | | | | | Phenanthrene | 4 ug/mL |
| | | | | | | | Phenol | 4 ug/mL |
| | | | | | | | Pyrene | 4 ug/mL |
| | | | | | | | Pyridine | 8 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-HSLA_STK_00050 | 01/30/19 | 10/01/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-567685_00004 | 0.4 mL | 2,4,6-Tribromophenol (Surr) | 200 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 200 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 200 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 200 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 200 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 200 ug/mL |
| | | | | | MS-569730 HSL_00008 | 1 mL | 3,3'-Dichlorobenzidine | 200 ug/mL |
| | | | | | MS-569731_00079 | 2 mL | Benzoic acid | 400 ug/mL |
| | | | | | MS-569732 HSL_00006 | 1 mL | Atrazine | 200 ug/mL |
| | | | | | | | Caprolactam | 200 ug/mL |
| | | | | | MS-571995_00002 | 2 mL | 1,1'-Biphenyl | 200 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 200 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 202.195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,4-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dioxane | 200 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 200 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 400 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 200 ug/mL |
| | | | | | | | 2-Chlorophenol | 200 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2-Methylphenol | 200 ug/mL |
| | | | | | | | 2-Nitroaniline | 200 ug/mL |
| | | | | | | | 2-Nitrophenol | 200 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 200 ug/mL |
| | | | | | | | 3-Methylphenol | 200 ug/mL |
| | | | | | | | 3-Nitroaniline | 200 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 400 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 200 ug/mL |
| | | | | | | | 4-Chloroaniline | 200 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Methylphenol | 200 ug/mL |
| | | | | | | | 4-Nitroaniline | 200 ug/mL |
| | | | | | | | 4-Nitrophenol | 400 ug/mL |
| | | | | | | | Acenaphthene | 200 ug/mL |
| | | | | | | | Acenaphthylene | 200 ug/mL |
| | | | | | | | Acetophenone | 200 ug/mL |
| | | | | | | | Aniline | 200 ug/mL |
| | | | | | | | Anthracene | 200 ug/mL |
| | | | | | | | Azobenzene | 200 ug/mL |
| | | | | | | | Benzo[a]anthracene | 200 ug/mL |
| | | | | | | | Benzo[a]pyrene | 200 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 200 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 200 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 200 ug/mL |
| | | | | | | | Benzyl alcohol | 200 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 200 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 200 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 200 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 200 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 200 ug/mL |
| | | | | | | | Carbazole | 200 ug/mL |
| | | | | | | | Chrysene | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Di-n-butyl phthalate | 200 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 200 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 200 ug/mL |
| | | | | | | | Dibenzofuran | 200 ug/mL |
| | | | | | | | Diethyl phthalate | 200 ug/mL |
| | | | | | | | Dimethyl phthalate | 200 ug/mL |
| | | | | | | | Diphenylamine | 170 ug/mL |
| | | | | | | | Fluoranthene | 200 ug/mL |
| | | | | | | | Fluorene | 200 ug/mL |
| | | | | | | | Hexachlorobenzene | 200 ug/mL |
| | | | | | | | Hexachlorobutadiene | 200 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 200 ug/mL |
| | | | | | | | Hexachloroethane | 200 ug/mL |
| | | | | | | | Hexadecane | 200 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 200 ug/mL |
| | | | | | | | Isophorone | 200 ug/mL |
| | | | | | | | n-Decane | 200 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 200 ug/mL |
| | | | | | | | Naphthalene | 200 ug/mL |
| | | | | | | | Nitrobenzene | 200 ug/mL |
| | | | | | | | Pentachlorophenol | 400 ug/mL |
| | | | | | | | Phenanthrene | 200 ug/mL |
| | | | | | | | Phenol | 200 ug/mL |
| | | | | | | | Pyrene | 200 ug/mL |
| | | | | | | | Pyridine | 400 ug/mL |
| ..MS-567685_00004 | 01/30/19 | | Restek, Lot A0130500 | | (Purchased Reagent) | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| ..MS-569730 HSL_00008 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| ..MS-569731_00079 | 03/31/19 | | Restek, Lot A0130477 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| ..MS-569732 HSL_00006 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Atrazine | 2000 ug/mL |
| | | | | | | | Caprolactam | 2000 ug/mL |
| ..MS-571995_00002 | 09/30/19 | | Restek, Lot A0136052 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-HSLA010_00040** | 01/30/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-HSLA_STK_00050 | 25 uL | 2,4,6-Tribromophenol (Surr) | 10 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 10 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 10 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 10 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 10 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 10 ug/mL |
| | | | | | | | 3,3'-Dichlorobenzidine | 10 ug/mL |
| | | | | | | | Benzoic acid | 20 ug/mL |
| | | | | | | | Atrazine | 10 ug/mL |
| | | | | | | | Caprolactam | 10 ug/mL |
| | | | | | | | 1,1'-Biphenyl | 10 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 10 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 10 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 10 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 10.1097 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 10 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 10 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 10 ug/mL |
| | | | | | | | 1,4-Dioxane | 10 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 10 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 10 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 10 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 10 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 10 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 10 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 20 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 10 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 10 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 10 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 10 ug/mL |
| | | | | | | | 2-Chlorophenol | 10 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 10 ug/mL |
| | | | | | | | 2-Methylphenol | 10 ug/mL |
| | | | | | | | 2-Nitroaniline | 10 ug/mL |
| | | | | | | | 2-Nitrophenol | 10 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 10 ug/mL |
| | | | | | | | 3-Methylphenol | 10 ug/mL |
| | | | | | | | 3-Nitroaniline | 10 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 20 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 10 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 10 ug/mL |
| | | | | | | | 4-Chloroaniline | 10 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 10 ug/mL |
| | | | | | | | 4-Methylphenol | 10 ug/mL |
| | | | | | | | 4-Nitroaniline | 10 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Nitrophenol | 20 ug/mL |
| | | | | | | | Acenaphthene | 10 ug/mL |
| | | | | | | | Acenaphthylene | 10 ug/mL |
| | | | | | | | Acetophenone | 10 ug/mL |
| | | | | | | | Aniline | 10 ug/mL |
| | | | | | | | Anthracene | 10 ug/mL |
| | | | | | | | Azobenzene | 10 ug/mL |
| | | | | | | | Benzo[a]anthracene | 10 ug/mL |
| | | | | | | | Benzo[a]pyrene | 10 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 10 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 10 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 10 ug/mL |
| | | | | | | | Benzyl alcohol | 10 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 10 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 10 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 10 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 10 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 10 ug/mL |
| | | | | | | | Carbazole | 10 ug/mL |
| | | | | | | | Chrysene | 10 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 10 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 10 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 10 ug/mL |
| | | | | | | | Dibenzofuran | 10 ug/mL |
| | | | | | | | Diethyl phthalate | 10 ug/mL |
| | | | | | | | Dimethyl phthalate | 10 ug/mL |
| | | | | | | | Diphenylamine | 8.5 ug/mL |
| | | | | | | | Fluoranthene | 10 ug/mL |
| | | | | | | | Fluorene | 10 ug/mL |
| | | | | | | | Hexachlorobenzene | 10 ug/mL |
| | | | | | | | Hexachlorobutadiene | 10 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 10 ug/mL |
| | | | | | | | Hexachloroethane | 10 ug/mL |
| | | | | | | | Hexadecane | 10 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 10 ug/mL |
| | | | | | | | Isophorone | 10 ug/mL |
| | | | | | | | n-Decane | 10 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 10 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 10 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 10 ug/mL |
| | | | | | | | Naphthalene | 10 ug/mL |
| | | | | | | | Nitrobenzene | 10 ug/mL |
| | | | | | | | Pentachlorophenol | 20 ug/mL |
| | | | | | | | Phenanthrene | 10 ug/mL |
| | | | | | | | Phenol | 10 ug/mL |
| | | | | | | | Pyrene | 10 ug/mL |
| | | | | | | | Pyridine | 20 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-HSLA_STK_00050 | 01/30/19 | 10/01/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-567685_00004 | 0.4 mL | 2,4,6-Tribromophenol (Surr) | 200 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 200 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 200 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 200 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 200 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 200 ug/mL |
| | | | | | MS-569730 HSL_00008 | 1 mL | 3,3'-Dichlorobenzidine | 200 ug/mL |
| | | | | | MS-569731_00079 | 2 mL | Benzoic acid | 400 ug/mL |
| | | | | | MS-569732 HSL_00006 | 1 mL | Atrazine | 200 ug/mL |
| | | | | | | | Caprolactam | 200 ug/mL |
| | | | | | MS-571995_00002 | 2 mL | 1,1'-Biphenyl | 200 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 200 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 202.195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dioxane | 200 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 200 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 400 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 200 ug/mL |
| | | | | | | | 2-Chlorophenol | 200 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2-Methylphenol | 200 ug/mL |
| | | | | | | | 2-Nitroaniline | 200 ug/mL |
| | | | | | | | 2-Nitrophenol | 200 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 200 ug/mL |
| | | | | | | | 3-Methylphenol | 200 ug/mL |
| | | | | | | | 3-Nitroaniline | 200 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 400 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Chloroaniline | 200 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Methylphenol | 200 ug/mL |
| | | | | | | | 4-Nitroaniline | 200 ug/mL |
| | | | | | | | 4-Nitrophenol | 400 ug/mL |
| | | | | | | | Acenaphthene | 200 ug/mL |
| | | | | | | | Acenaphthylene | 200 ug/mL |
| | | | | | | | Acetophenone | 200 ug/mL |
| | | | | | | | Aniline | 200 ug/mL |
| | | | | | | | Anthracene | 200 ug/mL |
| | | | | | | | Azobenzene | 200 ug/mL |
| | | | | | | | Benzo[a]anthracene | 200 ug/mL |
| | | | | | | | Benzo[a]pyrene | 200 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 200 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 200 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 200 ug/mL |
| | | | | | | | Benzyl alcohol | 200 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 200 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 200 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 200 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 200 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 200 ug/mL |
| | | | | | | | Carbazole | 200 ug/mL |
| | | | | | | | Chrysene | 200 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 200 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 200 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 200 ug/mL |
| | | | | | | | Dibenzofuran | 200 ug/mL |
| | | | | | | | Diethyl phthalate | 200 ug/mL |
| | | | | | | | Dimethyl phthalate | 200 ug/mL |
| | | | | | | | Diphenylamine | 170 ug/mL |
| | | | | | | | Fluoranthene | 200 ug/mL |
| | | | | | | | Fluorene | 200 ug/mL |
| | | | | | | | Hexachlorobenzene | 200 ug/mL |
| | | | | | | | Hexachlorobutadiene | 200 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 200 ug/mL |
| | | | | | | | Hexachloroethane | 200 ug/mL |
| | | | | | | | Hexadecane | 200 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 200 ug/mL |
| | | | | | | | Isophorone | 200 ug/mL |
| | | | | | | | n-Decane | 200 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 200 ug/mL |
| | | | | | | | Naphthalene | 200 ug/mL |
| | | | | | | | Nitrobenzene | 200 ug/mL |
| | | | | | | | Pentachlorophenol | 400 ug/mL |
| | | | | | | | Phenanthrene | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenol | 200 ug/mL |
| | | | | | | | Pyrene | 200 ug/mL |
| | | | | | | | Pyridine | 400 ug/mL |
| ..MS-567685_00004 | 01/30/19 | | Restek, Lot A0130500 | | (Purchased Reagent) | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| ..MS-569730_HSL_00008 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| ..MS-569731_00079 | 03/31/19 | | Restek, Lot A0130477 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| ..MS-569732_HSL_00006 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Atrazine | 2000 ug/mL |
| | | | | | | | Caprolactam | 2000 ug/mL |
| ..MS-571995_00002 | 09/30/19 | | Restek, Lot A0136052 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-HSLA020_00040** | 01/30/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-HSLA_STK_00050 | 50 uL | 2,4,6-Tribromophenol (Surr) | 20 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 20 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 20 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 20 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 20 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 20 ug/mL |
| | | | | | | | 3,3'-Dichlorobenzidine | 20 ug/mL |
| | | | | | | | Benzoic acid | 40 ug/mL |
| | | | | | | | Atrazine | 20 ug/mL |
| | | | | | | | Caprolactam | 20 ug/mL |
| | | | | | | | 1,1'-Biphenyl | 20 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 20 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 20 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 20 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 20.2195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 20 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 20 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 20 ug/mL |
| | | | | | | | 1,4-Dioxane | 20 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 20 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 20 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,4,5-Trichlorophenol | 20 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 20 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 20 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 20 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 40 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 20 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 20 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 20 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 20 ug/mL |
| | | | | | | | 2-Chlorophenol | 20 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 20 ug/mL |
| | | | | | | | 2-Methylphenol | 20 ug/mL |
| | | | | | | | 2-Nitroaniline | 20 ug/mL |
| | | | | | | | 2-Nitrophenol | 20 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 20 ug/mL |
| | | | | | | | 3-Methylphenol | 20 ug/mL |
| | | | | | | | 3-Nitroaniline | 20 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 40 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 20 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 20 ug/mL |
| | | | | | | | 4-Chloroaniline | 20 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 20 ug/mL |
| | | | | | | | 4-Methylphenol | 20 ug/mL |
| | | | | | | | 4-Nitroaniline | 20 ug/mL |
| | | | | | | | 4-Nitrophenol | 40 ug/mL |
| | | | | | | | Acenaphthene | 20 ug/mL |
| | | | | | | | Acenaphthylene | 20 ug/mL |
| | | | | | | | Acetophenone | 20 ug/mL |
| | | | | | | | Aniline | 20 ug/mL |
| | | | | | | | Anthracene | 20 ug/mL |
| | | | | | | | Azobenzene | 20 ug/mL |
| | | | | | | | Benzo[a]anthracene | 20 ug/mL |
| | | | | | | | Benzo[a]pyrene | 20 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 20 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 20 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 20 ug/mL |
| | | | | | | | Benzyl alcohol | 20 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 20 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 20 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 20 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 20 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 20 ug/mL |
| | | | | | | | Carbazole | 20 ug/mL |
| | | | | | | | Chrysene | 20 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 20 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 20 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 20 ug/mL |
| | | | | | | | Dibenzofuran | 20 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Diethyl phthalate | 20 ug/mL |
| | | | | | | | Dimethyl phthalate | 20 ug/mL |
| | | | | | | | Diphenylamine | 17 ug/mL |
| | | | | | | | Fluoranthene | 20 ug/mL |
| | | | | | | | Fluorene | 20 ug/mL |
| | | | | | | | Hexachlorobenzene | 20 ug/mL |
| | | | | | | | Hexachlorobutadiene | 20 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 20 ug/mL |
| | | | | | | | Hexachloroethane | 20 ug/mL |
| | | | | | | | Hexadecane | 20 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 20 ug/mL |
| | | | | | | | Isophorone | 20 ug/mL |
| | | | | | | | n-Decane | 20 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 20 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 20 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 20 ug/mL |
| | | | | | | | Naphthalene | 20 ug/mL |
| | | | | | | | Nitrobenzene | 20 ug/mL |
| | | | | | | | Pentachlorophenol | 40 ug/mL |
| | | | | | | | Phenanthrene | 20 ug/mL |
| | | | | | | | Phenol | 20 ug/mL |
| | | | | | | | Pyrene | 20 ug/mL |
| | | | | | | | Pyridine | 40 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-HSLA_STK_00050 | 01/30/19 | 10/01/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-567685_00004 | 0.4 mL | 2,4,6-Tribromophenol (Surr) | 200 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 200 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 200 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 200 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 200 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 200 ug/mL |
| | | | | | MS-569730 HSL_00008 | 1 mL | 3,3'-Dichlorobenzidine | 200 ug/mL |
| | | | | | MS-569731_00079 | 2 mL | Benzoic acid | 400 ug/mL |
| | | | | | MS-569732 HSL_00006 | 1 mL | Atrazine | 200 ug/mL |
| | | | | | | | Caprolactam | 200 ug/mL |
| | | | | | MS-571995_00002 | 2 mL | 1,1'-Biphenyl | 200 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 200 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 202.195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,4-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dioxane | 200 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 200 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 400 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 200 ug/mL |
| | | | | | | | 2-Chlorophenol | 200 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2-Methylphenol | 200 ug/mL |
| | | | | | | | 2-Nitroaniline | 200 ug/mL |
| | | | | | | | 2-Nitrophenol | 200 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 200 ug/mL |
| | | | | | | | 3-Methylphenol | 200 ug/mL |
| | | | | | | | 3-Nitroaniline | 200 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 400 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 200 ug/mL |
| | | | | | | | 4-Chloroaniline | 200 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Methylphenol | 200 ug/mL |
| | | | | | | | 4-Nitroaniline | 200 ug/mL |
| | | | | | | | 4-Nitrophenol | 400 ug/mL |
| | | | | | | | Acenaphthene | 200 ug/mL |
| | | | | | | | Acenaphthylene | 200 ug/mL |
| | | | | | | | Acetophenone | 200 ug/mL |
| | | | | | | | Aniline | 200 ug/mL |
| | | | | | | | Anthracene | 200 ug/mL |
| | | | | | | | Azobenzene | 200 ug/mL |
| | | | | | | | Benzo[a]anthracene | 200 ug/mL |
| | | | | | | | Benzo[a]pyrene | 200 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 200 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 200 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 200 ug/mL |
| | | | | | | | Benzyl alcohol | 200 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 200 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 200 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 200 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 200 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 200 ug/mL |
| | | | | | | | Carbazole | 200 ug/mL |
| | | | | | | | Chrysene | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Di-n-butyl phthalate | 200 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 200 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 200 ug/mL |
| | | | | | | | Dibenzofuran | 200 ug/mL |
| | | | | | | | Diethyl phthalate | 200 ug/mL |
| | | | | | | | Dimethyl phthalate | 200 ug/mL |
| | | | | | | | Diphenylamine | 170 ug/mL |
| | | | | | | | Fluoranthene | 200 ug/mL |
| | | | | | | | Fluorene | 200 ug/mL |
| | | | | | | | Hexachlorobenzene | 200 ug/mL |
| | | | | | | | Hexachlorobutadiene | 200 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 200 ug/mL |
| | | | | | | | Hexachloroethane | 200 ug/mL |
| | | | | | | | Hexadecane | 200 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 200 ug/mL |
| | | | | | | | Isophorone | 200 ug/mL |
| | | | | | | | n-Decane | 200 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 200 ug/mL |
| | | | | | | | Naphthalene | 200 ug/mL |
| | | | | | | | Nitrobenzene | 200 ug/mL |
| | | | | | | | Pentachlorophenol | 400 ug/mL |
| | | | | | | | Phenanthrene | 200 ug/mL |
| | | | | | | | Phenol | 200 ug/mL |
| | | | | | | | Pyrene | 200 ug/mL |
| | | | | | | | Pyridine | 400 ug/mL |
| ..MS-567685_00004 | 01/30/19 | | Restek, Lot A0130500 | | (Purchased Reagent) | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| ..MS-569730 HSL_00008 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| ..MS-569731_00079 | 03/31/19 | | Restek, Lot A0130477 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| ..MS-569732 HSL_00006 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Atrazine | 2000 ug/mL |
| | | | | | | | Caprolactam | 2000 ug/mL |
| ..MS-571995_00002 | 09/30/19 | | Restek, Lot A0136052 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-HSLA050_00041** | 01/30/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-HSLA_STK_00050 | 125 uL | 2,4,6-Tribromophenol (Surr) | 50 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 50 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 50 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 50 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 50 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 50 ug/mL |
| | | | | | | | 3,3'-Dichlorobenzidine | 50 ug/mL |
| | | | | | | | Benzoic acid | 100 ug/mL |
| | | | | | | | Atrazine | 50 ug/mL |
| | | | | | | | Caprolactam | 50 ug/mL |
| | | | | | | | 1,1'-Biphenyl | 50 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 50 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 50 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 50 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 50.5487 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 50 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 50 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 50 ug/mL |
| | | | | | | | 1,4-Dioxane | 50 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 50 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 50 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 50 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 50 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 50 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 50 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 100 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 50 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 50 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 50 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 50 ug/mL |
| | | | | | | | 2-Chlorophenol | 50 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 50 ug/mL |
| | | | | | | | 2-Methylphenol | 50 ug/mL |
| | | | | | | | 2-Nitroaniline | 50 ug/mL |
| | | | | | | | 2-Nitrophenol | 50 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 50 ug/mL |
| | | | | | | | 3-Methylphenol | 50 ug/mL |
| | | | | | | | 3-Nitroaniline | 50 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 100 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 50 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 50 ug/mL |
| | | | | | | | 4-Chloroaniline | 50 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 50 ug/mL |
| | | | | | | | 4-Methylphenol | 50 ug/mL |
| | | | | | | | 4-Nitroaniline | 50 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Nitrophenol | 100 ug/mL |
| | | | | | | | Acenaphthene | 50 ug/mL |
| | | | | | | | Acenaphthylene | 50 ug/mL |
| | | | | | | | Acetophenone | 50 ug/mL |
| | | | | | | | Aniline | 50 ug/mL |
| | | | | | | | Anthracene | 50 ug/mL |
| | | | | | | | Azobenzene | 50 ug/mL |
| | | | | | | | Benzo[a]anthracene | 50 ug/mL |
| | | | | | | | Benzo[a]pyrene | 50 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 50 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 50 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 50 ug/mL |
| | | | | | | | Benzyl alcohol | 50 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 50 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 50 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 50 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 50 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 50 ug/mL |
| | | | | | | | Carbazole | 50 ug/mL |
| | | | | | | | Chrysene | 50 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 50 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 50 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 50 ug/mL |
| | | | | | | | Dibenzofuran | 50 ug/mL |
| | | | | | | | Diethyl phthalate | 50 ug/mL |
| | | | | | | | Dimethyl phthalate | 50 ug/mL |
| | | | | | | | Diphenylamine | 42.5 ug/mL |
| | | | | | | | Fluoranthene | 50 ug/mL |
| | | | | | | | Fluorene | 50 ug/mL |
| | | | | | | | Hexachlorobenzene | 50 ug/mL |
| | | | | | | | Hexachlorobutadiene | 50 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 50 ug/mL |
| | | | | | | | Hexachloroethane | 50 ug/mL |
| | | | | | | | Hexadecane | 50 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 50 ug/mL |
| | | | | | | | Isophorone | 50 ug/mL |
| | | | | | | | n-Decane | 50 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 50 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 50 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 50 ug/mL |
| | | | | | | | Naphthalene | 50 ug/mL |
| | | | | | | | Nitrobenzene | 50 ug/mL |
| | | | | | | | Pentachlorophenol | 100 ug/mL |
| | | | | | | | Phenanthrene | 50 ug/mL |
| | | | | | | | Phenol | 50 ug/mL |
| | | | | | | | Pyrene | 50 ug/mL |
| | | | | | | | Pyridine | 100 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-HSLA_STK_00050 | 01/30/19 | 10/01/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-567685_00004 | 0.4 mL | 2,4,6-Tribromophenol (Surr) | 200 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 200 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 200 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 200 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 200 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 200 ug/mL |
| | | | | | MS-569730 HSL_00008 | 1 mL | 3,3'-Dichlorobenzidine | 200 ug/mL |
| | | | | | MS-569731_00079 | 2 mL | Benzoic acid | 400 ug/mL |
| | | | | | MS-569732 HSL_00006 | 1 mL | Atrazine | 200 ug/mL |
| | | | | | | | Caprolactam | 200 ug/mL |
| | | | | | MS-571995_00002 | 2 mL | 1,1'-Biphenyl | 200 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 200 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 202.195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dioxane | 200 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 200 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 400 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 200 ug/mL |
| | | | | | | | 2-Chlorophenol | 200 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2-Methylphenol | 200 ug/mL |
| | | | | | | | 2-Nitroaniline | 200 ug/mL |
| | | | | | | | 2-Nitrophenol | 200 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 200 ug/mL |
| | | | | | | | 3-Methylphenol | 200 ug/mL |
| | | | | | | | 3-Nitroaniline | 200 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 400 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Chloroaniline | 200 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Methylphenol | 200 ug/mL |
| | | | | | | | 4-Nitroaniline | 200 ug/mL |
| | | | | | | | 4-Nitrophenol | 400 ug/mL |
| | | | | | | | Acenaphthene | 200 ug/mL |
| | | | | | | | Acenaphthylene | 200 ug/mL |
| | | | | | | | Acetophenone | 200 ug/mL |
| | | | | | | | Aniline | 200 ug/mL |
| | | | | | | | Anthracene | 200 ug/mL |
| | | | | | | | Azobenzene | 200 ug/mL |
| | | | | | | | Benzo[a]anthracene | 200 ug/mL |
| | | | | | | | Benzo[a]pyrene | 200 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 200 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 200 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 200 ug/mL |
| | | | | | | | Benzyl alcohol | 200 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 200 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 200 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 200 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 200 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 200 ug/mL |
| | | | | | | | Carbazole | 200 ug/mL |
| | | | | | | | Chrysene | 200 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 200 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 200 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 200 ug/mL |
| | | | | | | | Dibenzofuran | 200 ug/mL |
| | | | | | | | Diethyl phthalate | 200 ug/mL |
| | | | | | | | Dimethyl phthalate | 200 ug/mL |
| | | | | | | | Diphenylamine | 170 ug/mL |
| | | | | | | | Fluoranthene | 200 ug/mL |
| | | | | | | | Fluorene | 200 ug/mL |
| | | | | | | | Hexachlorobenzene | 200 ug/mL |
| | | | | | | | Hexachlorobutadiene | 200 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 200 ug/mL |
| | | | | | | | Hexachloroethane | 200 ug/mL |
| | | | | | | | Hexadecane | 200 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 200 ug/mL |
| | | | | | | | Isophorone | 200 ug/mL |
| | | | | | | | n-Decane | 200 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 200 ug/mL |
| | | | | | | | Naphthalene | 200 ug/mL |
| | | | | | | | Nitrobenzene | 200 ug/mL |
| | | | | | | | Pentachlorophenol | 400 ug/mL |
| | | | | | | | Phenanthrene | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenol | 200 ug/mL |
| | | | | | | | Pyrene | 200 ug/mL |
| | | | | | | | Pyridine | 400 ug/mL |
| ..MS-567685_00004 | 01/30/19 | | Restek, Lot A0130500 | | (Purchased Reagent) | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| ..MS-569730_HSL_00008 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| ..MS-569731_00079 | 03/31/19 | | Restek, Lot A0130477 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| ..MS-569732_HSL_00006 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Atrazine | 2000 ug/mL |
| | | | | | | | Caprolactam | 2000 ug/mL |
| ..MS-571995_00002 | 09/30/19 | | Restek, Lot A0136052 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-HSLA080_00040** | 01/30/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-HSLA_STK_00050 | 200 uL | 2,4,6-Tribromophenol (Surr) | 80 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 80 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 80 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 80 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 80 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 80 ug/mL |
| | | | | | | | 3,3'-Dichlorobenzidine | 80 ug/mL |
| | | | | | | | Benzoic acid | 160 ug/mL |
| | | | | | | | Atrazine | 80 ug/mL |
| | | | | | | | Caprolactam | 80 ug/mL |
| | | | | | | | 1,1'-Biphenyl | 80 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 80 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 80.878 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dioxane | 80 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,4,5-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 80 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 80 ug/mL |
| | | | | | | | 2-Chlorophenol | 80 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2-Methylphenol | 80 ug/mL |
| | | | | | | | 2-Nitroaniline | 80 ug/mL |
| | | | | | | | 2-Nitrophenol | 80 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 80 ug/mL |
| | | | | | | | 3-Methylphenol | 80 ug/mL |
| | | | | | | | 3-Nitroaniline | 80 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 160 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 80 ug/mL |
| | | | | | | | 4-Chloroaniline | 80 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Methylphenol | 80 ug/mL |
| | | | | | | | 4-Nitroaniline | 80 ug/mL |
| | | | | | | | 4-Nitrophenol | 160 ug/mL |
| | | | | | | | Acenaphthene | 80 ug/mL |
| | | | | | | | Acenaphthylene | 80 ug/mL |
| | | | | | | | Acetophenone | 80 ug/mL |
| | | | | | | | Aniline | 80 ug/mL |
| | | | | | | | Anthracene | 80 ug/mL |
| | | | | | | | Azobenzene | 80 ug/mL |
| | | | | | | | Benzo[a]anthracene | 80 ug/mL |
| | | | | | | | Benzo[a]pyrene | 80 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 80 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 80 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 80 ug/mL |
| | | | | | | | Benzyl alcohol | 80 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 80 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 80 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 80 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 80 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 80 ug/mL |
| | | | | | | | Carbazole | 80 ug/mL |
| | | | | | | | Chrysene | 80 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 80 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 80 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 80 ug/mL |
| | | | | | | | Dibenzofuran | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Diethyl phthalate | 80 ug/mL |
| | | | | | | | Dimethyl phthalate | 80 ug/mL |
| | | | | | | | Diphenylamine | 68 ug/mL |
| | | | | | | | Fluoranthene | 80 ug/mL |
| | | | | | | | Fluorene | 80 ug/mL |
| | | | | | | | Hexachlorobenzene | 80 ug/mL |
| | | | | | | | Hexachlorobutadiene | 80 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 80 ug/mL |
| | | | | | | | Hexachloroethane | 80 ug/mL |
| | | | | | | | Hexadecane | 80 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 80 ug/mL |
| | | | | | | | Isophorone | 80 ug/mL |
| | | | | | | | n-Decane | 80 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 80 ug/mL |
| | | | | | | | Naphthalene | 80 ug/mL |
| | | | | | | | Nitrobenzene | 80 ug/mL |
| | | | | | | | Pentachlorophenol | 160 ug/mL |
| | | | | | | | Phenanthrene | 80 ug/mL |
| | | | | | | | Phenol | 80 ug/mL |
| | | | | | | | Pyrene | 80 ug/mL |
| | | | | | | | Pyridine | 160 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-HSLA_STK_00050 | 01/30/19 | 10/01/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-567685_00004 | 0.4 mL | 2,4,6-Tribromophenol (Surr) | 200 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 200 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 200 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 200 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 200 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 200 ug/mL |
| | | | | | MS-569730 HSL_00008 | 1 mL | 3,3'-Dichlorobenzidine | 200 ug/mL |
| | | | | | MS-569731_00079 | 2 mL | Benzoic acid | 400 ug/mL |
| | | | | | MS-569732 HSL_00006 | 1 mL | Atrazine | 200 ug/mL |
| | | | | | | | Caprolactam | 200 ug/mL |
| | | | | | MS-571995_00002 | 2 mL | 1,1'-Biphenyl | 200 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 200 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 202.195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,4-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dioxane | 200 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 200 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 400 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 200 ug/mL |
| | | | | | | | 2-Chlorophenol | 200 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2-Methylphenol | 200 ug/mL |
| | | | | | | | 2-Nitroaniline | 200 ug/mL |
| | | | | | | | 2-Nitrophenol | 200 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 200 ug/mL |
| | | | | | | | 3-Methylphenol | 200 ug/mL |
| | | | | | | | 3-Nitroaniline | 200 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 400 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 200 ug/mL |
| | | | | | | | 4-Chloroaniline | 200 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Methylphenol | 200 ug/mL |
| | | | | | | | 4-Nitroaniline | 200 ug/mL |
| | | | | | | | 4-Nitrophenol | 400 ug/mL |
| | | | | | | | Acenaphthene | 200 ug/mL |
| | | | | | | | Acenaphthylene | 200 ug/mL |
| | | | | | | | Acetophenone | 200 ug/mL |
| | | | | | | | Aniline | 200 ug/mL |
| | | | | | | | Anthracene | 200 ug/mL |
| | | | | | | | Azobenzene | 200 ug/mL |
| | | | | | | | Benzo[a]anthracene | 200 ug/mL |
| | | | | | | | Benzo[a]pyrene | 200 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 200 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 200 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 200 ug/mL |
| | | | | | | | Benzyl alcohol | 200 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 200 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 200 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 200 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 200 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 200 ug/mL |
| | | | | | | | Carbazole | 200 ug/mL |
| | | | | | | | Chrysene | 200 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Di-n-butyl phthalate | 200 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 200 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 200 ug/mL |
| | | | | | | | Dibenzofuran | 200 ug/mL |
| | | | | | | | Diethyl phthalate | 200 ug/mL |
| | | | | | | | Dimethyl phthalate | 200 ug/mL |
| | | | | | | | Diphenylamine | 170 ug/mL |
| | | | | | | | Fluoranthene | 200 ug/mL |
| | | | | | | | Fluorene | 200 ug/mL |
| | | | | | | | Hexachlorobenzene | 200 ug/mL |
| | | | | | | | Hexachlorobutadiene | 200 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 200 ug/mL |
| | | | | | | | Hexachloroethane | 200 ug/mL |
| | | | | | | | Hexadecane | 200 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 200 ug/mL |
| | | | | | | | Isophorone | 200 ug/mL |
| | | | | | | | n-Decane | 200 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 200 ug/mL |
| | | | | | | | Naphthalene | 200 ug/mL |
| | | | | | | | Nitrobenzene | 200 ug/mL |
| | | | | | | | Pentachlorophenol | 400 ug/mL |
| | | | | | | | Phenanthrene | 200 ug/mL |
| | | | | | | | Phenol | 200 ug/mL |
| | | | | | | | Pyrene | 200 ug/mL |
| | | | | | | | Pyridine | 400 ug/mL |
| ..MS-567685_00004 | 01/30/19 | | Restek, Lot A0130500 | | (Purchased Reagent) | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| ..MS-569730 HSL_00008 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| ..MS-569731_00079 | 03/31/19 | | Restek, Lot A0130477 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| ..MS-569732 HSL_00006 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Atrazine | 2000 ug/mL |
| | | | | | | | Caprolactam | 2000 ug/mL |
| ..MS-571995_00002 | 09/30/19 | | Restek, Lot A0136052 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-HSLA120_00040** | 01/30/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-HSLA_STK_00050 | 300 uL | 2,4,6-Tribromophenol (Surr) | 120 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 120 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 120 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 120 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 120 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 120 ug/mL |
| | | | | | | | 3,3'-Dichlorobenzidine | 120 ug/mL |
| | | | | | | | Benzoic acid | 240 ug/mL |
| | | | | | | | Atrazine | 120 ug/mL |
| | | | | | | | Caprolactam | 120 ug/mL |
| | | | | | | | 1,1'-Biphenyl | 120 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 120 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 120 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 120 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 121.317 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 120 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 120 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 120 ug/mL |
| | | | | | | | 1,4-Dioxane | 120 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 120 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 120 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 120 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 120 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 120 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 120 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 240 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 120 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 120 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 120 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 120 ug/mL |
| | | | | | | | 2-Chlorophenol | 120 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 120 ug/mL |
| | | | | | | | 2-Methylphenol | 120 ug/mL |
| | | | | | | | 2-Nitroaniline | 120 ug/mL |
| | | | | | | | 2-Nitrophenol | 120 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 120 ug/mL |
| | | | | | | | 3-Methylphenol | 120 ug/mL |
| | | | | | | | 3-Nitroaniline | 120 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 240 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 120 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 120 ug/mL |
| | | | | | | | 4-Chloroaniline | 120 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 120 ug/mL |
| | | | | | | | 4-Methylphenol | 120 ug/mL |
| | | | | | | | 4-Nitroaniline | 120 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Nitrophenol | 240 ug/mL |
| | | | | | | | Acenaphthene | 120 ug/mL |
| | | | | | | | Acenaphthylene | 120 ug/mL |
| | | | | | | | Acetophenone | 120 ug/mL |
| | | | | | | | Aniline | 120 ug/mL |
| | | | | | | | Anthracene | 120 ug/mL |
| | | | | | | | Azobenzene | 120 ug/mL |
| | | | | | | | Benzo[a]anthracene | 120 ug/mL |
| | | | | | | | Benzo[a]pyrene | 120 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 120 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 120 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 120 ug/mL |
| | | | | | | | Benzyl alcohol | 120 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 120 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 120 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 120 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 120 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 120 ug/mL |
| | | | | | | | Carbazole | 120 ug/mL |
| | | | | | | | Chrysene | 120 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 120 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 120 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 120 ug/mL |
| | | | | | | | Dibenzofuran | 120 ug/mL |
| | | | | | | | Diethyl phthalate | 120 ug/mL |
| | | | | | | | Dimethyl phthalate | 120 ug/mL |
| | | | | | | | Diphenylamine | 102 ug/mL |
| | | | | | | | Fluoranthene | 120 ug/mL |
| | | | | | | | Fluorene | 120 ug/mL |
| | | | | | | | Hexachlorobenzene | 120 ug/mL |
| | | | | | | | Hexachlorobutadiene | 120 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 120 ug/mL |
| | | | | | | | Hexachloroethane | 120 ug/mL |
| | | | | | | | Hexadecane | 120 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 120 ug/mL |
| | | | | | | | Isophorone | 120 ug/mL |
| | | | | | | | n-Decane | 120 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 120 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 120 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 120 ug/mL |
| | | | | | | | Naphthalene | 120 ug/mL |
| | | | | | | | Nitrobenzene | 120 ug/mL |
| | | | | | | | Pentachlorophenol | 240 ug/mL |
| | | | | | | | Phenanthrene | 120 ug/mL |
| | | | | | | | Phenol | 120 ug/mL |
| | | | | | | | Pyrene | 120 ug/mL |
| | | | | | | | Pyridine | 240 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-HSLA_STK_00050 | 01/30/19 | 10/01/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-567685_00004 | 0.4 mL | 2,4,6-Tribromophenol (Surr) | 200 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 200 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 200 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 200 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 200 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 200 ug/mL |
| | | | | | MS-569730 HSL_00008 | 1 mL | 3,3'-Dichlorobenzidine | 200 ug/mL |
| | | | | | MS-569731_00079 | 2 mL | Benzoic acid | 400 ug/mL |
| | | | | | MS-569732 HSL_00006 | 1 mL | Atrazine | 200 ug/mL |
| | | | | | | | Caprolactam | 200 ug/mL |
| | | | | | MS-571995_00002 | 2 mL | 1,1'-Biphenyl | 200 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 200 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 202.195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dioxane | 200 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 200 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 400 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 200 ug/mL |
| | | | | | | | 2-Chlorophenol | 200 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2-Methylphenol | 200 ug/mL |
| | | | | | | | 2-Nitroaniline | 200 ug/mL |
| | | | | | | | 2-Nitrophenol | 200 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 200 ug/mL |
| | | | | | | | 3-Methylphenol | 200 ug/mL |
| | | | | | | | 3-Nitroaniline | 200 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 400 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Chloroaniline | 200 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Methylphenol | 200 ug/mL |
| | | | | | | | 4-Nitroaniline | 200 ug/mL |
| | | | | | | | 4-Nitrophenol | 400 ug/mL |
| | | | | | | | Acenaphthene | 200 ug/mL |
| | | | | | | | Acenaphthylene | 200 ug/mL |
| | | | | | | | Acetophenone | 200 ug/mL |
| | | | | | | | Aniline | 200 ug/mL |
| | | | | | | | Anthracene | 200 ug/mL |
| | | | | | | | Azobenzene | 200 ug/mL |
| | | | | | | | Benzo[a]anthracene | 200 ug/mL |
| | | | | | | | Benzo[a]pyrene | 200 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 200 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 200 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 200 ug/mL |
| | | | | | | | Benzyl alcohol | 200 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 200 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 200 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 200 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 200 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 200 ug/mL |
| | | | | | | | Carbazole | 200 ug/mL |
| | | | | | | | Chrysene | 200 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 200 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 200 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 200 ug/mL |
| | | | | | | | Dibenzofuran | 200 ug/mL |
| | | | | | | | Diethyl phthalate | 200 ug/mL |
| | | | | | | | Dimethyl phthalate | 200 ug/mL |
| | | | | | | | Diphenylamine | 170 ug/mL |
| | | | | | | | Fluoranthene | 200 ug/mL |
| | | | | | | | Fluorene | 200 ug/mL |
| | | | | | | | Hexachlorobenzene | 200 ug/mL |
| | | | | | | | Hexachlorobutadiene | 200 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 200 ug/mL |
| | | | | | | | Hexachloroethane | 200 ug/mL |
| | | | | | | | Hexadecane | 200 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 200 ug/mL |
| | | | | | | | Isophorone | 200 ug/mL |
| | | | | | | | n-Decane | 200 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 200 ug/mL |
| | | | | | | | Naphthalene | 200 ug/mL |
| | | | | | | | Nitrobenzene | 200 ug/mL |
| | | | | | | | Pentachlorophenol | 400 ug/mL |
| | | | | | | | Phenanthrene | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenol | 200 ug/mL |
| | | | | | | | Pyrene | 200 ug/mL |
| | | | | | | | Pyridine | 400 ug/mL |
| ..MS-567685_00004 | 01/30/19 | | Restek, Lot A0130500 | | (Purchased Reagent) | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| ..MS-569730_HSL_00008 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| ..MS-569731_00079 | 03/31/19 | | Restek, Lot A0130477 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| ..MS-569732_HSL_00006 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Atrazine | 2000 ug/mL |
| | | | | | | | Caprolactam | 2000 ug/mL |
| ..MS-571995_00002 | 09/30/19 | | Restek, Lot A0136052 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-HSLA160_00040** | 01/30/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-HSLA_STK_00050 | 400 uL | 2,4,6-Tribromophenol (Surr) | 160 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 160 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 160 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 160 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 160 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 160 ug/mL |
| | | | | | | | 3,3'-Dichlorobenzidine | 160 ug/mL |
| | | | | | | | Benzoic acid | 320 ug/mL |
| | | | | | | | Atrazine | 160 ug/mL |
| | | | | | | | Caprolactam | 160 ug/mL |
| | | | | | | | 1,1'-Biphenyl | 160 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 160 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 160 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 160 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 161.756 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 160 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 160 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 160 ug/mL |
| | | | | | | | 1,4-Dioxane | 160 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 160 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 160 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,4,5-Trichlorophenol | 160 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 160 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 160 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 320 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 160 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 160 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 160 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 160 ug/mL |
| | | | | | | | 2-Chlorophenol | 160 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 160 ug/mL |
| | | | | | | | 2-Methylphenol | 160 ug/mL |
| | | | | | | | 2-Nitroaniline | 160 ug/mL |
| | | | | | | | 2-Nitrophenol | 160 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 160 ug/mL |
| | | | | | | | 3-Methylphenol | 160 ug/mL |
| | | | | | | | 3-Nitroaniline | 160 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 320 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 160 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 160 ug/mL |
| | | | | | | | 4-Chloroaniline | 160 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 160 ug/mL |
| | | | | | | | 4-Methylphenol | 160 ug/mL |
| | | | | | | | 4-Nitroaniline | 160 ug/mL |
| | | | | | | | 4-Nitrophenol | 320 ug/mL |
| | | | | | | | Acenaphthene | 160 ug/mL |
| | | | | | | | Acenaphthylene | 160 ug/mL |
| | | | | | | | Acetophenone | 160 ug/mL |
| | | | | | | | Aniline | 160 ug/mL |
| | | | | | | | Anthracene | 160 ug/mL |
| | | | | | | | Azobenzene | 160 ug/mL |
| | | | | | | | Benzo[a]anthracene | 160 ug/mL |
| | | | | | | | Benzo[a]pyrene | 160 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 160 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 160 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 160 ug/mL |
| | | | | | | | Benzyl alcohol | 160 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 160 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 160 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 160 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 160 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 160 ug/mL |
| | | | | | | | Carbazole | 160 ug/mL |
| | | | | | | | Chrysene | 160 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 160 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 160 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 160 ug/mL |
| | | | | | | | Dibenzofuran | 160 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Diethyl phthalate | 160 ug/mL |
| | | | | | | | Dimethyl phthalate | 160 ug/mL |
| | | | | | | | Diphenylamine | 136 ug/mL |
| | | | | | | | Fluoranthene | 160 ug/mL |
| | | | | | | | Fluorene | 160 ug/mL |
| | | | | | | | Hexachlorobenzene | 160 ug/mL |
| | | | | | | | Hexachlorobutadiene | 160 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 160 ug/mL |
| | | | | | | | Hexachloroethane | 160 ug/mL |
| | | | | | | | Hexadecane | 160 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 160 ug/mL |
| | | | | | | | Isophorone | 160 ug/mL |
| | | | | | | | n-Decane | 160 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 160 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 160 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 160 ug/mL |
| | | | | | | | Naphthalene | 160 ug/mL |
| | | | | | | | Nitrobenzene | 160 ug/mL |
| | | | | | | | Pentachlorophenol | 320 ug/mL |
| | | | | | | | Phenanthrene | 160 ug/mL |
| | | | | | | | Phenol | 160 ug/mL |
| | | | | | | | Pyrene | 160 ug/mL |
| | | | | | | | Pyridine | 320 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-HSLA_STK_00050 | 01/30/19 | 10/01/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-567685_00004 | 0.4 mL | 2,4,6-Tribromophenol (Surr) | 200 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 200 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 200 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 200 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 200 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 200 ug/mL |
| | | | | | MS-569730 HSL_00008 | 1 mL | 3,3'-Dichlorobenzidine | 200 ug/mL |
| | | | | | MS-569731_00079 | 2 mL | Benzoic acid | 400 ug/mL |
| | | | | | MS-569732 HSL_00006 | 1 mL | Atrazine | 200 ug/mL |
| | | | | | | | Caprolactam | 200 ug/mL |
| | | | | | MS-571995_00002 | 2 mL | 1,1'-Biphenyl | 200 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 200 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 202.195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,4-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dioxane | 200 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 200 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 400 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 200 ug/mL |
| | | | | | | | 2-Chlorophenol | 200 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2-Methylphenol | 200 ug/mL |
| | | | | | | | 2-Nitroaniline | 200 ug/mL |
| | | | | | | | 2-Nitrophenol | 200 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 200 ug/mL |
| | | | | | | | 3-Methylphenol | 200 ug/mL |
| | | | | | | | 3-Nitroaniline | 200 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 400 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 200 ug/mL |
| | | | | | | | 4-Chloroaniline | 200 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Methylphenol | 200 ug/mL |
| | | | | | | | 4-Nitroaniline | 200 ug/mL |
| | | | | | | | 4-Nitrophenol | 400 ug/mL |
| | | | | | | | Acenaphthene | 200 ug/mL |
| | | | | | | | Acenaphthylene | 200 ug/mL |
| | | | | | | | Acetophenone | 200 ug/mL |
| | | | | | | | Aniline | 200 ug/mL |
| | | | | | | | Anthracene | 200 ug/mL |
| | | | | | | | Azobenzene | 200 ug/mL |
| | | | | | | | Benzo[a]anthracene | 200 ug/mL |
| | | | | | | | Benzo[a]pyrene | 200 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 200 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 200 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 200 ug/mL |
| | | | | | | | Benzyl alcohol | 200 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 200 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 200 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 200 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 200 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 200 ug/mL |
| | | | | | | | Carbazole | 200 ug/mL |
| | | | | | | | Chrysene | 200 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Di-n-butyl phthalate | 200 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 200 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 200 ug/mL |
| | | | | | | | Dibenzofuran | 200 ug/mL |
| | | | | | | | Diethyl phthalate | 200 ug/mL |
| | | | | | | | Dimethyl phthalate | 200 ug/mL |
| | | | | | | | Diphenylamine | 170 ug/mL |
| | | | | | | | Fluoranthene | 200 ug/mL |
| | | | | | | | Fluorene | 200 ug/mL |
| | | | | | | | Hexachlorobenzene | 200 ug/mL |
| | | | | | | | Hexachlorobutadiene | 200 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 200 ug/mL |
| | | | | | | | Hexachloroethane | 200 ug/mL |
| | | | | | | | Hexadecane | 200 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 200 ug/mL |
| | | | | | | | Isophorone | 200 ug/mL |
| | | | | | | | n-Decane | 200 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 200 ug/mL |
| | | | | | | | Naphthalene | 200 ug/mL |
| | | | | | | | Nitrobenzene | 200 ug/mL |
| | | | | | | | Pentachlorophenol | 400 ug/mL |
| | | | | | | | Phenanthrene | 200 ug/mL |
| | | | | | | | Phenol | 200 ug/mL |
| | | | | | | | Pyrene | 200 ug/mL |
| | | | | | | | Pyridine | 400 ug/mL |
| ..MS-567685_00004 | 01/30/19 | | Restek, Lot A0130500 | | (Purchased Reagent) | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| ..MS-569730 HSL_00008 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| ..MS-569731_00079 | 03/31/19 | | Restek, Lot A0130477 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| ..MS-569732 HSL_00006 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Atrazine | 2000 ug/mL |
| | | | | | | | Caprolactam | 2000 ug/mL |
| ..MS-571995_00002 | 09/30/19 | | Restek, Lot A0136052 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-HSLA200_00040** | 01/30/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-HSLA_STK_00050 | 500 uL | 2,4,6-Tribromophenol (Surr) | 200 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 200 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 200 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 200 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 200 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 200 ug/mL |
| | | | | | | | 3,3'-Dichlorobenzidine | 200 ug/mL |
| | | | | | | | Benzoic acid | 400 ug/mL |
| | | | | | | | Atrazine | 200 ug/mL |
| | | | | | | | Caprolactam | 200 ug/mL |
| | | | | | | | 1,1'-Biphenyl | 200 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 200 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 202.195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dioxane | 200 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 200 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 400 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 200 ug/mL |
| | | | | | | | 2-Chlorophenol | 200 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2-Methylphenol | 200 ug/mL |
| | | | | | | | 2-Nitroaniline | 200 ug/mL |
| | | | | | | | 2-Nitrophenol | 200 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 200 ug/mL |
| | | | | | | | 3-Methylphenol | 200 ug/mL |
| | | | | | | | 3-Nitroaniline | 200 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 400 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 200 ug/mL |
| | | | | | | | 4-Chloroaniline | 200 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Methylphenol | 200 ug/mL |
| | | | | | | | 4-Nitroaniline | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Nitrophenol | 400 ug/mL |
| | | | | | | | Acenaphthene | 200 ug/mL |
| | | | | | | | Acenaphthylene | 200 ug/mL |
| | | | | | | | Acetophenone | 200 ug/mL |
| | | | | | | | Aniline | 200 ug/mL |
| | | | | | | | Anthracene | 200 ug/mL |
| | | | | | | | Azobenzene | 200 ug/mL |
| | | | | | | | Benzo[a]anthracene | 200 ug/mL |
| | | | | | | | Benzo[a]pyrene | 200 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 200 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 200 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 200 ug/mL |
| | | | | | | | Benzyl alcohol | 200 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 200 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 200 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 200 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 200 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 200 ug/mL |
| | | | | | | | Carbazole | 200 ug/mL |
| | | | | | | | Chrysene | 200 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 200 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 200 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 200 ug/mL |
| | | | | | | | Dibenzofuran | 200 ug/mL |
| | | | | | | | Diethyl phthalate | 200 ug/mL |
| | | | | | | | Dimethyl phthalate | 200 ug/mL |
| | | | | | | | Diphenylamine | 170 ug/mL |
| | | | | | | | Fluoranthene | 200 ug/mL |
| | | | | | | | Fluorene | 200 ug/mL |
| | | | | | | | Hexachlorobenzene | 200 ug/mL |
| | | | | | | | Hexachlorobutadiene | 200 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 200 ug/mL |
| | | | | | | | Hexachloroethane | 200 ug/mL |
| | | | | | | | Hexadecane | 200 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 200 ug/mL |
| | | | | | | | Isophorone | 200 ug/mL |
| | | | | | | | n-Decane | 200 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 200 ug/mL |
| | | | | | | | Naphthalene | 200 ug/mL |
| | | | | | | | Nitrobenzene | 200 ug/mL |
| | | | | | | | Pentachlorophenol | 400 ug/mL |
| | | | | | | | Phenanthrene | 200 ug/mL |
| | | | | | | | Phenol | 200 ug/mL |
| | | | | | | | Pyrene | 200 ug/mL |
| | | | | | | | Pyridine | 400 ug/mL |
| | | | | | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-HSLA_STK_00050 | 01/30/19 | 10/01/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-567685_00004 | 0.4 mL | 2,4,6-Tribromophenol (Surr) | 200 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 200 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 200 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 200 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 200 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 200 ug/mL |
| | | | | | MS-569730 HSL_00008 | 1 mL | 3,3'-Dichlorobenzidine | 200 ug/mL |
| | | | | | MS-569731_00079 | 2 mL | Benzoic acid | 400 ug/mL |
| | | | | | MS-569732 HSL_00006 | 1 mL | Atrazine | 200 ug/mL |
| | | | | | | | Caprolactam | 200 ug/mL |
| | | | | | MS-571995_00002 | 2 mL | 1,1'-Biphenyl | 200 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 200 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 202.195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dioxane | 200 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 200 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 400 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 200 ug/mL |
| | | | | | | | 2-Chlorophenol | 200 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2-Methylphenol | 200 ug/mL |
| | | | | | | | 2-Nitroaniline | 200 ug/mL |
| | | | | | | | 2-Nitrophenol | 200 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 200 ug/mL |
| | | | | | | | 3-Methylphenol | 200 ug/mL |
| | | | | | | | 3-Nitroaniline | 200 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 400 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Chloroaniline | 200 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Methylphenol | 200 ug/mL |
| | | | | | | | 4-Nitroaniline | 200 ug/mL |
| | | | | | | | 4-Nitrophenol | 400 ug/mL |
| | | | | | | | Acenaphthene | 200 ug/mL |
| | | | | | | | Acenaphthylene | 200 ug/mL |
| | | | | | | | Acetophenone | 200 ug/mL |
| | | | | | | | Aniline | 200 ug/mL |
| | | | | | | | Anthracene | 200 ug/mL |
| | | | | | | | Azobenzene | 200 ug/mL |
| | | | | | | | Benzo[a]anthracene | 200 ug/mL |
| | | | | | | | Benzo[a]pyrene | 200 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 200 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 200 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 200 ug/mL |
| | | | | | | | Benzyl alcohol | 200 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 200 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 200 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 200 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 200 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 200 ug/mL |
| | | | | | | | Carbazole | 200 ug/mL |
| | | | | | | | Chrysene | 200 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 200 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 200 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 200 ug/mL |
| | | | | | | | Dibenzofuran | 200 ug/mL |
| | | | | | | | Diethyl phthalate | 200 ug/mL |
| | | | | | | | Dimethyl phthalate | 200 ug/mL |
| | | | | | | | Diphenylamine | 170 ug/mL |
| | | | | | | | Fluoranthene | 200 ug/mL |
| | | | | | | | Fluorene | 200 ug/mL |
| | | | | | | | Hexachlorobenzene | 200 ug/mL |
| | | | | | | | Hexachlorobutadiene | 200 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 200 ug/mL |
| | | | | | | | Hexachloroethane | 200 ug/mL |
| | | | | | | | Hexadecane | 200 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 200 ug/mL |
| | | | | | | | Isophorone | 200 ug/mL |
| | | | | | | | n-Decane | 200 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 200 ug/mL |
| | | | | | | | Naphthalene | 200 ug/mL |
| | | | | | | | Nitrobenzene | 200 ug/mL |
| | | | | | | | Pentachlorophenol | 400 ug/mL |
| | | | | | | | Phenanthrene | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Phenol | 200 ug/mL |
| | | | | | | | Pyrene | 200 ug/mL |
| | | | | | | | Pyridine | 400 ug/mL |
| ..MS-567685_00004 | 01/30/19 | | Restek, Lot A0130500 | | (Purchased Reagent) | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| ..MS-569730_HSL_00008 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| ..MS-569731_00079 | 03/31/19 | | Restek, Lot A0130477 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| ..MS-569732_HSL_00006 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Atrazine | 2000 ug/mL |
| | | | | | | | Caprolactam | 2000 ug/mL |
| ..MS-571995_00002 | 09/30/19 | | Restek, Lot A0136052 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | bis (2-chloroisopropyl) ether | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-HSLACCV080_00178** | 01/30/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-HSLACCV080_00178** | 01/30/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-HSLA_STK_00048 | 200 uL | 2,4,6-Tribromophenol (Surr) | 80 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 80 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 80 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 80 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 80 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 80 ug/mL |
| | | | | | | | Famphur | 80 ug/mL |
| | | | | | | | 3,3'-Dichlorobenzidine | 80 ug/mL |
| | | | | | | | Benzoic acid | 160 ug/mL |
| | | | | | | | Atrazine | 80 ug/mL |
| | | | | | | | Caprolactam | 80 ug/mL |
| | | | | | | | 1,1'-Biphenyl | 80 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 80 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 80.878 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 80 ug/mL |
| | | | | | | | 1,4-Dioxane | 80 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 80 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 80 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 160 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 80 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 80 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 80 ug/mL |
| | | | | | | | 2-Chlorophenol | 80 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 80 ug/mL |
| | | | | | | | 2-Methylphenol | 80 ug/mL |
| | | | | | | | 2-Nitroaniline | 80 ug/mL |
| | | | | | | | 2-Nitrophenol | 80 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 3-Methylphenol | 80 ug/mL |
| | | | | | | | 3-Nitroaniline | 80 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 160 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 80 ug/mL |
| | | | | | | | 4-Chloroaniline | 80 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 80 ug/mL |
| | | | | | | | 4-Methylphenol | 80 ug/mL |
| | | | | | | | 4-Nitroaniline | 80 ug/mL |
| | | | | | | | 4-Nitrophenol | 160 ug/mL |
| | | | | | | | Acenaphthene | 80 ug/mL |
| | | | | | | | Acenaphthylene | 80 ug/mL |
| | | | | | | | Acetophenone | 80 ug/mL |
| | | | | | | | Aniline | 80 ug/mL |
| | | | | | | | Anthracene | 80 ug/mL |
| | | | | | | | Azobenzene | 80 ug/mL |
| | | | | | | | Benzo[a]anthracene | 80 ug/mL |
| | | | | | | | Benzo[a]pyrene | 80 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 80 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 80 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 80 ug/mL |
| | | | | | | | Benzyl alcohol | 80 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 80 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 80 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 80 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 80 ug/mL |
| | | | | | | | Carbazole | 80 ug/mL |
| | | | | | | | Chrysene | 80 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 80 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 80 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 80 ug/mL |
| | | | | | | | Dibenzofuran | 80 ug/mL |
| | | | | | | | Diethyl phthalate | 80 ug/mL |
| | | | | | | | Dimethyl phthalate | 80 ug/mL |
| | | | | | | | Diphenylamine | 68 ug/mL |
| | | | | | | | Fluoranthene | 80 ug/mL |
| | | | | | | | Fluorene | 80 ug/mL |
| | | | | | | | Hexachlorobenzene | 80 ug/mL |
| | | | | | | | Hexachlorobutadiene | 80 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 80 ug/mL |
| | | | | | | | Hexachloroethane | 80 ug/mL |
| | | | | | | | Hexadecane | 80 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 80 ug/mL |
| | | | | | | | Isophorone | 80 ug/mL |
| | | | | | | | n-Decane | 80 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 80 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 80 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Naphthalene | 80 ug/mL |
| | | | | | | | Nitrobenzene | 80 ug/mL |
| | | | | | | | Pentachlorophenol | 160 ug/mL |
| | | | | | | | Phenanthrene | 80 ug/mL |
| | | | | | | | Phenol | 80 ug/mL |
| | | | | | | | Pyrene | 80 ug/mL |
| | | | | | | | Pyridine | 160 ug/mL |
| .MS-HSLA_STK_00048 | 01/30/19 | 10/01/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-567685_00004 | 0.4 mL | 2,4,6-Tribromophenol (Surr) | 200 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 200 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 200 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 200 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 200 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 200 ug/mL |
| | | | | | MS-568023_00043 | 1 mL | Famphur | 200 ug/mL |
| | | | | | MS-569730_HSL_00008 | 1 mL | 3,3'-Dichlorobenzidine | 200 ug/mL |
| | | | | | MS-569731_00079 | 2 mL | Benzoic acid | 400 ug/mL |
| | | | | | MS-569732_HSL_00006 | 1 mL | Atrazine | 200 ug/mL |
| | | | | | | | Caprolactam | 200 ug/mL |
| | | | | | MS-571995_00002 | 2 mL | 1,1'-Biphenyl | 200 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 200 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 202.195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dioxane | 200 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 200 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 400 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 200 ug/mL |
| | | | | | | | 2-Chlorophenol | 200 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2-Methylphenol | 200 ug/mL |
| | | | | | | | 2-Nitroaniline | 200 ug/mL |
| | | | | | | | 2-Nitrophenol | 200 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 200 ug/mL |
| | | | | | | | 3-Methylphenol | 200 ug/mL |
| | | | | | | | 3-Nitroaniline | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 400 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 200 ug/mL |
| | | | | | | | 4-Chloroaniline | 200 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Methylphenol | 200 ug/mL |
| | | | | | | | 4-Nitroaniline | 200 ug/mL |
| | | | | | | | 4-Nitrophenol | 400 ug/mL |
| | | | | | | | Acenaphthene | 200 ug/mL |
| | | | | | | | Acenaphthylene | 200 ug/mL |
| | | | | | | | Acetophenone | 200 ug/mL |
| | | | | | | | Aniline | 200 ug/mL |
| | | | | | | | Anthracene | 200 ug/mL |
| | | | | | | | Azobenzene | 200 ug/mL |
| | | | | | | | Benzo[a]anthracene | 200 ug/mL |
| | | | | | | | Benzo[a]pyrene | 200 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 200 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 200 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 200 ug/mL |
| | | | | | | | Benzyl alcohol | 200 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 200 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 200 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 200 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 200 ug/mL |
| | | | | | | | Carbazole | 200 ug/mL |
| | | | | | | | Chrysene | 200 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 200 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 200 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 200 ug/mL |
| | | | | | | | Dibenzofuran | 200 ug/mL |
| | | | | | | | Diethyl phthalate | 200 ug/mL |
| | | | | | | | Dimethyl phthalate | 200 ug/mL |
| | | | | | | | Diphenylamine | 170 ug/mL |
| | | | | | | | Fluoranthene | 200 ug/mL |
| | | | | | | | Fluorene | 200 ug/mL |
| | | | | | | | Hexachlorobenzene | 200 ug/mL |
| | | | | | | | Hexachlorobutadiene | 200 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 200 ug/mL |
| | | | | | | | Hexachloroethane | 200 ug/mL |
| | | | | | | | Hexadecane | 200 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 200 ug/mL |
| | | | | | | | Isophorone | 200 ug/mL |
| | | | | | | | n-Decane | 200 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 200 ug/mL |
| | | | | | | | Naphthalene | 200 ug/mL |
| | | | | | | | Nitrobenzene | 200 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Pentachlorophenol | 400 ug/mL |
| | | | | | | | Phenanthrene | 200 ug/mL |
| | | | | | | | Phenol | 200 ug/mL |
| | | | | | | | Pyrene | 200 ug/mL |
| | | | | | | | Pyridine | 400 ug/mL |
| ..MS-567685_00004 | 01/30/19 | | Restek, Lot A0130500 | | (Purchased Reagent) | | 2,4,6-Tribromophenol (Surr) | 5000 ug/mL |
| | | | | | | | 2-Fluorobiphenyl | 5000 ug/mL |
| | | | | | | | 2-Fluorophenol (Surr) | 5000 ug/mL |
| | | | | | | | Nitrobenzene-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Phenol-d5 (Surr) | 5000 ug/mL |
| | | | | | | | Terphenyl-d14 (Surr) | 5000 ug/mL |
| ..MS-568023_00043 | 06/30/20 | | Restek, Lot A0139090 | | (Purchased Reagent) | | Famphur | 2000 ug/mL |
| ..MS-569730_HSL_00008 | 10/31/19 | | Restek, Lot A0137351 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| ..MS-569731_00079 | 03/31/19 | | Restek, Lot A0130477 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| ..MS-569732_HSL_00006 | 10/31/19 | | Restek, Lot A0137125 | | (Purchased Reagent) | | Atrazine | 2000 ug/mL |
| | | | | | | | Caprolactam | 2000 ug/mL |
| ..MS-571995_00002 | 09/30/19 | | Restek, Lot A0136052 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| **MS-HSLB1B3SSV_00052** | 03/06/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | Restek, Lot A0112833 | | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | Restek, Lot A0129635 | | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-HSLB1B3SSV_00052** | 03/06/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-HSLB1_STK_00012 | 250 uL | Benzoic acid | 200 ug/mL |
| | | | | | | | 1,1'-Biphenyl | 100 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 100 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 100 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 100 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 101.097 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 100 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 100 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 100 ug/mL |
| | | | | | | | 1,4-Dioxane | 100 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 100 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 100 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,4,5-Trichlorophenol | 100 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 100 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 100 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 100 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 100 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 100 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 100 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 100 ug/mL |
| | | | | | | | 2-Chlorophenol | 100 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 100 ug/mL |
| | | | | | | | 2-Methylphenol | 100 ug/mL |
| | | | | | | | 2-Nitroaniline | 100 ug/mL |
| | | | | | | | 2-Nitrophenol | 100 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 100 ug/mL |
| | | | | | | | 3-Methylphenol | 100 ug/mL |
| | | | | | | | 3-Nitroaniline | 100 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 200 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 100 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 100 ug/mL |
| | | | | | | | 4-Chloroaniline | 100 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 100 ug/mL |
| | | | | | | | 4-Methylphenol | 100 ug/mL |
| | | | | | | | 4-Nitroaniline | 100 ug/mL |
| | | | | | | | 4-Nitrophenol | 200 ug/mL |
| | | | | | | | Acenaphthene | 100 ug/mL |
| | | | | | | | Acenaphthylene | 100 ug/mL |
| | | | | | | | Acetophenone | 100 ug/mL |
| | | | | | | | Aniline | 100 ug/mL |
| | | | | | | | Anthracene | 100 ug/mL |
| | | | | | | | Azobenzene | 100 ug/mL |
| | | | | | | | Benzo[a]anthracene | 100 ug/mL |
| | | | | | | | Benzo[a]pyrene | 100 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 100 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 100 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 100 ug/mL |
| | | | | | | | Benzyl alcohol | 100 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 100 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 100 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 100 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 100 ug/mL |
| | | | | | | | Carbazole | 100 ug/mL |
| | | | | | | | Chrysene | 100 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 100 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 100 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 100 ug/mL |
| | | | | | | | Dibenzofuran | 100 ug/mL |
| | | | | | | | Diethyl phthalate | 100 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Dimethyl phthalate | 100 ug/mL |
| | | | | | | | Diphenylamine | 85 ug/mL |
| | | | | | | | Fluoranthene | 100 ug/mL |
| | | | | | | | Fluorene | 100 ug/mL |
| | | | | | | | Hexachlorobenzene | 100 ug/mL |
| | | | | | | | Hexachlorobutadiene | 100 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 100 ug/mL |
| | | | | | | | Hexachloroethane | 100 ug/mL |
| | | | | | | | Hexadecane | 100 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 100 ug/mL |
| | | | | | | | Isophorone | 100 ug/mL |
| | | | | | | | n-Decane | 100 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 100 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 100 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 100 ug/mL |
| | | | | | | | Naphthalene | 100 ug/mL |
| | | | | | | | Nitrobenzene | 100 ug/mL |
| | | | | | | | Pentachlorophenol | 200 ug/mL |
| | | | | | | | Phenanthrene | 100 ug/mL |
| | | | | | | | Phenol | 100 ug/mL |
| | | | | | | | Pyrene | 100 ug/mL |
| | | | | | | | Pyridine | 200 ug/mL |
| .MS-HSLB1_STK_00012 | 03/31/19 | 06/18/18 | Methylene Chloride, Lot 187286 | 5 mL | MS-569731.SEC_00003 | 1 mL | Benzoic acid | 400 ug/mL |
| | | | | | MS-571995.SEC_00002 | 1 mL | 1,1'-Biphenyl | 200 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 200 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 202.195 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 200 ug/mL |
| | | | | | | | 1,4-Dioxane | 200 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 200 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 200 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 400 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 200 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 200 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 200 ug/mL |
| | | | | | | | 2-Chlorophenol | 200 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 200 ug/mL |
| | | | | | | | 2-Methylphenol | 200 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2-Nitroaniline | 200 ug/mL |
| | | | | | | | 2-Nitrophenol | 200 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 200 ug/mL |
| | | | | | | | 3-Methylphenol | 200 ug/mL |
| | | | | | | | 3-Nitroaniline | 200 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 400 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 200 ug/mL |
| | | | | | | | 4-Chloroaniline | 200 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 200 ug/mL |
| | | | | | | | 4-Methylphenol | 200 ug/mL |
| | | | | | | | 4-Nitroaniline | 200 ug/mL |
| | | | | | | | 4-Nitrophenol | 400 ug/mL |
| | | | | | | | Acenaphthene | 200 ug/mL |
| | | | | | | | Acenaphthylene | 200 ug/mL |
| | | | | | | | Acetophenone | 200 ug/mL |
| | | | | | | | Aniline | 200 ug/mL |
| | | | | | | | Anthracene | 200 ug/mL |
| | | | | | | | Azobenzene | 200 ug/mL |
| | | | | | | | Benzo[a]anthracene | 200 ug/mL |
| | | | | | | | Benzo[a]pyrene | 200 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 200 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 200 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 200 ug/mL |
| | | | | | | | Benzyl alcohol | 200 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 200 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 200 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 200 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 200 ug/mL |
| | | | | | | | Carbazole | 200 ug/mL |
| | | | | | | | Chrysene | 200 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 200 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 200 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 200 ug/mL |
| | | | | | | | Dibenzofuran | 200 ug/mL |
| | | | | | | | Diethyl phthalate | 200 ug/mL |
| | | | | | | | Dimethyl phthalate | 200 ug/mL |
| | | | | | | | Diphenylamine | 170 ug/mL |
| | | | | | | | Fluoranthene | 200 ug/mL |
| | | | | | | | Fluorene | 200 ug/mL |
| | | | | | | | Hexachlorobenzene | 200 ug/mL |
| | | | | | | | Hexachlorobutadiene | 200 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 200 ug/mL |
| | | | | | | | Hexachloroethane | 200 ug/mL |
| | | | | | | | Hexadecane | 200 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 200 ug/mL |
| | | | | | | | Isophorone | 200 ug/mL |
| | | | | | | | n-Decane | 200 ug/mL |

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | N-Nitrosodi-n-propylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 200 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 200 ug/mL |
| | | | | | | | Naphthalene | 200 ug/mL |
| | | | | | | | Nitrobenzene | 200 ug/mL |
| | | | | | | | Pentachlorophenol | 400 ug/mL |
| | | | | | | | Phenanthrene | 200 ug/mL |
| | | | | | | | Phenol | 200 ug/mL |
| | | | | | | | Pyrene | 200 ug/mL |
| | | | | | | | Pyridine | 400 ug/mL |
| ..MS-569731.SEC_00003 | 05/31/19 | | Restek, Lot A0132859 | | (Purchased Reagent) | | Benzoic acid | 2000 ug/mL |
| ..MS-571995.SEC_00002 | 03/31/19 | | Restek, Lot A0131190 | | (Purchased Reagent) | | 1,1'-Biphenyl | 1000 ug/mL |
| | | | | | | | 1,2,4,5-Tetrachlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,2-Diphenylhydrazine(as Azobenzene) | 1010.97 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,3-Dinitrobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 1000 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 1-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2,3,4,6-Tetrachlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,5-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4,6-Trichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,4-Dimethylphenol | 1000 ug/mL |
| | | | | | | | 2,4-Dinitrophenol | 2000 ug/mL |
| | | | | | | | 2,4-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2,6-Dichlorophenol | 1000 ug/mL |
| | | | | | | | 2,6-Dinitrotoluene | 1000 ug/mL |
| | | | | | | | 2-Chloronaphthalene | 1000 ug/mL |
| | | | | | | | 2-Chlorophenol | 1000 ug/mL |
| | | | | | | | 2-Methylnaphthalene | 1000 ug/mL |
| | | | | | | | 2-Methylphenol | 1000 ug/mL |
| | | | | | | | 2-Nitroaniline | 1000 ug/mL |
| | | | | | | | 2-Nitrophenol | 1000 ug/mL |
| | | | | | | | 3 & 4 Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Methylphenol | 1000 ug/mL |
| | | | | | | | 3-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4,6-Dinitro-2-methylphenol | 2000 ug/mL |
| | | | | | | | 4-Bromophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Chloro-3-methylphenol | 1000 ug/mL |
| | | | | | | | 4-Chloroaniline | 1000 ug/mL |
| | | | | | | | 4-Chlorophenyl phenyl ether | 1000 ug/mL |
| | | | | | | | 4-Methylphenol | 1000 ug/mL |
| | | | | | | | 4-Nitroaniline | 1000 ug/mL |
| | | | | | | | 4-Nitrophenol | 2000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Acenaphthene | 1000 ug/mL |
| | | | | | | | Acenaphthylene | 1000 ug/mL |
| | | | | | | | Acetophenone | 1000 ug/mL |
| | | | | | | | Aniline | 1000 ug/mL |
| | | | | | | | Anthracene | 1000 ug/mL |
| | | | | | | | Azobenzene | 1000 ug/mL |
| | | | | | | | Benzo[a]anthracene | 1000 ug/mL |
| | | | | | | | Benzo[a]pyrene | 1000 ug/mL |
| | | | | | | | Benzo[b]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzo[g,h,i]perylene | 1000 ug/mL |
| | | | | | | | Benzo[k]fluoranthene | 1000 ug/mL |
| | | | | | | | Benzyl alcohol | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethoxy)methane | 1000 ug/mL |
| | | | | | | | Bis(2-chloroethyl)ether | 1000 ug/mL |
| | | | | | | | Bis(2-ethylhexyl) phthalate | 1000 ug/mL |
| | | | | | | | Butyl benzyl phthalate | 1000 ug/mL |
| | | | | | | | Carbazole | 1000 ug/mL |
| | | | | | | | Chrysene | 1000 ug/mL |
| | | | | | | | Di-n-butyl phthalate | 1000 ug/mL |
| | | | | | | | Di-n-octyl phthalate | 1000 ug/mL |
| | | | | | | | Dibenz(a,h)anthracene | 1000 ug/mL |
| | | | | | | | Dibenzofuran | 1000 ug/mL |
| | | | | | | | Diethyl phthalate | 1000 ug/mL |
| | | | | | | | Dimethyl phthalate | 1000 ug/mL |
| | | | | | | | Diphenylamine | 850 ug/mL |
| | | | | | | | Fluoranthene | 1000 ug/mL |
| | | | | | | | Fluorene | 1000 ug/mL |
| | | | | | | | Hexachlorobenzene | 1000 ug/mL |
| | | | | | | | Hexachlorobutadiene | 1000 ug/mL |
| | | | | | | | Hexachlorocyclopentadiene | 1000 ug/mL |
| | | | | | | | Hexachloroethane | 1000 ug/mL |
| | | | | | | | Hexadecane | 1000 ug/mL |
| | | | | | | | Indeno[1,2,3-cd]pyrene | 1000 ug/mL |
| | | | | | | | Isophorone | 1000 ug/mL |
| | | | | | | | n-Decane | 1000 ug/mL |
| | | | | | | | N-Nitrosodi-n-propylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodimethylamine | 1000 ug/mL |
| | | | | | | | N-Nitrosodiphenylamine | 1000 ug/mL |
| | | | | | | | Naphthalene | 1000 ug/mL |
| | | | | | | | Nitrobenzene | 1000 ug/mL |
| | | | | | | | Pentachlorophenol | 2000 ug/mL |
| | | | | | | | Phenanthrene | 1000 ug/mL |
| | | | | | | | Phenol | 1000 ug/mL |
| | | | | | | | Pyrene | 1000 ug/mL |
| | | | | | | | Pyridine | 2000 ug/mL |
| **MS-HSLB2SSV_00047** | 02/28/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-IS_00014 | 50 uL | 1,4-Dichlorobenzene-d4 | 40 ug/mL |
| | | | | | | | Acenaphthene-d10 | 40 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Chrysene-d12 | 40 ug/mL |
| | | | | | | | Naphthalene-d8 | 40 ug/mL |
| | | | | | | | Perylene-d12 | 40 ug/mL |
| | | | | | | | Phenanthrene-d10 | 40 ug/mL |
| .MS-IS_00014 | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| ..MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| ..MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MS-HSLB2SSV_00047** | 02/28/19 | 10/23/18 | Methylene Chloride, Lot 203837 | 0.5 mL | MS-HSLB2_STK_00010 | 250 uL | 3,3'-Dichlorobenzidine | 100 ug/mL |
| | | | | | | | Atrazine | 100 ug/mL |
| | | | | | | | Caprolactam | 100 ug/mL |
| .MS-HSLB2_STK_00010 | 02/28/19 | 06/18/18 | Methylene Chloride, Lot 187286 | 10 mL | MS-569730SEC_00004 | 1 mL | 3,3'-Dichlorobenzidine | 200 ug/mL |
| | | | | | MS-569732HSEC_00003 | 1 mL | Atrazine | 200 ug/mL |
| | | | | | | | Caprolactam | 200 ug/mL |
| ..MS-569730SEC_00004 | 04/30/19 | | Restek, Lot A0131614 | | (Purchased Reagent) | | 3,3'-Dichlorobenzidine | 2000 ug/mL |
| ..MS-569732HSEC_00003 | 02/28/19 | | Restek, Lot A0130332 | | (Purchased Reagent) | | Atrazine | 2000 ug/mL |
| | | | | | | | Caprolactam | 2000 ug/mL |
| **MS-IS_00014** | 04/04/19 | 04/04/18 | Methylene Chloride, Lot 181545 | 250 mL | MS-567684_00019 | 5 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| | | | | | MS-567684_00020 | 45 mL | 1,4-Dichlorobenzene-d4 | 400 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Acenaphthene-d10 | 400 ug/mL |
| | | | | | | | Chrysene-d12 | 400 ug/mL |
| | | | | | | | Naphthalene-d8 | 400 ug/mL |
| | | | | | | | Perylene-d12 | 400 ug/mL |
| | | | | | | | Phenanthrene-d10 | 400 ug/mL |
| .MS-567684_00019 | 07/31/20 | | Restek, Lot A0112833 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| .MS-567684_00020 | 08/31/22 | | Restek, Lot A0129635 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 2000 ug/mL |
| | | | | | | | Acenaphthene-d10 | 2000 ug/mL |
| | | | | | | | Chrysene-d12 | 2000 ug/mL |
| | | | | | | | Naphthalene-d8 | 2000 ug/mL |
| | | | | | | | Perylene-d12 | 2000 ug/mL |
| | | | | | | | Phenanthrene-d10 | 2000 ug/mL |
| **MV-568718-D_00014** | 05/31/22 | | RESTEK, Lot A0127975 | | (Purchased Reagent) | | 1,4-Dichlorobenzene-d4 | 250 ug/mL |
| | | | | | | | Chlorobenzene-d5 | 250 ug/mL |
| | | | | | | | Fluorobenzene | 250 ug/mL |
| | | | | | | | TBA-d9 (IS) | 5000 ug/mL |
| **MV-ARCH SS A_00108** | 04/18/19 | 11/01/18 | P&T Methanol, Lot 196628 | 50 mL | MV-567650_00028 | 5 mL | 1,2-Dichloroethane-d4 (Surr) | 250 ug/mL |
| | | | | | | | 4-Bromofluorobenzene (Surr) | 250 ug/mL |
| | | | | | | | Dibromofluoromethane (Surr) | 250 ug/mL |
| | | | | | | | Toluene-d8 (Surr) | 250 ug/mL |
| .MV-567650_00028 | 11/30/22 | | Restek, Lot A0132615 | | (Purchased Reagent) | | 1,2-Dichloroethane-d4 (Surr) | 2500 ug/mL |
| | | | | | | | 4-Bromofluorobenzene (Surr) | 2500 ug/mL |
| | | | | | | | Dibromofluoromethane (Surr) | 2500 ug/mL |
| | | | | | | | Toluene-d8 (Surr) | 2500 ug/mL |
| **MV-BFB_00027** | | | | | | | 1,2-Dichloroethene, Total | |
| | | | | | | | 1,2-Dichloroethene, Total (URS) | |
| | | | | | | | 1,3-Dichloropropene, Total | |
| | | | | | | | TAH | |
| | | | | | | | Total BTEX | |
| | | | | | | | Trihalomethanes, Total | |
| | | | | | | | Unknown | |
| | | | | | | | Xylenes, Total | |
| | | | | | | | Xylenes, Total (URS) | |
| | | | | | MV-STS110N1_00066 | 1.25 mL | BFB | 50 ug/mL |
| .MV-STS110N1_00066 | 10/31/19 | | Ultra Scientific, Lot CH-3248Z | | (Purchased Reagent) | | BFB | 2000 ug/mL |
| **MV-Gas A_00005** | 01/24/19 | 01/10/19 | P&T Methanol, Lot 196628 | 30 mL | MV-569722_00009 | 600 uL | Bromomethane | 50 ug/mL |
| | | | | | | | Chloroethane | 50 ug/mL |
| | | | | | | | Chloromethane | 50 ug/mL |
| | | | | | | | Dichlorodifluoromethane | 50 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Dichlorofluoromethane | 50 ug/mL |
| | | | | | | | Trichlorofluoromethane | 50 ug/mL |
| | | | | | | | Vinyl chloride | 50 ug/mL |
| | | | | | MV-569723_00004 | 600 uL | 2-Chloroethyl vinyl ether | 50 ug/mL |
| .MV-569722_00009 | 09/30/21 | | RESTEK, Lot A0141380 | | (Purchased Reagent) | | Bromomethane | 2500 ug/mL |
| | | | | | | | Chloroethane | 2500 ug/mL |
| | | | | | | | Chloromethane | 2500 ug/mL |
| | | | | | | | Dichlorodifluoromethane | 2500 ug/mL |
| | | | | | | | Dichlorofluoromethane | 2500 ug/mL |
| | | | | | | | Trichlorofluoromethane | 2500 ug/mL |
| | | | | | | | Vinyl chloride | 2500 ug/mL |
| .MV-569723_00004 | 12/31/20 | | RESTEK, Lot A0133302 | | (Purchased Reagent) | | 2-Chloroethyl vinyl ether | 2500 ug/mL |
| **MV-Gas A_00006** | 02/04/19 | 01/23/19 | P&T Methanol, Lot 196628 | 30 mL | MV-569722_00009 | 600 uL | Bromomethane | 50 ug/mL |
| | | | | | | | Chloroethane | 50 ug/mL |
| | | | | | | | Chloromethane | 50 ug/mL |
| | | | | | | | Dichlorodifluoromethane | 50 ug/mL |
| | | | | | | | Trichlorofluoromethane | 50 ug/mL |
| | | | | | | | Vinyl chloride | 50 ug/mL |
| .MV-569722_00009 | 09/30/21 | | RESTEK, Lot A0141380 | | (Purchased Reagent) | | Bromomethane | 2500 ug/mL |
| | | | | | | | Chloroethane | 2500 ug/mL |
| | | | | | | | Chloromethane | 2500 ug/mL |
| | | | | | | | Dichlorodifluoromethane | 2500 ug/mL |
| | | | | | | | Trichlorofluoromethane | 2500 ug/mL |
| | | | | | | | Vinyl chloride | 2500 ug/mL |
| **MV-Gas B_00006** | 01/24/19 | 01/10/19 | P&T Methanol, Lot 196628 | 30 mL | MV-569722.sec_00005 | 600 uL | Bromomethane | 50 ug/mL |
| | | | | | | | Chloroethane | 50 ug/mL |
| | | | | | | | Chloromethane | 50 ug/mL |
| | | | | | | | Dichlorodifluoromethane | 50 ug/mL |
| | | | | | | | Trichlorofluoromethane | 50 ug/mL |
| | | | | | | | Vinyl chloride | 50 ug/mL |
| .MV-569722.sec_00005 | 06/30/20 | | RESTEK, Lot A0128832 | | (Purchased Reagent) | | Bromomethane | 2500 ug/mL |
| | | | | | | | Chloroethane | 2500 ug/mL |
| | | | | | | | Chloromethane | 2500 ug/mL |
| | | | | | | | Dichlorodifluoromethane | 2500 ug/mL |
| | | | | | | | Trichlorofluoromethane | 2500 ug/mL |
| | | | | | | | Vinyl chloride | 2500 ug/mL |
| **MV-Gas B_00007** | 02/04/19 | 01/23/19 | P&T Methanol, Lot 196628 | 30 mL | MV-569722.sec_00005 | 600 uL | Bromomethane | 50 ug/mL |
| | | | | | | | Chloroethane | 50 ug/mL |
| | | | | | | | Chloromethane | 50 ug/mL |
| | | | | | | | Dichlorodifluoromethane | 50 ug/mL |
| | | | | | | | Trichlorofluoromethane | 50 ug/mL |
| | | | | | | | Vinyl chloride | 50 ug/mL |
| .MV-569722.sec_00005 | 06/30/20 | | RESTEK, Lot A0128832 | | (Purchased Reagent) | | Bromomethane | 2500 ug/mL |
| | | | | | | | Chloroethane | 2500 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Chloromethane | 2500 ug/mL |
| | | | | | | | Dichlorodifluoromethane | 2500 ug/mL |
| | | | | | | | Trichlorofluoromethane | 2500 ug/mL |
| | | | | | | | Vinyl chloride | 2500 ug/mL |
| **MV-MegaMain B_00007** | 01/31/19 | 01/02/19 | P&T Methanol, Lot 181124 | 50 mL | MV-568720.sec_00021 | 1266 uL | Acrolein | 500.07 ug/mL |
| | | | | | MV-569721.sec_00005 | 800 uL | 2-Butanone (MEK) | 200 ug/mL |
| | | | | | | | 2-Hexanone | 200 ug/mL |
| | | | | | | | 4-Methyl-2-pentanone (MIBK) | 200 ug/mL |
| | | | | | | | Acetone | 200 ug/mL |
| | | | | | MV-569723.sec_00004 | 1000 uL | 2-Chloroethyl vinyl ether | 50 ug/mL |
| | | | | | MV-569724.sec_00021 | 1000 uL | Vinyl acetate | 100 ug/mL |
| | | | | | MV-569727.sec_00005 | 4000 uL | Cyclohexanone | 2000 ug/mL |
| | | | | | MV-571992.sec_00002 | 1000 uL | 1,1,1-Trichloroethane | 50 ug/mL |
| | | | | | | | 1,1,2,2-Tetrachloroethane | 50 ug/mL |
| | | | | | | | 1,1,2-Trichloroethane | 50 ug/mL |
| | | | | | | | 1,1,2-Trichlorotrifluoroethane | 50 ug/mL |
| | | | | | | | 1,1-Dichloroethane | 50 ug/mL |
| | | | | | | | 1,1-Dichloroethene | 50 ug/mL |
| | | | | | | | 1,2,3-Trichlorobenzene | 50 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 50 ug/mL |
| | | | | | | | 1,2-Dibromo-3-Chloropropane | 50 ug/mL |
| | | | | | | | 1,2-Dibromoethane | 50 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 50 ug/mL |
| | | | | | | | 1,2-Dichloroethane | 50 ug/mL |
| | | | | | | | 1,2-Dichloroethene, Total | 100 ug/mL |
| | | | | | | | 1,2-Dichloroethene, Total (URS) | 100 ug/mL |
| | | | | | | | 1,2-Dichloropropane | 50 ug/mL |
| | | | | | | | 1,3,5-Trimethylbenzene | 50 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 50 ug/mL |
| | | | | | | | 1,3-Dichloropropene, Total | 100 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 50 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 2-Methyl-2-propanol | 500 ug/mL |
| | | | | | | | Acrylonitrile | 500 ug/mL |
| | | | | | | | Benzene | 50 ug/mL |
| | | | | | | | Bromoform | 50 ug/mL |
| | | | | | | | Carbon disulfide | 50 ug/mL |
| | | | | | | | Carbon tetrachloride | 50 ug/mL |
| | | | | | | | Chlorobenzene | 50 ug/mL |
| | | | | | | | Chlorobromomethane | 50 ug/mL |
| | | | | | | | Chlorodibromomethane | 50 ug/mL |
| | | | | | | | Chloroform | 50 ug/mL |
| | | | | | | | cis-1,2-Dichloroethene | 50 ug/mL |
| | | | | | | | cis-1,3-Dichloropropene | 50 ug/mL |
| | | | | | | | Cyclohexane | 50 ug/mL |
| | | | | | | | Dichlorobromomethane | 50 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Ethylbenzene | 50 ug/mL |
| | | | | | | | Isobutyl alcohol | 1250 ug/mL |
| | | | | | | | Isopropylbenzene | 50 ug/mL |
| | | | | | | | m-Xylene & p-Xylene | 50 ug/mL |
| | | | | | | | Methyl acetate | 100 ug/mL |
| | | | | | | | Methyl tert-butyl ether | 50 ug/mL |
| | | | | | | | Methylcyclohexane | 50 ug/mL |
| | | | | | | | Methylene Chloride | 50 ug/mL |
| | | | | | | | o-Xylene | 50 ug/mL |
| | | | | | | | Styrene | 50 ug/mL |
| | | | | | | | Tetrachloroethene | 50 ug/mL |
| | | | | | | | Tetrahydrofuran | 100 ug/mL |
| | | | | | | | Toluene | 50 ug/mL |
| | | | | | | | trans-1,2-Dichloroethene | 50 ug/mL |
| | | | | | | | trans-1,3-Dichloropropene | 50 ug/mL |
| | | | | | | | Trichloroethene | 50 ug/mL |
| | | | | | | | Trihalomethanes, Total | 200 ug/mL |
| | | | | | MV-CUS17739.s_00005 | 1250 uL | sec-Butyl Alcohol | 750 ug/mL |
| .MV-568720.sec_00021 | 01/31/19 | | RESTEK, Lot A0139592 | | (Purchased Reagent) | | Acrolein | 19750 ug/mL |
| .MV-569721.sec_00005 | 01/31/20 | | RESTEK, Lot A0113880 | | (Purchased Reagent) | | 2-Butanone (MEK) | 12500 ug/mL |
| | | | | | | | 2-Hexanone | 12500 ug/mL |
| | | | | | | | 4-Methyl-2-pentanone (MIBK) | 12500 ug/mL |
| | | | | | | | Acetone | 12500 ug/mL |
| .MV-569723.sec_00004 | 01/30/20 | | RESTEK, Lot A0123884 | | (Purchased Reagent) | | 2-Chloroethyl vinyl ether | 2500 ug/mL |
| .MV-569724.sec_00021 | 02/28/19 | | RESTEK, Lot A0140470 | | (Purchased Reagent) | | Vinyl acetate | 5000 ug/mL |
| .MV-569727.sec_00005 | 10/31/20 | | RESTEK, Lot A0131573 | | (Purchased Reagent) | | Cyclohexanone | 25000 ug/mL |
| .MV-571992.sec_00002 | 06/30/19 | | RESTEK, Lot A0123775 | | (Purchased Reagent) | | 1,1,1-Trichloroethane | 2500 ug/mL |
| | | | | | | | 1,1,2,2-Tetrachloroethane | 2500 ug/mL |
| | | | | | | | 1,1,2-Trichloroethane | 2500 ug/mL |
| | | | | | | | 1,1,2-Trichlorotrifluoroethane | 2500 ug/mL |
| | | | | | | | 1,1-Dichloroethane | 2500 ug/mL |
| | | | | | | | 1,1-Dichloroethene | 2500 ug/mL |
| | | | | | | | 1,2,3-Trichlorobenzene | 2500 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 2500 ug/mL |
| | | | | | | | 1,2-Dibromo-3-Chloropropane | 2500 ug/mL |
| | | | | | | | 1,2-Dibromoethane | 2500 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 2500 ug/mL |
| | | | | | | | 1,2-Dichloroethane | 2500 ug/mL |
| | | | | | | | 1,2-Dichloroethene, Total | 5000 ug/mL |
| | | | | | | | 1,2-Dichloroethene, Total (URS) | 5000 ug/mL |
| | | | | | | | 1,2-Dichloropropane | 2500 ug/mL |
| | | | | | | | 1,3,5-Trimethylbenzene | 2500 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 2500 ug/mL |
| | | | | | | | 1,3-Dichloropropene, Total | 5000 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 2500 ug/mL |
| | | | | | | | 1,4-Dioxane | 50000 ug/mL |
| | | | | | | | 2-Methyl-2-propanol | 25000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | Acrylonitrile | 25000 ug/mL |
| | | | | | | | Benzene | 2500 ug/mL |
| | | | | | | | Bromoform | 2500 ug/mL |
| | | | | | | | Carbon disulfide | 2500 ug/mL |
| | | | | | | | Carbon tetrachloride | 2500 ug/mL |
| | | | | | | | Chlorobenzene | 2500 ug/mL |
| | | | | | | | Chlorobromomethane | 2500 ug/mL |
| | | | | | | | Chlorodibromomethane | 2500 ug/mL |
| | | | | | | | Chloroform | 2500 ug/mL |
| | | | | | | | cis-1,2-Dichloroethene | 2500 ug/mL |
| | | | | | | | cis-1,3-Dichloropropene | 2500 ug/mL |
| | | | | | | | Cyclohexane | 2500 ug/mL |
| | | | | | | | Dichlorobromomethane | 2500 ug/mL |
| | | | | | | | Ethylbenzene | 2500 ug/mL |
| | | | | | | | Isobutyl alcohol | 62500 ug/mL |
| | | | | | | | Isopropylbenzene | 2500 ug/mL |
| | | | | | | | m-Xylene & p-Xylene | 2500 ug/mL |
| | | | | | | | Methyl acetate | 5000 ug/mL |
| | | | | | | | Methyl tert-butyl ether | 2500 ug/mL |
| | | | | | | | Methylcyclohexane | 2500 ug/mL |
| | | | | | | | Methylene Chloride | 2500 ug/mL |
| | | | | | | | o-Xylene | 2500 ug/mL |
| | | | | | | | Styrene | 2500 ug/mL |
| | | | | | | | Tetrachloroethene | 2500 ug/mL |
| | | | | | | | Tetrahydrofuran | 5000 ug/mL |
| | | | | | | | Toluene | 2500 ug/mL |
| | | | | | | | trans-1,2-Dichloroethene | 2500 ug/mL |
| | | | | | | | trans-1,3-Dichloropropene | 2500 ug/mL |
| | | | | | | | Trichloroethene | 2500 ug/mL |
| | | | | | | | Trihalomethanes, Total | 10000 ug/mL |
| .MV-CUS17739.s_00005 | 10/31/20 | | Ultra, Lot CS-4706 | | (Purchased Reagent) | | sec-Butyl Alcohol | 30000 ug/mL |
| **MV-MegaMainA_00009** | 01/31/19 | 12/15/18 | P&T Methanol, Lot 181124 | 50 mL | MV-568720_00023 | 1266 uL | Acrolein | 500.07 ug/mL |
| | | | | | MV-569721_00006 | 800 uL | 2-Butanone (MEK) | 200 ug/mL |
| | | | | | | | 2-Hexanone | 200 ug/mL |
| | | | | | | | 4-Methyl-2-pentanone (MIBK) | 200 ug/mL |
| | | | | | | | Acetone | 200 ug/mL |
| | | | | | MV-569724_00017 | 1000 uL | Vinyl acetate | 100 ug/mL |
| | | | | | MV-569727_00007 | 4000 uL | Cyclohexanone | 2000 ug/mL |
| | | | | | MV-571992_00002 | 1000 uL | 1,1,1,2-Tetrachloroethane | 50 ug/mL |
| | | | | | | | 1,1,1-Trichloroethane | 50 ug/mL |
| | | | | | | | 1,1,2,2-Tetrachloroethane | 50 ug/mL |
| | | | | | | | 1,1,2-Trichloroethane | 50 ug/mL |
| | | | | | | | 1,1,2-Trichlorotrifluoroethane | 50 ug/mL |
| | | | | | | | 1,1-Dichloroethane | 50 ug/mL |
| | | | | | | | 1,1-Dichloroethene | 50 ug/mL |
| | | | | | | | 1,1-Dichloropropene | 50 ug/mL |
| | | | | | | | 1,2,3-Trichlorobenzene | 50 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,2,3-Trichloropropane | 50 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 50 ug/mL |
| | | | | | | | 1,2,4-Trimethylbenzene | 50 ug/mL |
| | | | | | | | 1,2-Dibromo-3-Chloropropane | 50 ug/mL |
| | | | | | | | 1,2-Dibromoethane | 50 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 50 ug/mL |
| | | | | | | | 1,2-Dichloroethane | 50 ug/mL |
| | | | | | | | 1,2-Dichloropropane | 50 ug/mL |
| | | | | | | | 1,3,5-Trimethylbenzene | 50 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 50 ug/mL |
| | | | | | | | 1,3-Dichloropropane | 50 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 50 ug/mL |
| | | | | | | | 1,4-Dioxane | 1000 ug/mL |
| | | | | | | | 2,2-Dichloropropane | 50 ug/mL |
| | | | | | | | 2-Chlorotoluene | 50 ug/mL |
| | | | | | | | 2-Methyl-2-propanol | 500 ug/mL |
| | | | | | | | 3-Chloro-1-propene | 50 ug/mL |
| | | | | | | | 4-Chlorotoluene | 50 ug/mL |
| | | | | | | | 4-Isopropyltoluene | 50 ug/mL |
| | | | | | | | Acrylonitrile | 500 ug/mL |
| | | | | | | | Benzene | 50 ug/mL |
| | | | | | | | Bromobenzene | 50 ug/mL |
| | | | | | | | Bromoform | 50 ug/mL |
| | | | | | | | Carbon disulfide | 50 ug/mL |
| | | | | | | | Carbon tetrachloride | 50 ug/mL |
| | | | | | | | Chlorobenzene | 50 ug/mL |
| | | | | | | | Chlorobromomethane | 50 ug/mL |
| | | | | | | | Chlorodibromomethane | 50 ug/mL |
| | | | | | | | Chloroform | 50 ug/mL |
| | | | | | | | cis-1,2-Dichloroethene | 50 ug/mL |
| | | | | | | | cis-1,3-Dichloropropene | 50 ug/mL |
| | | | | | | | Cyclohexane | 50 ug/mL |
| | | | | | | | Dibromomethane | 50 ug/mL |
| | | | | | | | Dichlorobromomethane | 50 ug/mL |
| | | | | | | | Ethyl ether | 50 ug/mL |
| | | | | | | | Ethyl methacrylate | 50 ug/mL |
| | | | | | | | Ethylbenzene | 50 ug/mL |
| | | | | | | | Hexachlorobutadiene | 50 ug/mL |
| | | | | | | | Hexane | 50 ug/mL |
| | | | | | | | Iodomethane | 50 ug/mL |
| | | | | | | | Isobutyl alcohol | 1250 ug/mL |
| | | | | | | | Isopropylbenzene | 50 ug/mL |
| | | | | | | | m-Xylene & p-Xylene | 50 ug/mL |
| | | | | | | | Methyl acetate | 100 ug/mL |
| | | | | | | | Methyl tert-butyl ether | 50 ug/mL |
| | | | | | | | Methylcyclohexane | 50 ug/mL |
| | | | | | | | Methylene Chloride | 50 ug/mL |
| | | | | | | | n-Butylbenzene | 50 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | n-Heptane | 50 ug/mL |
| | | | | | | | N-Propylbenzene | 50 ug/mL |
| | | | | | | | Naphthalene | 50 ug/mL |
| | | | | | | | o-Xylene | 50 ug/mL |
| | | | | | | | sec-Butylbenzene | 50 ug/mL |
| | | | | | | | Styrene | 50 ug/mL |
| | | | | | | | tert-Butylbenzene | 50 ug/mL |
| | | | | | | | Tetrachloroethene | 50 ug/mL |
| | | | | | | | Tetrahydrofuran | 100 ug/mL |
| | | | | | | | Toluene | 50 ug/mL |
| | | | | | | | trans-1,2-Dichloroethene | 50 ug/mL |
| | | | | | | | trans-1,3-Dichloropropene | 50 ug/mL |
| | | | | | | | trans-1,4-Dichloro-2-butene | 50 ug/mL |
| | | | | | | | Trichloroethene | 50 ug/mL |
| | | | | | MV-CUS17739_00004 | 2500 uL | 1-Chlorohexane | 50 ug/mL |
| | | | | | | | 2-Pentanone | 200 ug/mL |
| | | | | | | | sec-Butyl Alcohol | 1500 ug/mL |
| .MV-568720_00023 | 03/31/19 | | RESTEK, Lot A0141320 | | (Purchased Reagent) | | Acrolein | 19750 ug/mL |
| .MV-569721_00006 | 10/31/20 | | RESTEK, Lot A0131486 | | (Purchased Reagent) | | 2-Butanone (MEK) | 12500 ug/mL |
| | | | | | | | 2-Hexanone | 12500 ug/mL |
| | | | | | | | 4-Methyl-2-pentanone (MIBK) | 12500 ug/mL |
| | | | | | | | Acetone | 12500 ug/mL |
| .MV-569724_00017 | 02/28/19 | | RESTEK, Lot A0140969 | | (Purchased Reagent) | | Vinyl acetate | 5000 ug/mL |
| .MV-569727_00007 | 02/29/20 | | RESTEK, Lot A0124672 | | (Purchased Reagent) | | Cyclohexanone | 25000 ug/mL |
| .MV-571992_00002 | 08/31/19 | | RESTEK, Lot A0123711 | | (Purchased Reagent) | | 1,1,1,2-Tetrachloroethane | 2500 ug/mL |
| | | | | | | | 1,1,1-Trichloroethane | 2500 ug/mL |
| | | | | | | | 1,1,2,2-Tetrachloroethane | 2500 ug/mL |
| | | | | | | | 1,1,2-Trichloroethane | 2500 ug/mL |
| | | | | | | | 1,1,2-Trichlorotrifluoroethane | 2500 ug/mL |
| | | | | | | | 1,1-Dichloroethane | 2500 ug/mL |
| | | | | | | | 1,1-Dichloroethene | 2500 ug/mL |
| | | | | | | | 1,1-Dichloropropene | 2500 ug/mL |
| | | | | | | | 1,2,3-Trichlorobenzene | 2500 ug/mL |
| | | | | | | | 1,2,3-Trichloropropane | 2500 ug/mL |
| | | | | | | | 1,2,4-Trichlorobenzene | 2500 ug/mL |
| | | | | | | | 1,2,4-Trimethylbenzene | 2500 ug/mL |
| | | | | | | | 1,2-Dibromo-3-Chloropropane | 2500 ug/mL |
| | | | | | | | 1,2-Dibromoethane | 2500 ug/mL |
| | | | | | | | 1,2-Dichlorobenzene | 2500 ug/mL |
| | | | | | | | 1,2-Dichloroethane | 2500 ug/mL |
| | | | | | | | 1,2-Dichloropropane | 2500 ug/mL |
| | | | | | | | 1,3,5-Trimethylbenzene | 2500 ug/mL |
| | | | | | | | 1,3-Dichlorobenzene | 2500 ug/mL |
| | | | | | | | 1,3-Dichloropropane | 2500 ug/mL |
| | | | | | | | 1,4-Dichlorobenzene | 2500 ug/mL |
| | | | | | | | 1,4-Dioxane | 50000 ug/mL |
| | | | | | | | 2,2-Dichloropropane | 2500 ug/mL |
| | | | | | | | 2-Chlorotoluene | 2500 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2-Methyl-2-propanol | 25000 ug/mL |
| | | | | | | | 3-Chloro-1-propene | 2500 ug/mL |
| | | | | | | | 4-Chlorotoluene | 2500 ug/mL |
| | | | | | | | 4-Isopropyltoluene | 2500 ug/mL |
| | | | | | | | Acrylonitrile | 25000 ug/mL |
| | | | | | | | Benzene | 2500 ug/mL |
| | | | | | | | Bromobenzene | 2500 ug/mL |
| | | | | | | | Bromoform | 2500 ug/mL |
| | | | | | | | Carbon disulfide | 2500 ug/mL |
| | | | | | | | Carbon tetrachloride | 2500 ug/mL |
| | | | | | | | Chlorobenzene | 2500 ug/mL |
| | | | | | | | Chlorobromomethane | 2500 ug/mL |
| | | | | | | | Chlorodibromomethane | 2500 ug/mL |
| | | | | | | | Chloroform | 2500 ug/mL |
| | | | | | | | cis-1,2-Dichloroethene | 2500 ug/mL |
| | | | | | | | cis-1,3-Dichloropropene | 2500 ug/mL |
| | | | | | | | Cyclohexane | 2500 ug/mL |
| | | | | | | | Dibromomethane | 2500 ug/mL |
| | | | | | | | Dichlorobromomethane | 2500 ug/mL |
| | | | | | | | Ethyl ether | 2500 ug/mL |
| | | | | | | | Ethyl methacrylate | 2500 ug/mL |
| | | | | | | | Ethylbenzene | 2500 ug/mL |
| | | | | | | | Hexachlorobutadiene | 2500 ug/mL |
| | | | | | | | Hexane | 2500 ug/mL |
| | | | | | | | Iodomethane | 2500 ug/mL |
| | | | | | | | Isobutyl alcohol | 62500 ug/mL |
| | | | | | | | Isopropylbenzene | 2500 ug/mL |
| | | | | | | | m-Xylene & p-Xylene | 2500 ug/mL |
| | | | | | | | Methyl acetate | 5000 ug/mL |
| | | | | | | | Methyl tert-butyl ether | 2500 ug/mL |
| | | | | | | | Methylcyclohexane | 2500 ug/mL |
| | | | | | | | Methylene Chloride | 2500 ug/mL |
| | | | | | | | n-Butylbenzene | 2500 ug/mL |
| | | | | | | | n-Heptane | 2500 ug/mL |
| | | | | | | | N-Propylbenzene | 2500 ug/mL |
| | | | | | | | Naphthalene | 2500 ug/mL |
| | | | | | | | o-Xylene | 2500 ug/mL |
| | | | | | | | sec-Butylbenzene | 2500 ug/mL |
| | | | | | | | Styrene | 2500 ug/mL |
| | | | | | | | tert-Butylbenzene | 2500 ug/mL |
| | | | | | | | Tetrachloroethene | 2500 ug/mL |
| | | | | | | | Tetrahydrofuran | 5000 ug/mL |
| | | | | | | | Toluene | 2500 ug/mL |
| | | | | | | | trans-1,2-Dichloroethene | 2500 ug/mL |
| | | | | | | | trans-1,3-Dichloropropene | 2500 ug/mL |
| | | | | | | | trans-1,4-Dichloro-2-butene | 2500 ug/mL |
| | | | | | | | Trichloroethene | 2500 ug/mL |
| .MV-CUS17739_00004 | 10/31/20 | | Ultra, Lot CS-4707 | | (Purchased Reagent) | | 1-Chlorohexane | 1000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2-Pentanone | 4000 ug/mL |
| | | | | | | | sec-Butyl Alcohol | 30000 ug/mL |
| **MV-MegaMainA_00009** | 01/31/19 | 12/15/18 | P&T Methanol, Lot 181124 | 50 mL | MV-569723_00004 | 1000 uL | 2-Chloroethyl vinyl ether | 50 ug/mL |
| | | | | | MV-571992_00002 | 1000 uL | 1,2-Dichloroethene, Total | 100 ug/mL |
| | | | | | | | 1,2-Dichloroethene, Total (URS) | 100 ug/mL |
| | | | | | | | Trihalomethanes, Total | 200 ug/mL |
| | | | | | | | Xylenes, Total | 100 ug/mL |
| .MV-569723_00004 | 12/31/20 | | RESTEK, Lot A0133302 | | (Purchased Reagent) | | 2-Chloroethyl vinyl ether | 2500 ug/mL |
| .MV-571992_00002 | 08/31/19 | | RESTEK, Lot A0123711 | | (Purchased Reagent) | | 1,2-Dichloroethene, Total | 5000 ug/mL |
| | | | | | | | 1,2-Dichloroethene, Total (URS) | 5000 ug/mL |
| | | | | | | | Trihalomethanes, Total | 10000 ug/mL |
| | | | | | | | Xylenes, Total | 5000 ug/mL |
| **MV-Supp A_00033** | 05/19/19 | 11/19/18 | P&T Methanol, Lot 199628 | 20 mL | mv-570808_00005 | 400 uL | 1,2,3-Trimethylbenzene | 50 ug/mL |
| | | | | | | | 1,3,5-Trichlorobenzene | 50 ug/mL |
| | | | | | | | 2-Chloro-1,3-butadiene | 50 ug/mL |
| | | | | | | | 2-Nitropropane | 100 ug/mL |
| | | | | | | | Isopropyl alcohol | 500 ug/mL |
| | | | | | | | Methacrylonitrile | 500 ug/mL |
| | | | | | | | n-Butanol | 1250 ug/mL |
| | | | | | mv-570809_00005 | 400 uL | Ethyl acetate | 100 ug/mL |
| | | | | | | | Methyl methacrylate | 100 ug/mL |
| | | | | | mv-571993_00003 | 400 uL | Acetonitrile | 500 ug/mL |
| | | | | | | | Isopropyl ether | 50 ug/mL |
| | | | | | | | Propionitrile | 500 ug/mL |
| | | | | | | | Tert-amyl methyl ether | 50 ug/mL |
| | | | | | | | Tert-butyl ethyl ether | 50 ug/mL |
| | | | | | mv-571994_00002 | 600 uL | Ethanol | 3000 ug/mL |
| | | | | | mv-VO-TAOH-5_00006 | 2000 uL | cis-1,4-Dichloro-2-butene | 100 ug/mL |
| | | | | | | | Ethylene oxide | 5000 ug/mL |
| | | | | | | | Propene oxide | 5000 ug/mL |
| .mv-570808_00005 | 09/30/19 | | Restek, Lot A0135915 | | (Purchased Reagent) | | 1,2,3-Trimethylbenzene | 2500 ug/mL |
| | | | | | | | 1,3,5-Trichlorobenzene | 2500 ug/mL |
| | | | | | | | 2-Chloro-1,3-butadiene | 2500 ug/mL |
| | | | | | | | 2-Nitropropane | 5000 ug/mL |
| | | | | | | | Isopropyl alcohol | 25000 ug/mL |
| | | | | | | | Methacrylonitrile | 25000 ug/mL |
| | | | | | | | n-Butanol | 62500 ug/mL |
| .mv-570809_00005 | 08/31/19 | | Restek, Lot A0135442 | | (Purchased Reagent) | | Ethyl acetate | 5000 ug/mL |
| | | | | | | | Methyl methacrylate | 5000 ug/mL |
| .mv-571993_00003 | 07/31/20 | | RESTEK, Lot A0139911 | | (Purchased Reagent) | | Acetonitrile | 25000 ug/mL |
| | | | | | | | Isopropyl ether | 2500 ug/mL |
| | | | | | | | Propionitrile | 25000 ug/mL |
| | | | | | | | Tert-amyl methyl ether | 2500 ug/mL |
| | | | | | | | Tert-butyl ethyl ether | 2500 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| .mv-571994_00002 | 11/30/20 | | RESTEK, Lot A0132270 | | (Purchased Reagent) | | Ethanol | 100000 ug/mL |
| .mv-VO-TAOH-5_00006 | 06/30/19 | | SPEX, Lot EN180524019 | | (Purchased Reagent) | | cis-1,4-Dichloro-2-butene | 1000 ug/mL |
| | | | | | | | Ethylene oxide | 50000 ug/mL |
| | | | | | | | Propene oxide | 50000 ug/mL |
| **MV-Supp B_00023** | 03/31/19 | 01/02/19 | P&T Methanol, Lot 127999 | 10 mL | mv-570808.sec_00002 | 200 uL | Isopropyl alcohol | 500 ug/mL |
| | | | | | | | Methacrylonitrile | 500 ug/mL |
| | | | | | | | n-Butanol | 1250 ug/mL |
| | | | | | mv-570809.sec_00002 | 200 uL | Ethyl acetate | 100 ug/mL |
| | | | | | | | Methyl methacrylate | 100 ug/mL |
| | | | | | mv-571993.sec_00002 | 200 uL | Acetonitrile | 500 ug/mL |
| | | | | | | | Propionitrile | 500 ug/mL |
| | | | | | mv-571994.sec_00002 | 300 uL | Ethanol | 3000 ug/mL |
| | | | | | mv-VOTAOH5.se_00005 | 1000 uL | cis-1,4-Dichloro-2-butene | 100 ug/mL |
| | | | | | | | Ethylene oxide | 5000 ug/mL |
| | | | | | | | Propene oxide | 5000 ug/mL |
| .mv-570808.sec_00002 | 09/30/18 | | Restek, Lot A0126195 | | (Purchased Reagent) | | Isopropyl alcohol | 25000 ug/mL |
| | | | | | | | Methacrylonitrile | 25000 ug/mL |
| | | | | | | | n-Butanol | 62500 ug/mL |
| .mv-570809.sec_00002 | 10/31/18 | | Restek, Lot A0126533 | | (Purchased Reagent) | | Ethyl acetate | 5000 ug/mL |
| | | | | | | | Methyl methacrylate | 5000 ug/mL |
| .mv-571993.sec_00002 | 04/30/19 | | RESTEK, Lot A0126826 | | (Purchased Reagent) | | Acetonitrile | 25000 ug/mL |
| | | | | | | | Propionitrile | 25000 ug/mL |
| .mv-571994.sec_00002 | 06/30/20 | | RESTEK, Lot A0128874 | | (Purchased Reagent) | | Ethanol | 100000 ug/mL |
| .mv-VOTAOH5.se_00005 | 11/20/18 | | SPEX, Lot TS180524011 | | (Purchased Reagent) | | cis-1,4-Dichloro-2-butene | 1000 ug/mL |
| | | | | | | | Ethylene oxide | 50000 ug/mL |
| | | | | | | | Propene oxide | 50000 ug/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| **10CSDFCL37CUP_00034** | 07/31/25 | 10/01/18 | Hexane, Lot 196294 | 200 mL | 10XXDFCL37INP_00001 | 0.02 mL | 37Cl4-2,3,7,8-TCDD | 0.2 ng/mL |
| .10XXDFCL37INP_00001 | 07/31/25 | 09/28/16 | Nonane, Lot SHBH0333V | 3 mL | 10INDFCL37P_00001 | 0.12 mL | 37Cl4-2,3,7,8-TCDD | 2000 ng/mL |
| ..10INDFCL37P_00001 | 07/31/25 | Cambridge Isotope, Lot ER05211501 | | | (Purchased Reagent) | | 37Cl4-2,3,7,8-TCDD | 50 ug/mL |
| **10IDDFC13WRKP_00051** | 08/31/22 | 12/03/18 | ACETONE, Lot 179319 | 200 mL | 10MXDFC13ISP_00020 | 2 mL | 13C-1,2,3,4,6,7,8-HpCDD | 1 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 1 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 1 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 1 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 1 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 1 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 1 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 1 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 1 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 1 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 1 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 1 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 1 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 1 ng/mL |
| | | | | | | | 13C-OCDD | 2 ng/mL |
| | | | | | 10XX13COCDFP_00001 | 0.04 mL | 13C-OCDF | 2 ng/mL |
| .10MXDFC13ISP_00020 | 10/01/25 | CIL, Lot ER05281501 | | | (Purchased Reagent) | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| .10XX13COCDFP_00001 | 08/31/22 | 10/20/16 | Nonane, Lot SHBH0333V | 5 mL | 10INC13OCDFP_00001 | 1 mL | 13C-OCDF | 10 ug/mL |
| ..10INC13OCDFP_00001 | 08/31/22 | Cambridge Isotope, Lot ER080812-01 | | | (Purchased Reagent) | | 13C-OCDF | 50 ug/mL |
| **10RSDFWRKP_00028** | 06/30/20 | 12/03/18 | Nonane, Lot SHBK4119 | 10 mL | 10XXDFRSINTP_00001 | 0.2 mL | 13C-1,2,3,7,8,9-HxCDD | 0.1 ug/mL |
| | | | | | | | 13C-1,2,3,4-TCDD | 0.1 ug/mL |
| .10XXDFRSINTP_00001 | 06/30/20 | 01/30/17 | Nonane, Lot SHBH0333V | 10 mL | 10INDFHXCDRSP_00001 | 1 mL | 13C-1,2,3,7,8,9-HxCDD | 5 ug/mL |
| | | | | | 10INDFTCDDRSP_00001 | 1 mL | 13C-1,2,3,4-TCDD | 5 ug/mL |
| ..10INDFHXCDRSP_00001 | 09/30/26 | Cambridge Isotope, Lot ER08221601 | | | (Purchased Reagent) | | 13C-1,2,3,7,8,9-HxCDD | 50 ug/mL |
| ..10INDFTCDDRSP_00001 | 06/30/20 | Cambridge Isotope, Lot ER060710-01 | | | (Purchased Reagent) | | 13C-1,2,3,4-TCDD | 50 ug/mL |
| **10SPDFNATSPKP_00023** | 05/01/26 | 10/23/18 | ACETONE, Lot 179319 | 100 mL | 10XXDFNATP_00007 | 0.5 mL | 1,2,3,4,6,7,8-HpCDD | 1 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 1 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 1 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 1 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 1 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 1 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 1 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 1 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 1 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 1 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 1 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 1 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 1 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 0.2 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 0.2 ng/mL |
| | | | | | | | OCDD | 2 ng/mL |
| | | | | | | | OCDF | 2 ng/mL |
| .10XXDFNATP_00007 | 05/01/26 | 09/18/18 | Nonane, Lot SHBJ6527 | 3 mL | 10MXDFNATP_00002 | 0.3 mL | 1,2,3,4,6,7,8-HpCDD | 200 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 200 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 200 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 200 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 200 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 200 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 200 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 200 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 200 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 200 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 200 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 200 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 40 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 40 ng/mL |
| | | | | | | | OCDD | 400 ng/mL |
| | | | | | | | OCDF | 400 ng/mL |
| ..10MXDFNATP_00002 | 05/01/26 | Cambridge Isotope, Lot ER02241602 | | | (Purchased Reagent) | | 1,2,3,4,6,7,8-HpCDD | 2000 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 2000 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 2000 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 2000 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 2000 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 2000 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 2000 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 2000 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 2000 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 2000 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 2000 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 2000 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 2000 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 400 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 400 ng/mL |
| | | | | | | | OCDD | 4000 ng/mL |
| | | | | | | | OCDF | 4000 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| **61CV1613OS_00005** | 04/01/20 | 04/08/15 | Nonane, Lot 13CS30114 | 1 mL | 61CV1613S_00001 | 1000 uL | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 10 ng/mL |
| | | | | | 61XX13COCDFP_00001 | 20 uL | 13C-OCDF | 200 ng/mL |
| .61CV1613S_00001 | 04/01/20 | WELLINGTON, Lot 13CS30114 | | | (Purchased Reagent) | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 10 ng/mL |
| .61XX13COCDFP_00001 | 06/01/21 | 11/10/15 | Nonane, Lot SHBC8566V | 5 mL | 61INC13OCDFP_00001 | 1 mL | 13C-OCDF | 10 ug/mL |
| ..61INC13OCDFP_00001 | 06/01/21 | Cerriliant, Lot ER062011-01 | | | (Purchased Reagent) | | 13C-OCDF | 50 ug/mL |
| **61L11613OP_00001** | 11/10/16 | 11/09/15 | Nonane, Lot ER031611-01A | 0.2 mL | 61L11613P_00001 | 200 uL | 1,2,3,4,6,7,8-HpCDD | 2.5 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 2.5 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 2.5 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 2.5 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 2.5 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 2.5 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 2.5 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 2.5 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 2.5 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 2.5 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,2,3,7,8-PeCDF | 2.5 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4-TCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 2.5 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 2.5 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 0.5 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 0.5 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 0.5 ng/mL |
| | | | | | | | OCDD | 5 ng/mL |
| | | | | | | | OCDF | 5 ng/mL |
| | | | | | 61XX13COCDFP_00001 | 4 uL | 13C-OCDF | 200 ng/mL |
| .61L11613P_00001 | 03/01/21 | CERILLIANT, Lot ER031611-01A | | | (Purchased Reagent) | | 1,2,3,4,6,7,8-HpCDD | 2.5 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 2.5 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 2.5 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 2.5 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 2.5 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 2.5 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 2.5 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 2.5 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 2.5 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 2.5 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 2.5 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4-TCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 2.5 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 2.5 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 0.5 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 0.5 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 0.5 ng/mL |
| | | | | | | | OCDD | 5 ng/mL |
| | | | | | | | OCDF | 5 ng/mL |
| .61XX13COCDFP_00001 | 06/01/21 | 11/10/15 | Nonane, Lot SHBC8566V | 5 mL | 61INC13OCDFP_00001 | 1 mL | 13C-OCDF | 10 ug/mL |
| ..61INC13OCDFP_00001 | 06/01/21 | Cerriliant, Lot ER062011-01 | | | (Purchased Reagent) | | 13C-OCDF | 50 ug/mL |
| **61L21613OP_00001** | 03/01/21 | 11/09/15 | Nonane, Lot ER031611-01B | 0.2 mL | 61L21613P_00001 | 200 uL | 1,2,3,4,6,7,8-HpCDD | 10 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 10 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 10 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 10 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 10 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 10 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 10 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 10 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 10 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 10 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 10 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4-TCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 10 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 10 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 2 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 2 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 2 ng/mL |
| | | | | | | | OCDD | 20 ng/mL |
| | | | | | | | OCDF | 20 ng/mL |
| | | | | | 61XX13COCDFP_00001 | 4 uL | 13C-OCDF | 200 ng/mL |
| .61L21613P_00001 | 03/01/21 | CERILLIANT, Lot ER031611-01B | | | (Purchased Reagent) | | 1,2,3,4,6,7,8-HpCDD | 10 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 10 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 10 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 10 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 10 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 10 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 10 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 10 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 10 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 10 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 10 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4-TCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 10 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 10 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 2 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 2 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 2 ng/mL |
| | | | | | | | OCDD | 20 ng/mL |
| | | | | | | | OCDF | 20 ng/mL |
| .61XX13COCDFP_00001 | 06/01/21 | 11/10/15 | Nonane, Lot SHBC8566V | 5 mL | 61INC13OCDFP_00001 | 1 mL | 13C-OCDF | 10 ug/mL |
| ..61INC13OCDFP_00001 | 06/01/21 | Cerriliant, Lot ER062011-01 | | | (Purchased Reagent) | | 13C-OCDF | 50 ug/mL |
| **61L31613OP_00001** | 03/01/21 | 11/09/15 | Nonane, Lot ER031611-01C | 0.2 mL | 61L31613P_00001 | 200 uL | 1,2,3,4,6,7,8-HpCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 50 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4-TCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 10 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | OCDD | 100 ng/mL |
| | | | | | | | OCDF | 100 ng/mL |
| | | | | | 61XX13COCDFP_00001 | 4 uL | 13C-OCDF | 200 ng/mL |
| .61L31613P_00001 | 03/01/21 | CERILLIANT, Lot ER031611-01C | | | (Purchased Reagent) | | 1,2,3,4,6,7,8-HpCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4-TCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 10 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | OCDD | 100 ng/mL |
| | | | | | | | OCDF | 100 ng/mL |
| .61XX13COCDFP_00001 | 06/01/21 | 11/10/15 | Nonane, Lot SHBC8566V | 5 mL | 61INC13OCDFP_00001 | 1 mL | 13C-OCDF | 10 ug/mL |
| ..61INC13OCDFP_00001 | 06/01/21 | Cerriliant, Lot ER062011-01 | | | (Purchased Reagent) | | 13C-OCDF | 50 ug/mL |
| **61L41613OP_00001** | 03/01/21 | 11/09/15 | Nonane, Lot ER031611-01D | 0.2 mL | 61L41613P_00001 | 200 uL | 1,2,3,4,6,7,8-HpCDD | 200 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 200 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 200 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 200 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 200 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 200 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 200 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 200 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 200 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 200 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 200 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4-TCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 200 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 200 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 40 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 40 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 40 ng/mL |
| | | | | | | | OCDD | 400 ng/mL |
| | | | | | | | OCDF | 400 ng/mL |
| | | | | | 61XX13COCDFP_00001 | 4 uL | 13C-OCDF | 200 ng/mL |
| .61L41613P_00001 | 03/01/21 | CERILLIANT, Lot ER031611-01D | | | (Purchased Reagent) | | 1,2,3,4,6,7,8-HpCDD | 200 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 200 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 200 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 200 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 200 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 200 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 200 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 200 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 200 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 200 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 200 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4-TCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 200 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 200 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 40 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 40 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 40 ng/mL |
| | | | | | | | OCDD | 400 ng/mL |
| | | | | | | | OCDF | 400 ng/mL |
| .61XX13COCDFP_00001 | 06/01/21 | 11/10/15 | Nonane, Lot SHBC8566V | 5 mL | 61INC13OCDFP_00001 | 1 mL | 13C-OCDF | 10 ug/mL |
| ..61INC13OCDFP_00001 | 06/01/21 | Cerriliant, Lot ER062011-01 | | | (Purchased Reagent) | | 13C-OCDF | 50 ug/mL |
| **61L51613OP_00001** | 03/01/21 | 11/09/15 | Nonane, Lot ER031611-01E | 0.2 mL | 61L51613P_00001 | 200 uL | 1,2,3,4,6,7,8-HpCDD | 1000 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 1000 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 1000 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 1000 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 1000 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 1000 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 1000 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 1000 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 1000 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 1000 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 1000 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4-TCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 1000 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 1000 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 200 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 200 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 200 ng/mL |
| | | | | | | | OCDD | 2000 ng/mL |
| | | | | | | | OCDF | 2000 ng/mL |
| | | | | | 61XX13COCDFP_00001 | 4 uL | 13C-OCDF | 200 ng/mL |
| .61L51613P_00001 | 03/01/21 | CERILLIANT, Lot ER031611-01E | | | (Purchased Reagent) | | 1,2,3,4,6,7,8-HpCDD | 1000 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 1000 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 1000 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 1000 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 1000 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 1000 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 1000 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 1000 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 1000 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 1000 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 1000 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4-TCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 1000 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 1000 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 200 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 200 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 200 ng/mL |
| | | | | | | | OCDD | 2000 ng/mL |
| | | | | | | | OCDF | 2000 ng/mL |
| .61XX13COCDFP_00001 | 06/01/21 | 11/10/15 | Nonane, Lot SHBC8566V | 5 mL | 61INC13OCDFP_00001 | 1 mL | 13C-OCDF | 10 ug/mL |
| ..61INC13OCDFP_00001 | 06/01/21 | Cerriliant, Lot ER062011-01 | | | (Purchased Reagent) | | 13C-OCDF | 50 ug/mL |
| **61WDML3OP_00001** | 01/31/21 | 08/22/16 | Nonane, Lot ER031611-01C | 0.2 mL | 61WDML3P_00001 | 200 uL | 1,2,3,4,6,7,8-HpCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 10 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | OCDD | 100 ng/mL |
| | | | | | | | OCDF | 100 ng/mL |
| | | | | | 61XX13COCDFP_00001 | 4 uL | 13C-OCDF | 200 ng/mL |
| .61WDML3P_00001 | 01/31/21 | CERILLIANT, Lot ER011711-01 | | | (Purchased Reagent) | | 1,2,3,4,6,7,8-HpCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 10 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | OCDD | 100 ng/mL |
| | | | | | | | OCDF | 100 ng/mL |
| .61XX13COCDFP_00001 | 06/01/21 | 11/10/15 | Nonane, Lot SHBC8566V | 5 mL | 61INC13OCDFP_00001 | 1 mL | 13C-OCDF | 10 ug/mL |
| ..61INC13OCDFP_00001 | 06/01/21 | Cerriliant, Lot ER062011-01 | | | (Purchased Reagent) | | 13C-OCDF | 50 ug/mL |
| **61WDML3OP_F/L_00052** | 01/31/21 | 01/22/19 | Nonane, Lot SHBJ6527 | 0.2 mL | 61WDML3P_F/L_00010 | 200 uL | 1,2,3,4,6,7,8-HpCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 50 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 10 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | OCDD | 100 ng/mL |
| | | | | | | | OCDF | 100 ng/mL |
| | | | | | 61XX13COCDFP_00001 | 4 uL | 13C-OCDF | 200 ng/mL |
| .61WDML3P_F/L_00010 | 01/31/21 | | CERILLIANT, Lot ER011711-01 | | (Purchased Reagent) | | 1,2,3,4,6,7,8-HpCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,6,7,8-HpCDF | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8,9-HpCDF | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,4,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8,9-HxCDF | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDD | 50 ng/mL |
| | | | | | | | 1,2,3,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,6,7,8-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8,9-HpCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,4,7,8-HxCDF | 100 ng/mL |

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

| Reagent ID | Exp Date | Prep Date | Dilutant Used | Reagent Final Volume | Parent Reagent | | Analyte | Concentration |
|---|---|---|---|---|---|---|---|---|
| | | | | | Reagent ID | Volume Added | | |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8,9-HxCDF | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDD | 100 ng/mL |
| | | | | | | | 13C-1,2,3,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,6,7,8-HxCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,4,7,8-PeCDF | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDD | 100 ng/mL |
| | | | | | | | 13C-2,3,7,8-TCDF | 100 ng/mL |
| | | | | | | | 13C-OCDD | 200 ng/mL |
| | | | | | | | 2,3,4,6,7,8-HxCDF | 50 ng/mL |
| | | | | | | | 2,3,4,7,8-PeCDF | 50 ng/mL |
| | | | | | | | 2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | 2,3,7,8-TCDF | 10 ng/mL |
| | | | | | | | 37Cl4-2,3,7,8-TCDD | 10 ng/mL |
| | | | | | | | OCDD | 100 ng/mL |
| | | | | | | | OCDF | 100 ng/mL |
| .61XX13COCDFP_00001 | 06/01/21 | 11/10/15 | Nonane, Lot SHBC8566V | 5 mL | 61INC13OCDFP_00001 | 1 mL | 13C-OCDF | 10 ug/mL |
| ..61INC13OCDFP_00001 | 06/01/21 | Cerriliant, Lot ER062011-01 | | | (Purchased Reagent) | | 13C-OCDF | 50 ug/mL |

# Reagent

# 571995_00054

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 571995 **Lot No.:** A0140111

**Description :** 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** January 31, 2020 **Storage:** 0°C or colder

**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | 1,4-Dioxane | | 1,006.6 µg/mL | +/- 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 123-91-1 | (Lot SHBJ5124) | | +/- 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1503 | µg/mL | Stressed |
| 2 | N-Nitrosodimethylamine | | 1,005.1 µg/mL | +/- 5.8437 | µg/mL | Gravimetric |
| | **CAS #** 62-75-9 | (Lot 180322JLM) | | +/- 12.0150 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1217 | µg/mL | Stressed |
| 3 | Pyridine | | 2,012.7 µg/mL | +/- 11.7020 | µg/mL | Gravimetric |
| | **CAS #** 110-86-1 | (Lot SHBC7174V) | | +/- 24.0599 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 38.2910 | µg/mL | Stressed |
| 4 | Phenol | | 1,008.6 µg/mL | +/- 5.8641 | µg/mL | Gravimetric |
| | **CAS #** 108-95-2 | (Lot SHBF9719V) | | +/- 12.0569 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1883 | µg/mL | Stressed |
| 5 | Aniline | | 1,006.2 µg/mL | +/- 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 62-53-3 | (Lot K22Z462) | | +/- 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1427 | µg/mL | Stressed |
| 6 | Bis(2-chloroethyl)ether | | 1,009.5 µg/mL | +/- 5.8693 | µg/mL | Gravimetric |
| | **CAS #** 111-44-4 | (Lot SHBD4430V) | | +/- 12.0676 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.2054 | µg/mL | Stressed |
| 7 | n-Decane (C10) | | 1,010.0 µg/mL | +/- 5.8722 | µg/mL | Gravimetric |
| | **CAS #** 124-18-5 | (Lot SHBJ8526) | | +/- 12.0736 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.2150 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 24 | Bis(2-chloroethoxy)methane | | 1,009.6 | µg/mL | +/- | 5.8699 | µg/mL | Gravimetric |
| | **CAS #** 111-91-1 | (Lot 5670100) | | | +/- | 12.0688 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2073 | µg/mL | Stressed |
| 25 | 2,4-Dichlorophenol | | 1,009.0 | µg/mL | +/- | 5.8664 | µg/mL | Gravimetric |
| | **CAS #** 120-83-2 | (Lot BCBJ8113V) | | | +/- | 12.0616 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1959 | µg/mL | Stressed |
| 26 | 1,2,4-Trichlorobenzene | | 1,008.4 | µg/mL | +/- | 5.8629 | µg/mL | Gravimetric |
| | **CAS #** 120-82-1 | (Lot SHBJ0905) | | | +/- | 12.0545 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1845 | µg/mL | Stressed |
| 27 | Naphthalene | | 1,008.3 | µg/mL | +/- | 5.8623 | µg/mL | Gravimetric |
| | **CAS #** 91-20-3 | (Lot MKBW2603V) | | | +/- | 12.0533 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1826 | µg/mL | Stressed |
| 28 | 2,6-Dichlorophenol | | 1,006.8 | µg/mL | +/- | 5.8536 | µg/mL | Gravimetric |
| | **CAS #** 87-65-0 | (Lot MKBP8620V) | | | +/- | 12.0353 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1541 | µg/mL | Stressed |
| 29 | 4-Chloroaniline | | 1,005.3 | µg/mL | +/- | 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 106-47-8 | (Lot BCBJ1580V) | | | +/- | 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1255 | µg/mL | Stressed |
| 30 | Hexachlorobutadiene | | 1,008.6 | µg/mL | +/- | 5.8641 | µg/mL | Gravimetric |
| | **CAS #** 87-68-3 | (Lot J31X013) | | | +/- | 12.0569 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1883 | µg/mL | Stressed |
| 31 | 4-Chloro-3-methylphenol | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 59-50-7 | (Lot STBC7309V) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 32 | 2-Methylnaphthalene | | 1,005.5 | µg/mL | +/- | 5.8461 | µg/mL | Gravimetric |
| | **CAS #** 91-57-6 | (Lot STBF0201V) | | | +/- | 12.0199 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 19.1294 | µg/mL | Stressed |
| 33 | 1-Methylnaphthalene | | 1,002.4 | µg/mL | +/- | 5.8283 | µg/mL | Gravimetric |
| | **CAS #** 90-12-0 | (Lot 523400-9) | | | +/- | 11.9833 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0712 | µg/mL | Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene | | 1,007.2 | µg/mL | +/- | 5.8559 | µg/mL | Gravimetric |
| | **CAS #** 95-94-3 | (Lot MKBW7717V) | | | +/- | 12.0401 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1617 | µg/mL | Stressed |
| 35 | Hexachlorocyclopentadiene | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 77-47-4 | (Lot 0012015) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 36 | 2,4,6-Trichlorophenol | | 1,009.3 | µg/mL | +/- | 5.8682 | µg/mL | Gravimetric |
| | **CAS #** 88-06-2 | (Lot STBF3742V) | | | +/- | 12.0652 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2016 | µg/mL | Stressed |
| 37 | 2,4,5-Trichlorophenol | | 1,009.2 | µg/mL | +/- | 5.8676 | µg/mL | Gravimetric |
| | **CAS #** 95-95-4 | (Lot FHN01) | | | +/- | 12.0640 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1997 | µg/mL | Stressed |
| 38 | 2-Chloronaphthalene | | 1,006.8 | µg/mL | +/- | 5.8536 | µg/mL | Gravimetric |
| | **CAS #** 91-58-7 | (Lot AJ2UI) | | | +/- | 12.0353 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1541 | µg/mL | Stressed |
| 39 | Biphenyl | | 1,006.3 | µg/mL | +/- | 5.8507 | µg/mL | Gravimetric |
| | **CAS #** 92-52-4 | (Lot MKBV9808V) | | | +/- | 12.0294 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1446 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 56 | 4-Nitroaniline | | 1,007.5 | µg/mL | +/- | 5.8579 | µg/mL | Gravimetric |
| | **CAS #** 100-01-6 | (Lot BCBG4702V) | | | +/- | 12.0442 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1681 | µg/mL | Stressed |
| 57 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) | | 2,012.4 | µg/mL | +/- | 11.7003 | µg/mL | Gravimetric |
| | **CAS #** 534-52-1 | (Lot B180716L) | | | +/- | 24.0564 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.2853 | µg/mL | Stressed |
| 58 | Diphenylamine | | 856.1 | µg/mL | +/- | 4.9889 | µg/mL | Gravimetric |
| | **CAS #** 122-39-4 | (Lot MKBN8295V) | | | +/- | 10.2395 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 16.2906 | µg/mL | Stressed |
| 59 | Azobenzene | | 1,009.8 | µg/mL | +/- | 5.8709 | µg/mL | Gravimetric |
| | **CAS #** 103-33-3 | (Lot BCBS6535V) | | | +/- | 12.0709 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 19.2106 | µg/mL | Stressed |
| 60 | 4-Bromophenyl phenyl ether | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 101-55-3 | (Lot STBB9729V) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 61 | Hexachlorobenzene | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 118-74-1 | (Lot LRAB8468) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 62 | Pentachlorophenol | | 2,005.9 | µg/mL | +/- | 11.6625 | µg/mL | Gravimetric |
| | **CAS #** 87-86-5 | (Lot 170717KJA) | | | +/- | 23.9787 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.1617 | µg/mL | Stressed |
| 63 | n-Octadecane (C18) | | 1,004.8 | µg/mL | +/- | 5.8420 | µg/mL | Gravimetric |
| | **CAS #** 593-45-3 | (Lot T7N4E) | | | +/- | 12.0114 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1160 | µg/mL | Stressed |
| 64 | Phenanthrene | | 1,005.3 | µg/mL | +/- | 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 85-01-8 | (Lot MKCB1762V) | | | +/- | 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1255 | µg/mL | Stressed |
| 65 | Anthracene | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 120-12-7 | (Lot MKBR2268V) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 66 | Carbazole | | 1,002.7 | µg/mL | +/- | 5.8298 | µg/mL | Gravimetric |
| | **CAS #** 86-74-8 | (Lot 7528800) | | | +/- | 11.9863 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0761 | µg/mL | Stressed |
| 67 | Di-n-butylphthalate | | 1,005.6 | µg/mL | +/- | 5.8466 | µg/mL | Gravimetric |
| | **CAS #** 84-74-2 | (Lot MKBT0244V) | | | +/- | 12.0210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1312 | µg/mL | Stressed |
| 68 | Fluoranthene | | 1,002.6 | µg/mL | +/- | 5.8294 | µg/mL | Gravimetric |
| | **CAS #** 206-44-0 | (Lot MKBQ6360V) | | | +/- | 11.9856 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0749 | µg/mL | Stressed |
| 69 | Pyrene | | 1,009.3 | µg/mL | +/- | 5.8682 | µg/mL | Gravimetric |
| | **CAS #** 129-00-0 | (Lot BCBT5695) | | | +/- | 12.0652 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2016 | µg/mL | Stressed |
| 70 | Benzyl butyl phthalate | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 85-68-7 | (Lot MKCF0058) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 71 | Benz(a)anthracene | | 1,004.8 | µg/mL | +/- | 5.8422 | µg/mL | Gravimetric |
| | **CAS #** 56-55-3 | (Lot 0012018) | | | +/- | 12.0118 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 19.1166 | µg/mL | Stressed |

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

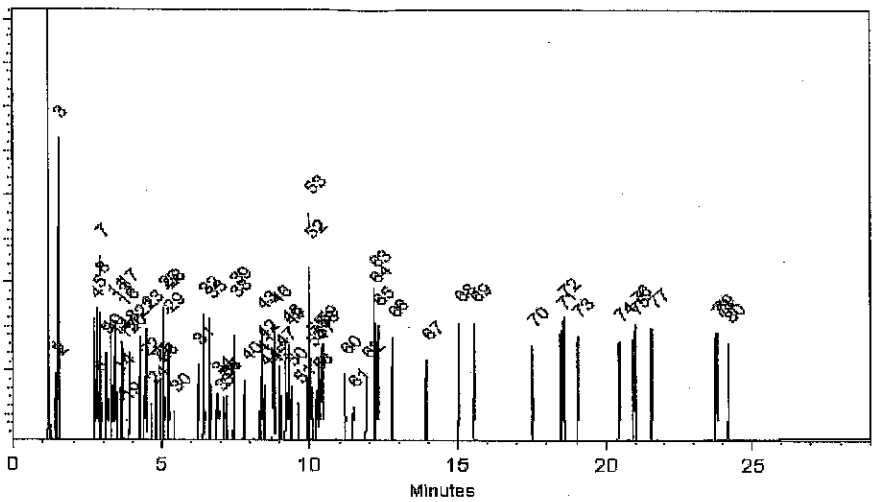
**Carrier Gas:**
hydrogen-constant flow 1.8 mL/min.

**Temp. Program:**
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
340°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

**Date Mixed:** 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 02-Aug-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 72 | Chrysene | | 1,009.4 | µg/mL | +/- | 5.8687 | µg/mL | Gravimetric |
| | **CAS #** 218-01-9 | (Lot 012015) | | | +/- | 12.0664 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2035 | µg/mL | Stressed |
| 73 | Bis(2-ethylhexyl)phthalate | | 1,007.3 | µg/mL | +/- | 5.8565 | µg/mL | Gravimetric |
| | **CAS #** 117-81-7 | (Lot MKBZ3868V) | | | +/- | 12.0413 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1636 | µg/mL | Stressed |
| 74 | Di-n-octyl phthalate | | 1,007.0 | µg/mL | +/- | 5.8548 | µg/mL | Gravimetric |
| | **CAS #** 117-84-0 | (Lot 7170200) | | | +/- | 12.0377 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1579 | µg/mL | Stressed |
| 75 | Benzo(b)fluoranthene | | 1,003.7 | µg/mL | +/- | 5.8356 | µg/mL | Gravimetric |
| | **CAS #** 205-99-2 | (Lot 012012B) | | | +/- | 11.9983 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0951 | µg/mL | Stressed |
| 76 | Benzo(k)fluoranthene | | 1,005.7 | µg/mL | +/- | 5.8472 | µg/mL | Gravimetric |
| | **CAS #** 207-08-9 | (Lot 012012K) | | | +/- | 12.0222 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1332 | µg/mL | Stressed |
| 77 | Benzo(a)pyrene | | 1,008.8 | µg/mL | +/- | 5.8653 | µg/mL | Gravimetric |
| | **CAS #** 50-32-8 | (Lot ER071309-02) | | | +/- | 12.0593 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1921 | µg/mL | Stressed |
| 78 | Indeno(1,2,3-cd)pyrene | | 1,006.9 | µg/mL | +/- | 5.8542 | µg/mL | Gravimetric |
| | **CAS #** 193-39-5 | (Lot ER082107-02) | | | +/- | 12.0365 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1560 | µg/mL | Stressed |
| 79 | Dibenz(a,h)anthracene | | 1,008.7 | µg/mL | +/- | 5.8647 | µg/mL | Gravimetric |
| | **CAS #** 53-70-3 | (Lot ER032211-01) | | | +/- | 12.0581 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1902 | µg/mL | Stressed |
| 80 | Benzo(g,h,i)perylene | | 1,000.2 | µg/mL | +/- | 5.8152 | µg/mL | Gravimetric |
| | **CAS #** 191-24-2 | (Lot ER05121401) | | | +/- | 11.9565 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0285 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Specific Reference Material Notes:**

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 40 | 2-Nitroaniline | | 1,007.5 µg/mL | +/- 5.8577 | µg/mL | Gravimetric |
| | **CAS #** 88-74-4 | (Lot MKBK7597V) | | +/- 12.0437 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1674 | µg/mL | Stressed |
| 41 | Acenaphthylene | | 1,007.2 µg/mL | +/- 5.8557 | µg/mL | Gravimetric |
| | **CAS #** 208-96-8 | (Lot O03R) | | +/- 12.0395 | µg/mL | Unstressed |
| | **Purity** 97% | | | +/- 19.1608 | µg/mL | Stressed |
| 42 | 1,3-Dinitrobenzene | | 1,008.9 µg/mL | +/- 5.8658 | µg/mL | Gravimetric |
| | **CAS #** 99-65-0 | (Lot BCBN4329V) | | +/- 12.0605 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1940 | µg/mL | Stressed |
| 43 | Dimethylphthalate | | 1,009.2 µg/mL | +/- 5.8676 | µg/mL | Gravimetric |
| | **CAS #** 131-11-3 | (Lot 10117699) | | +/- 12.0640 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1997 | µg/mL | Stressed |
| 44 | 2,6-Dinitrotoluene | | 1,009.1 µg/mL | +/- 5.8670 | µg/mL | Gravimetric |
| | **CAS #** 606-20-2 | (Lot 1437483V) | | +/- 12.0628 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1978 | µg/mL | Stressed |
| 45 | 3-Nitroaniline | | 1,009.8 µg/mL | +/- 5.8711 | µg/mL | Gravimetric |
| | **CAS #** 99-09-2 | (Lot MKBX1283V) | | +/- 12.0712 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.2112 | µg/mL | Stressed |
| 46 | Acenaphthene | | 1,008.1 µg/mL | +/- 5.8612 | µg/mL | Gravimetric |
| | **CAS #** 83-32-9 | (Lot MKCC8329) | | +/- 12.0509 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1788 | µg/mL | Stressed |
| 47 | 2,4-Dinitrophenol | | 2,013.2 µg/mL | +/- 11.7049 | µg/mL | Gravimetric |
| | **CAS #** 51-28-5 | (Lot STBG3580V) | | +/- 24.0659 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 38.3005 | µg/mL | Stressed |
| 48 | Dibenzofuran | | 1,007.0 µg/mL | +/- 5.8548 | µg/mL | Gravimetric |
| | **CAS #** 132-64-9 | (Lot MKCD9952) | | +/- 12.0377 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1579 | µg/mL | Stressed |
| 49 | 4-Nitrophenol | | 2,015.4 µg/mL | +/- 11.7177 | µg/mL | Gravimetric |
| | **CAS #** 100-02-7 | (Lot MKBK1842V) | | +/- 24.0922 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 38.3424 | µg/mL | Stressed |
| 50 | 2,4-Dinitrotoluene | | 1,009.5 µg/mL | +/- 5.8693 | µg/mL | Gravimetric |
| | **CAS #** 121-14-2 | (Lot MKAA0690V) | | +/- 12.0676 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.2054 | µg/mL | Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol | | 1,005.3 µg/mL | +/- 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 58-90-2 | (Lot PR-30126) | | +/- 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1255 | µg/mL | Stressed |
| 52 | Fluorene | | 1,007.7 µg/mL | +/- 5.8591 | µg/mL | Gravimetric |
| | **CAS #** 86-73-7 | (Lot 10174662) | | +/- 12.0465 | µg/mL | Unstressed |
| | **Purity** 98% | | | +/- 19.1718 | µg/mL | Stressed |
| 53 | n-Hexadecane (C16) | | 1,009.8 µg/mL | +/- 5.8711 | µg/mL | Gravimetric |
| | **CAS #** 544-76-3 | (Lot SHBJ3997) | | +/- 12.0712 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.2112 | µg/mL | Stressed |
| 54 | Diethylphthalate | | 1,007.4 µg/mL | +/- 5.8571 | µg/mL | Gravimetric |
| | **CAS #** 84-66-2 | (Lot MKCB0810V) | | +/- 12.0425 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1655 | µg/mL | Stressed |
| 55 | 4-Chlorophenyl phenyl ether | | 1,006.7 µg/mL | +/- 5.8530 | µg/mL | Gravimetric |
| | **CAS #** 7005-72-3 | (Lot MKBX5225V) | | +/- 12.0342 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1522 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | 2-Chlorophenol | | 1,005.6 | µg/mL | +/- | 5.8466 | µg/mL | Gravimetric |
| | **CAS #** 95-57-8 | (Lot STBF2690V) | | | +/- | 12.0210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1312 | µg/mL | Stressed |
| 9 | 1,3-Dichlorobenzene | | 1,009.7 | µg/mL | +/- | 5.8705 | µg/mL | Gravimetric |
| | **CAS #** 541-73-1 | (Lot BCBQ7100V) | | | +/- | 12.0700 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2092 | µg/mL | Stressed |
| 10 | 1,4-Dichlorobenzene | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 106-46-7 | (Lot MKBS4401V) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 11 | Benzyl alcohol | | 1,009.6 | µg/mL | +/- | 5.8699 | µg/mL | Gravimetric |
| | **CAS #** 100-51-6 | (Lot SHBJ0534) | | | +/- | 12.0688 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2073 | µg/mL | Stressed |
| 12 | 1,2-Dichlorobenzene | | 1,007.7 | µg/mL | +/- | 5.8589 | µg/mL | Gravimetric |
| | **CAS #** 95-50-1 | (Lot SHBG3111V) | | | +/- | 12.0461 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1712 | µg/mL | Stressed |
| 13 | 2-Methylphenol (o-cresol) | | 1,008.4 | µg/mL | +/- | 5.8629 | µg/mL | Gravimetric |
| | **CAS #** 95-48-7 | (Lot SHBH6379) | | | +/- | 12.0545 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1845 | µg/mL | Stressed |
| 14 | 2,2'-oxybis(1-chloropropane) | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 108-60-1 | (Lot 7577400) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 15 | Acetophenone | | 1,009.4 | µg/mL | +/- | 5.8687 | µg/mL | Gravimetric |
| | **CAS #** 98-86-2 | (Lot STBG8586) | | | +/- | 12.0664 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2035 | µg/mL | Stressed |
| 16 | 3-Methylphenol (m-cresol) | | 504.9 | µg/mL | +/- | 2.9423 | µg/mL | Gravimetric |
| | **CAS #** 108-39-4 | (Lot SHBD0627V) | | | +/- | 6.0389 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.6077 | µg/mL | Stressed |
| 17 | 4-Methylphenol (p-cresol) | | 501.8 | µg/mL | +/- | 2.9242 | µg/mL | Gravimetric |
| | **CAS #** 106-44-5 | (Lot 49396APV) | | | +/- | 6.0018 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.5487 | µg/mL | Stressed |
| 18 | N-Nitroso-di-n-propylamine | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 621-64-7 | (Lot OPAGF) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 19 | Hexachloroethane | | 1,001.4 | µg/mL | +/- | 5.8222 | µg/mL | Gravimetric |
| | **CAS #** 67-72-1 | (Lot 4H3SF) | | | +/- | 11.9708 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0513 | µg/mL | Stressed |
| 20 | Nitrobenzene | | 1,005.9 | µg/mL | +/- | 5.8484 | µg/mL | Gravimetric |
| | **CAS #** 98-95-3 | (Lot SHBG5577V) | | | +/- | 12.0246 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1370 | µg/mL | Stressed |
| 21 | Isophorone | | 1,009.1 | µg/mL | +/- | 5.8670 | µg/mL | Gravimetric |
| | **CAS #** 78-59-1 | (Lot MKBG2442V) | | | +/- | 12.0629 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1979 | µg/mL | Stressed |
| 22 | 2-Nitrophenol | | 1,008.7 | µg/mL | +/- | 5.8647 | µg/mL | Gravimetric |
| | **CAS #** 88-75-5 | (Lot BCBH7602V) | | | +/- | 12.0581 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1902 | µg/mL | Stressed |
| 23 | 2,4-Dimethylphenol | | 1,008.6 | µg/mL | +/- | 5.8641 | µg/mL | Gravimetric |
| | **CAS #** 105-67-9 | (Lot 10165155) | | | +/- | 12.0569 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1883 | µg/mL | Stressed |

# Reagent

# 571995_00057

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 571995 **Lot No.:** A0140111

**Description :** 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** January 31, 2020 **Storage:** 0°C or colder

**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | 1,4-Dioxane<br>**CAS #** 123-91-1 (Lot SHBJ5124)<br>**Purity** 99% | 1,006.6 µg/mL | +/- 5.8525 µg/mL<br>+/- 12.0330 µg/mL<br>+/- 19.1503 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | N-Nitrosodimethylamine<br>**CAS #** 62-75-9 (Lot 180322JLM)<br>**Purity** 99% | 1,005.1 µg/mL | +/- 5.8437 µg/mL<br>+/- 12.0150 µg/mL<br>+/- 19.1217 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Pyridine<br>**CAS #** 110-86-1 (Lot SHBC7174V)<br>**Purity** 99% | 2,012.7 µg/mL | +/- 11.7020 µg/mL<br>+/- 24.0599 µg/mL<br>+/- 38.2910 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Phenol<br>**CAS #** 108-95-2 (Lot SHBF9719V)<br>**Purity** 99% | 1,008.6 µg/mL | +/- 5.8641 µg/mL<br>+/- 12.0569 µg/mL<br>+/- 19.1883 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Aniline<br>**CAS #** 62-53-3 (Lot K22Z462)<br>**Purity** 99% | 1,006.2 µg/mL | +/- 5.8501 µg/mL<br>+/- 12.0282 µg/mL<br>+/- 19.1427 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Bis(2-chloroethyl)ether<br>**CAS #** 111-44-4 (Lot SHBD4430V)<br>**Purity** 99% | 1,009.5 µg/mL | +/- 5.8693 µg/mL<br>+/- 12.0676 µg/mL<br>+/- 19.2054 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 7 | n-Decane (C10)<br>**CAS #** 124-18-5 (Lot SHBJ8526)<br>**Purity** 99% | 1,010.0 µg/mL | +/- 5.8722 µg/mL<br>+/- 12.0736 µg/mL<br>+/- 19.2150 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 24 | Bis(2-chloroethoxy)methane | | 1,009.6 | µg/mL | +/- | 5.8699 | µg/mL | Gravimetric |
| | **CAS #** 111-91-1 | (Lot 5670100) | | | +/- | 12.0688 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2073 | µg/mL | Stressed |
| 25 | 2,4-Dichlorophenol | | 1,009.0 | µg/mL | +/- | 5.8664 | µg/mL | Gravimetric |
| | **CAS #** 120-83-2 | (Lot BCBJ8113V) | | | +/- | 12.0616 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1959 | µg/mL | Stressed |
| 26 | 1,2,4-Trichlorobenzene | | 1,008.4 | µg/mL | +/- | 5.8629 | µg/mL | Gravimetric |
| | **CAS #** 120-82-1 | (Lot SHBJ0905) | | | +/- | 12.0545 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1845 | µg/mL | Stressed |
| 27 | Naphthalene | | 1,008.3 | µg/mL | +/- | 5.8623 | µg/mL | Gravimetric |
| | **CAS #** 91-20-3 | (Lot MKBW2603V) | | | +/- | 12.0533 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1826 | µg/mL | Stressed |
| 28 | 2,6-Dichlorophenol | | 1,006.8 | µg/mL | +/- | 5.8536 | µg/mL | Gravimetric |
| | **CAS #** 87-65-0 | (Lot MKBP8620V) | | | +/- | 12.0353 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1541 | µg/mL | Stressed |
| 29 | 4-Chloroaniline | | 1,005.3 | µg/mL | +/- | 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 106-47-8 | (Lot BCBJ1580V) | | | +/- | 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1255 | µg/mL | Stressed |
| 30 | Hexachlorobutadiene | | 1,008.6 | µg/mL | +/- | 5.8641 | µg/mL | Gravimetric |
| | **CAS #** 87-68-3 | (Lot J31X013) | | | +/- | 12.0569 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1883 | µg/mL | Stressed |
| 31 | 4-Chloro-3-methylphenol | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 59-50-7 | (Lot STBC7309V) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 32 | 2-Methylnaphthalene | | 1,005.5 | µg/mL | +/- | 5.8461 | µg/mL | Gravimetric |
| | **CAS #** 91-57-6 | (Lot STBF0201V) | | | +/- | 12.0199 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 19.1294 | µg/mL | Stressed |
| 33 | 1-Methylnaphthalene | | 1,002.4 | µg/mL | +/- | 5.8283 | µg/mL | Gravimetric |
| | **CAS #** 90-12-0 | (Lot 523400-9) | | | +/- | 11.9833 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0712 | µg/mL | Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene | | 1,007.2 | µg/mL | +/- | 5.8559 | µg/mL | Gravimetric |
| | **CAS #** 95-94-3 | (Lot MKBW7717V) | | | +/- | 12.0401 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1617 | µg/mL | Stressed |
| 35 | Hexachlorocyclopentadiene | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 77-47-4 | (Lot 0012015) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 36 | 2,4,6-Trichlorophenol | | 1,009.3 | µg/mL | +/- | 5.8682 | µg/mL | Gravimetric |
| | **CAS #** 88-06-2 | (Lot STBF3742V) | | | +/- | 12.0652 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2016 | µg/mL | Stressed |
| 37 | 2,4,5-Trichlorophenol | | 1,009.2 | µg/mL | +/- | 5.8676 | µg/mL | Gravimetric |
| | **CAS #** 95-95-4 | (Lot FHN01) | | | +/- | 12.0640 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1997 | µg/mL | Stressed |
| 38 | 2-Chloronaphthalene | | 1,006.8 | µg/mL | +/- | 5.8536 | µg/mL | Gravimetric |
| | **CAS #** 91-58-7 | (Lot AJ2UI) | | | +/- | 12.0353 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1541 | µg/mL | Stressed |
| 39 | Biphenyl | | 1,006.3 | µg/mL | +/- | 5.8507 | µg/mL | Gravimetric |
| | **CAS #** 92-52-4 | (Lot MKBV9808V) | | | +/- | 12.0294 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1446 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 56 | 4-Nitroaniline | | 1,007.5 | µg/mL | +/- | 5.8579 | µg/mL | Gravimetric |
| | **CAS #** 100-01-6 | (Lot BCBG4702V) | | | +/- | 12.0442 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1681 | µg/mL | Stressed |
| 57 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) | | 2,012.4 | µg/mL | +/- | 11.7003 | µg/mL | Gravimetric |
| | **CAS #** 534-52-1 | (Lot B180716L) | | | +/- | 24.0564 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.2853 | µg/mL | Stressed |
| 58 | Diphenylamine | | 856.1 | µg/mL | +/- | 4.9889 | µg/mL | Gravimetric |
| | **CAS #** 122-39-4 | (Lot MKBN8295V) | | | +/- | 10.2395 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 16.2906 | µg/mL | Stressed |
| 59 | Azobenzene | | 1,009.8 | µg/mL | +/- | 5.8709 | µg/mL | Gravimetric |
| | **CAS #** 103-33-3 | (Lot BCBS6535V) | | | +/- | 12.0709 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 19.2106 | µg/mL | Stressed |
| 60 | 4-Bromophenyl phenyl ether | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 101-55-3 | (Lot STBB9729V) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 61 | Hexachlorobenzene | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 118-74-1 | (Lot LRAB8468) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 62 | Pentachlorophenol | | 2,005.9 | µg/mL | +/- | 11.6625 | µg/mL | Gravimetric |
| | **CAS #** 87-86-5 | (Lot 170717KJA) | | | +/- | 23.9787 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.1617 | µg/mL | Stressed |
| 63 | n-Octadecane (C18) | | 1,004.8 | µg/mL | +/- | 5.8420 | µg/mL | Gravimetric |
| | **CAS #** 593-45-3 | (Lot T7N4E) | | | +/- | 12.0114 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1160 | µg/mL | Stressed |
| 64 | Phenanthrene | | 1,005.3 | µg/mL | +/- | 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 85-01-8 | (Lot MKCB1762V) | | | +/- | 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1255 | µg/mL | Stressed |
| 65 | Anthracene | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 120-12-7 | (Lot MKBR2268V) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 66 | Carbazole | | 1,002.7 | µg/mL | +/- | 5.8298 | µg/mL | Gravimetric |
| | **CAS #** 86-74-8 | (Lot 7528800) | | | +/- | 11.9863 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0761 | µg/mL | Stressed |
| 67 | Di-n-butylphthalate | | 1,005.6 | µg/mL | +/- | 5.8466 | µg/mL | Gravimetric |
| | **CAS #** 84-74-2 | (Lot MKBT0244V) | | | +/- | 12.0210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1312 | µg/mL | Stressed |
| 68 | Fluoranthene | | 1,002.6 | µg/mL | +/- | 5.8294 | µg/mL | Gravimetric |
| | **CAS #** 206-44-0 | (Lot MKBQ6360V) | | | +/- | 11.9856 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0749 | µg/mL | Stressed |
| 69 | Pyrene | | 1,009.3 | µg/mL | +/- | 5.8682 | µg/mL | Gravimetric |
| | **CAS #** 129-00-0 | (Lot BCBT5695) | | | +/- | 12.0652 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2016 | µg/mL | Stressed |
| 70 | Benzyl butyl phthalate | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 85-68-7 | (Lot MKCF0058) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 71 | Benz(a)anthracene | | 1,004.8 | µg/mL | +/- | 5.8422 | µg/mL | Gravimetric |
| | **CAS #** 56-55-3 | (Lot 0012018) | | | +/- | 12.0118 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 19.1166 | µg/mL | Stressed |

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

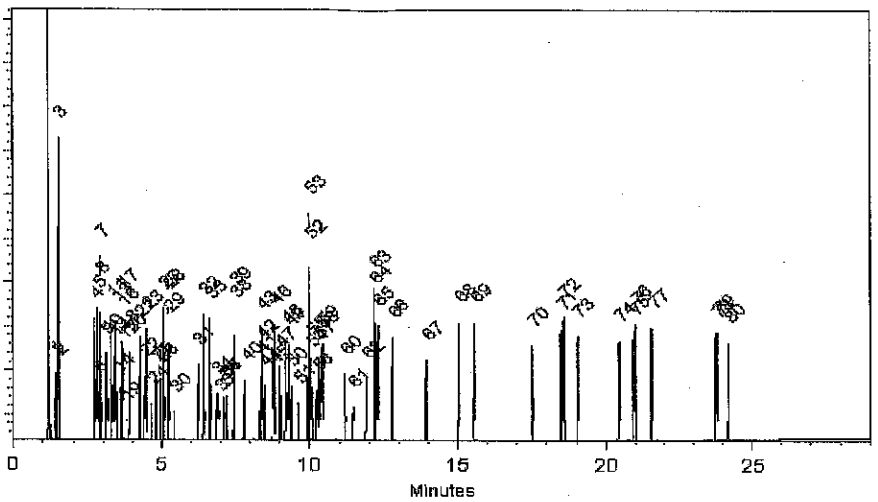
**Carrier Gas:**
hydrogen-constant flow 1.8 mL/min.

**Temp. Program:**
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
340°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

**Date Mixed:** 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 02-Aug-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 72 | Chrysene | | 1,009.4 | µg/mL | +/- | 5.8687 | µg/mL | Gravimetric |
| | **CAS #** 218-01-9 | (Lot 012015) | | | +/- | 12.0664 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2035 | µg/mL | Stressed |
| 73 | Bis(2-ethylhexyl)phthalate | | 1,007.3 | µg/mL | +/- | 5.8565 | µg/mL | Gravimetric |
| | **CAS #** 117-81-7 | (Lot MKBZ3868V) | | | +/- | 12.0413 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1636 | µg/mL | Stressed |
| 74 | Di-n-octyl phthalate | | 1,007.0 | µg/mL | +/- | 5.8548 | µg/mL | Gravimetric |
| | **CAS #** 117-84-0 | (Lot 7170200) | | | +/- | 12.0377 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1579 | µg/mL | Stressed |
| 75 | Benzo(b)fluoranthene | | 1,003.7 | µg/mL | +/- | 5.8356 | µg/mL | Gravimetric |
| | **CAS #** 205-99-2 | (Lot 012012B) | | | +/- | 11.9983 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0951 | µg/mL | Stressed |
| 76 | Benzo(k)fluoranthene | | 1,005.7 | µg/mL | +/- | 5.8472 | µg/mL | Gravimetric |
| | **CAS #** 207-08-9 | (Lot 012012K) | | | +/- | 12.0222 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1332 | µg/mL | Stressed |
| 77 | Benzo(a)pyrene | | 1,008.8 | µg/mL | +/- | 5.8653 | µg/mL | Gravimetric |
| | **CAS #** 50-32-8 | (Lot ER071309-02) | | | +/- | 12.0593 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1921 | µg/mL | Stressed |
| 78 | Indeno(1,2,3-cd)pyrene | | 1,006.9 | µg/mL | +/- | 5.8542 | µg/mL | Gravimetric |
| | **CAS #** 193-39-5 | (Lot ER082107-02) | | | +/- | 12.0365 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1560 | µg/mL | Stressed |
| 79 | Dibenz(a,h)anthracene | | 1,008.7 | µg/mL | +/- | 5.8647 | µg/mL | Gravimetric |
| | **CAS #** 53-70-3 | (Lot ER032211-01) | | | +/- | 12.0581 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1902 | µg/mL | Stressed |
| 80 | Benzo(g,h,i)perylene | | 1,000.2 | µg/mL | +/- | 5.8152 | µg/mL | Gravimetric |
| | **CAS #** 191-24-2 | (Lot ER05121401) | | | +/- | 11.9565 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0285 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Specific Reference Material Notes:**

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 40 | 2-Nitroaniline<br>**CAS #** 88-74-4<br>**Purity** 99% | (Lot MKBK7597V) | 1,007.5 | µg/mL | +/- 5.8577<br>+/- 12.0437<br>+/- 19.1674 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 41 | Acenaphthylene<br>**CAS #** 208-96-8<br>**Purity** 97% | (Lot O03R) | 1,007.2 | µg/mL | +/- 5.8557<br>+/- 12.0395<br>+/- 19.1608 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 42 | 1,3-Dinitrobenzene<br>**CAS #** 99-65-0<br>**Purity** 99% | (Lot BCBN4329V) | 1,008.9 | µg/mL | +/- 5.8658<br>+/- 12.0605<br>+/- 19.1940 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 43 | Dimethylphthalate<br>**CAS #** 131-11-3<br>**Purity** 99% | (Lot 10117699) | 1,009.2 | µg/mL | +/- 5.8676<br>+/- 12.0640<br>+/- 19.1997 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 44 | 2,6-Dinitrotoluene<br>**CAS #** 606-20-2<br>**Purity** 99% | (Lot 1437483V) | 1,009.1 | µg/mL | +/- 5.8670<br>+/- 12.0628<br>+/- 19.1978 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 45 | 3-Nitroaniline<br>**CAS #** 99-09-2<br>**Purity** 99% | (Lot MKBX1283V) | 1,009.8 | µg/mL | +/- 5.8711<br>+/- 12.0712<br>+/- 19.2112 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 46 | Acenaphthene<br>**CAS #** 83-32-9<br>**Purity** 99% | (Lot MKCC8329) | 1,008.1 | µg/mL | +/- 5.8612<br>+/- 12.0509<br>+/- 19.1788 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 47 | 2,4-Dinitrophenol<br>**CAS #** 51-28-5<br>**Purity** 99% | (Lot STBG3580V) | 2,013.2 | µg/mL | +/- 11.7049<br>+/- 24.0659<br>+/- 38.3005 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 48 | Dibenzofuran<br>**CAS #** 132-64-9<br>**Purity** 99% | (Lot MKCD9952) | 1,007.0 | µg/mL | +/- 5.8548<br>+/- 12.0377<br>+/- 19.1579 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 49 | 4-Nitrophenol<br>**CAS #** 100-02-7<br>**Purity** 99% | (Lot MKBK1842V) | 2,015.4 | µg/mL | +/- 11.7177<br>+/- 24.0922<br>+/- 38.3424 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 50 | 2,4-Dinitrotoluene<br>**CAS #** 121-14-2<br>**Purity** 99% | (Lot MKAA0690V) | 1,009.5 | µg/mL | +/- 5.8693<br>+/- 12.0676<br>+/- 19.2054 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol<br>**CAS #** 58-90-2<br>**Purity** 99% | (Lot PR-30126) | 1,005.3 | µg/mL | +/- 5.8449<br>+/- 12.0174<br>+/- 19.1255 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 52 | Fluorene<br>**CAS #** 86-73-7<br>**Purity** 98% | (Lot 10174662) | 1,007.7 | µg/mL | +/- 5.8591<br>+/- 12.0465<br>+/- 19.1718 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 53 | n-Hexadecane (C16)<br>**CAS #** 544-76-3<br>**Purity** 99% | (Lot SHBJ3997) | 1,009.8 | µg/mL | +/- 5.8711<br>+/- 12.0712<br>+/- 19.2112 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 54 | Diethylphthalate<br>**CAS #** 84-66-2<br>**Purity** 99% | (Lot MKCB0810V) | 1,007.4 | µg/mL | +/- 5.8571<br>+/- 12.0425<br>+/- 19.1655 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 55 | 4-Chlorophenyl phenyl ether<br>**CAS #** 7005-72-3<br>**Purity** 99% | (Lot MKBX5225V) | 1,006.7 | µg/mL | +/- 5.8530<br>+/- 12.0342<br>+/- 19.1522 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | 2-Chlorophenol | | 1,005.6 | µg/mL | +/- | 5.8466 | µg/mL | Gravimetric |
| | **CAS #** 95-57-8 | (Lot STBF2690V) | | | +/- | 12.0210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1312 | µg/mL | Stressed |
| 9 | 1,3-Dichlorobenzene | | 1,009.7 | µg/mL | +/- | 5.8705 | µg/mL | Gravimetric |
| | **CAS #** 541-73-1 | (Lot BCBQ7100V) | | | +/- | 12.0700 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2092 | µg/mL | Stressed |
| 10 | 1,4-Dichlorobenzene | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 106-46-7 | (Lot MKBS4401V) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 11 | Benzyl alcohol | | 1,009.6 | µg/mL | +/- | 5.8699 | µg/mL | Gravimetric |
| | **CAS #** 100-51-6 | (Lot SHBJ0534) | | | +/- | 12.0688 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2073 | µg/mL | Stressed |
| 12 | 1,2-Dichlorobenzene | | 1,007.7 | µg/mL | +/- | 5.8589 | µg/mL | Gravimetric |
| | **CAS #** 95-50-1 | (Lot SHBG3111V) | | | +/- | 12.0461 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1712 | µg/mL | Stressed |
| 13 | 2-Methylphenol (o-cresol) | | 1,008.4 | µg/mL | +/- | 5.8629 | µg/mL | Gravimetric |
| | **CAS #** 95-48-7 | (Lot SHBH6379) | | | +/- | 12.0545 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1845 | µg/mL | Stressed |
| 14 | 2,2'-oxybis(1-chloropropane) | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 108-60-1 | (Lot 7577400) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 15 | Acetophenone | | 1,009.4 | µg/mL | +/- | 5.8687 | µg/mL | Gravimetric |
| | **CAS #** 98-86-2 | (Lot STBG8586) | | | +/- | 12.0664 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2035 | µg/mL | Stressed |
| 16 | 3-Methylphenol (m-cresol) | | 504.9 | µg/mL | +/- | 2.9423 | µg/mL | Gravimetric |
| | **CAS #** 108-39-4 | (Lot SHBD0627V) | | | +/- | 6.0389 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.6077 | µg/mL | Stressed |
| 17 | 4-Methylphenol (p-cresol) | | 501.8 | µg/mL | +/- | 2.9242 | µg/mL | Gravimetric |
| | **CAS #** 106-44-5 | (Lot 49396APV) | | | +/- | 6.0018 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.5487 | µg/mL | Stressed |
| 18 | N-Nitroso-di-n-propylamine | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 621-64-7 | (Lot OPAGF) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 19 | Hexachloroethane | | 1,001.4 | µg/mL | +/- | 5.8222 | µg/mL | Gravimetric |
| | **CAS #** 67-72-1 | (Lot 4H3SF) | | | +/- | 11.9708 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0513 | µg/mL | Stressed |
| 20 | Nitrobenzene | | 1,005.9 | µg/mL | +/- | 5.8484 | µg/mL | Gravimetric |
| | **CAS #** 98-95-3 | (Lot SHBG5577V) | | | +/- | 12.0246 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1370 | µg/mL | Stressed |
| 21 | Isophorone | | 1,009.1 | µg/mL | +/- | 5.8670 | µg/mL | Gravimetric |
| | **CAS #** 78-59-1 | (Lot MKBG2442V) | | | +/- | 12.0629 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1979 | µg/mL | Stressed |
| 22 | 2-Nitrophenol | | 1,008.7 | µg/mL | +/- | 5.8647 | µg/mL | Gravimetric |
| | **CAS #** 88-75-5 | (Lot BCBH7602V) | | | +/- | 12.0581 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1902 | µg/mL | Stressed |
| 23 | 2,4-Dimethylphenol | | 1,008.6 | µg/mL | +/- | 5.8641 | µg/mL | Gravimetric |
| | **CAS #** 105-67-9 | (Lot 10165155) | | | +/- | 12.0569 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1883 | µg/mL | Stressed |

# Reagent

# 571995_00062

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 571995 **Lot No.:** A0140111

**Description :** 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** January 31, 2020 **Storage:** 0°C or colder

**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|---|
| 1 | 1,4-Dioxane | | 1,006.6 µg/mL | +/- 5.8525 µg/mL | Gravimetric |
| | **CAS #** 123-91-1 | (Lot SHBJ5124) | | +/- 12.0330 µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1503 µg/mL | Stressed |
| 2 | N-Nitrosodimethylamine | | 1,005.1 µg/mL | +/- 5.8437 µg/mL | Gravimetric |
| | **CAS #** 62-75-9 | (Lot 180322JLM) | | +/- 12.0150 µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1217 µg/mL | Stressed |
| 3 | Pyridine | | 2,012.7 µg/mL | +/- 11.7020 µg/mL | Gravimetric |
| | **CAS #** 110-86-1 | (Lot SHBC7174V) | | +/- 24.0599 µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 38.2910 µg/mL | Stressed |
| 4 | Phenol | | 1,008.6 µg/mL | +/- 5.8641 µg/mL | Gravimetric |
| | **CAS #** 108-95-2 | (Lot SHBF9719V) | | +/- 12.0569 µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1883 µg/mL | Stressed |
| 5 | Aniline | | 1,006.2 µg/mL | +/- 5.8501 µg/mL | Gravimetric |
| | **CAS #** 62-53-3 | (Lot K22Z462) | | +/- 12.0282 µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.1427 µg/mL | Stressed |
| 6 | Bis(2-chloroethyl)ether | | 1,009.5 µg/mL | +/- 5.8693 µg/mL | Gravimetric |
| | **CAS #** 111-44-4 | (Lot SHBD4430V) | | +/- 12.0676 µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.2054 µg/mL | Stressed |
| 7 | n-Decane (C10) | | 1,010.0 µg/mL | +/- 5.8722 µg/mL | Gravimetric |
| | **CAS #** 124-18-5 | (Lot SHBJ8526) | | +/- 12.0736 µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 19.2150 µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 24 | Bis(2-chloroethoxy)methane | | 1,009.6 | µg/mL | +/- | 5.8699 | µg/mL | Gravimetric |
| | **CAS #** 111-91-1 | (Lot 5670100) | | | +/- | 12.0688 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2073 | µg/mL | Stressed |
| 25 | 2,4-Dichlorophenol | | 1,009.0 | µg/mL | +/- | 5.8664 | µg/mL | Gravimetric |
| | **CAS #** 120-83-2 | (Lot BCBJ8113V) | | | +/- | 12.0616 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1959 | µg/mL | Stressed |
| 26 | 1,2,4-Trichlorobenzene | | 1,008.4 | µg/mL | +/- | 5.8629 | µg/mL | Gravimetric |
| | **CAS #** 120-82-1 | (Lot SHBJ0905) | | | +/- | 12.0545 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1845 | µg/mL | Stressed |
| 27 | Naphthalene | | 1,008.3 | µg/mL | +/- | 5.8623 | µg/mL | Gravimetric |
| | **CAS #** 91-20-3 | (Lot MKBW2603V) | | | +/- | 12.0533 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1826 | µg/mL | Stressed |
| 28 | 2,6-Dichlorophenol | | 1,006.8 | µg/mL | +/- | 5.8536 | µg/mL | Gravimetric |
| | **CAS #** 87-65-0 | (Lot MKBP8620V) | | | +/- | 12.0353 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1541 | µg/mL | Stressed |
| 29 | 4-Chloroaniline | | 1,005.3 | µg/mL | +/- | 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 106-47-8 | (Lot BCBJ1580V) | | | +/- | 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1255 | µg/mL | Stressed |
| 30 | Hexachlorobutadiene | | 1,008.6 | µg/mL | +/- | 5.8641 | µg/mL | Gravimetric |
| | **CAS #** 87-68-3 | (Lot J31X013) | | | +/- | 12.0569 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1883 | µg/mL | Stressed |
| 31 | 4-Chloro-3-methylphenol | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 59-50-7 | (Lot STBC7309V) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 32 | 2-Methylnaphthalene | | 1,005.5 | µg/mL | +/- | 5.8461 | µg/mL | Gravimetric |
| | **CAS #** 91-57-6 | (Lot STBF0201V) | | | +/- | 12.0199 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 19.1294 | µg/mL | Stressed |
| 33 | 1-Methylnaphthalene | | 1,002.4 | µg/mL | +/- | 5.8283 | µg/mL | Gravimetric |
| | **CAS #** 90-12-0 | (Lot 523400-9) | | | +/- | 11.9833 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0712 | µg/mL | Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene | | 1,007.2 | µg/mL | +/- | 5.8559 | µg/mL | Gravimetric |
| | **CAS #** 95-94-3 | (Lot MKBW7717V) | | | +/- | 12.0401 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1617 | µg/mL | Stressed |
| 35 | Hexachlorocyclopentadiene | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 77-47-4 | (Lot 0012015) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 36 | 2,4,6-Trichlorophenol | | 1,009.3 | µg/mL | +/- | 5.8682 | µg/mL | Gravimetric |
| | **CAS #** 88-06-2 | (Lot STBF3742V) | | | +/- | 12.0652 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2016 | µg/mL | Stressed |
| 37 | 2,4,5-Trichlorophenol | | 1,009.2 | µg/mL | +/- | 5.8676 | µg/mL | Gravimetric |
| | **CAS #** 95-95-4 | (Lot FHN01) | | | +/- | 12.0640 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1997 | µg/mL | Stressed |
| 38 | 2-Chloronaphthalene | | 1,006.8 | µg/mL | +/- | 5.8536 | µg/mL | Gravimetric |
| | **CAS #** 91-58-7 | (Lot AJ2UI) | | | +/- | 12.0353 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1541 | µg/mL | Stressed |
| 39 | Biphenyl | | 1,006.3 | µg/mL | +/- | 5.8507 | µg/mL | Gravimetric |
| | **CAS #** 92-52-4 | (Lot MKBV9808V) | | | +/- | 12.0294 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1446 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 56 | 4-Nitroaniline | | 1,007.5 | µg/mL | +/- | 5.8579 | µg/mL | Gravimetric |
| | **CAS #** 100-01-6 | (Lot BCBG4702V) | | | +/- | 12.0442 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1681 | µg/mL | Stressed |
| 57 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) | | 2,012.4 | µg/mL | +/- | 11.7003 | µg/mL | Gravimetric |
| | **CAS #** 534-52-1 | (Lot B180716L) | | | +/- | 24.0564 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.2853 | µg/mL | Stressed |
| 58 | Diphenylamine | | 856.1 | µg/mL | +/- | 4.9889 | µg/mL | Gravimetric |
| | **CAS #** 122-39-4 | (Lot MKBN8295V) | | | +/- | 10.2395 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 16.2906 | µg/mL | Stressed |
| 59 | Azobenzene | | 1,009.8 | µg/mL | +/- | 5.8709 | µg/mL | Gravimetric |
| | **CAS #** 103-33-3 | (Lot BCBS6535V) | | | +/- | 12.0709 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 19.2106 | µg/mL | Stressed |
| 60 | 4-Bromophenyl phenyl ether | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 101-55-3 | (Lot STBB9729V) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 61 | Hexachlorobenzene | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 118-74-1 | (Lot LRAB8468) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 62 | Pentachlorophenol | | 2,005.9 | µg/mL | +/- | 11.6625 | µg/mL | Gravimetric |
| | **CAS #** 87-86-5 | (Lot 170717KJA) | | | +/- | 23.9787 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.1617 | µg/mL | Stressed |
| 63 | n-Octadecane (C18) | | 1,004.8 | µg/mL | +/- | 5.8420 | µg/mL | Gravimetric |
| | **CAS #** 593-45-3 | (Lot T7N4E) | | | +/- | 12.0114 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1160 | µg/mL | Stressed |
| 64 | Phenanthrene | | 1,005.3 | µg/mL | +/- | 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 85-01-8 | (Lot MKCB1762V) | | | +/- | 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1255 | µg/mL | Stressed |
| 65 | Anthracene | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 120-12-7 | (Lot MKBR2268V) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 66 | Carbazole | | 1,002.7 | µg/mL | +/- | 5.8298 | µg/mL | Gravimetric |
| | **CAS #** 86-74-8 | (Lot 7528800) | | | +/- | 11.9863 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0761 | µg/mL | Stressed |
| 67 | Di-n-butylphthalate | | 1,005.6 | µg/mL | +/- | 5.8466 | µg/mL | Gravimetric |
| | **CAS #** 84-74-2 | (Lot MKBT0244V) | | | +/- | 12.0210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1312 | µg/mL | Stressed |
| 68 | Fluoranthene | | 1,002.6 | µg/mL | +/- | 5.8294 | µg/mL | Gravimetric |
| | **CAS #** 206-44-0 | (Lot MKBQ6360V) | | | +/- | 11.9856 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0749 | µg/mL | Stressed |
| 69 | Pyrene | | 1,009.3 | µg/mL | +/- | 5.8682 | µg/mL | Gravimetric |
| | **CAS #** 129-00-0 | (Lot BCBT5695) | | | +/- | 12.0652 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2016 | µg/mL | Stressed |
| 70 | Benzyl butyl phthalate | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 85-68-7 | (Lot MKCF0058) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 71 | Benz(a)anthracene | | 1,004.8 | µg/mL | +/- | 5.8422 | µg/mL | Gravimetric |
| | **CAS #** 56-55-3 | (Lot 0012018) | | | +/- | 12.0118 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 19.1166 | µg/mL | Stressed |

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

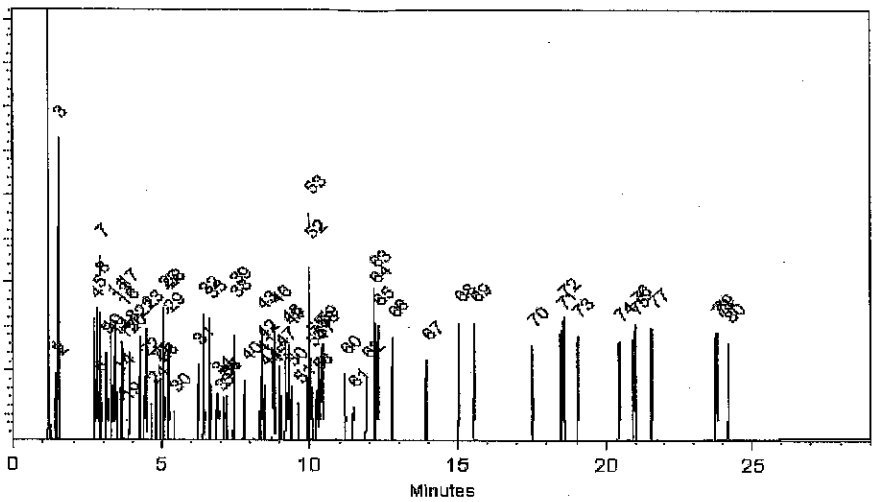
**Carrier Gas:**
hydrogen-constant flow 1.8 mL/min.

**Temp. Program:**
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
340°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

**Date Mixed:** 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 02-Aug-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 72 | Chrysene | | 1,009.4 | µg/mL | +/- | 5.8687 | µg/mL | Gravimetric |
| | **CAS #** 218-01-9 | (Lot 012015) | | | +/- | 12.0664 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2035 | µg/mL | Stressed |
| 73 | Bis(2-ethylhexyl)phthalate | | 1,007.3 | µg/mL | +/- | 5.8565 | µg/mL | Gravimetric |
| | **CAS #** 117-81-7 | (Lot MKBZ3868V) | | | +/- | 12.0413 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1636 | µg/mL | Stressed |
| 74 | Di-n-octyl phthalate | | 1,007.0 | µg/mL | +/- | 5.8548 | µg/mL | Gravimetric |
| | **CAS #** 117-84-0 | (Lot 7170200) | | | +/- | 12.0377 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1579 | µg/mL | Stressed |
| 75 | Benzo(b)fluoranthene | | 1,003.7 | µg/mL | +/- | 5.8356 | µg/mL | Gravimetric |
| | **CAS #** 205-99-2 | (Lot 012012B) | | | +/- | 11.9983 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0951 | µg/mL | Stressed |
| 76 | Benzo(k)fluoranthene | | 1,005.7 | µg/mL | +/- | 5.8472 | µg/mL | Gravimetric |
| | **CAS #** 207-08-9 | (Lot 012012K) | | | +/- | 12.0222 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1332 | µg/mL | Stressed |
| 77 | Benzo(a)pyrene | | 1,008.8 | µg/mL | +/- | 5.8653 | µg/mL | Gravimetric |
| | **CAS #** 50-32-8 | (Lot ER071309-02) | | | +/- | 12.0593 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1921 | µg/mL | Stressed |
| 78 | Indeno(1,2,3-cd)pyrene | | 1,006.9 | µg/mL | +/- | 5.8542 | µg/mL | Gravimetric |
| | **CAS #** 193-39-5 | (Lot ER082107-02) | | | +/- | 12.0365 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1560 | µg/mL | Stressed |
| 79 | Dibenz(a,h)anthracene | | 1,008.7 | µg/mL | +/- | 5.8647 | µg/mL | Gravimetric |
| | **CAS #** 53-70-3 | (Lot ER032211-01) | | | +/- | 12.0581 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1902 | µg/mL | Stressed |
| 80 | Benzo(g,h,i)perylene | | 1,000.2 | µg/mL | +/- | 5.8152 | µg/mL | Gravimetric |
| | **CAS #** 191-24-2 | (Lot ER05121401) | | | +/- | 11.9565 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0285 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Specific Reference Material Notes:**

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 40 | 2-Nitroaniline<br>**CAS #** 88-74-4<br>**Purity** 99% | (Lot MKBK7597V) | 1,007.5 | µg/mL | +/- 5.8577<br>+/- 12.0437<br>+/- 19.1674 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 41 | Acenaphthylene<br>**CAS #** 208-96-8<br>**Purity** 97% | (Lot O03R) | 1,007.2 | µg/mL | +/- 5.8557<br>+/- 12.0395<br>+/- 19.1608 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 42 | 1,3-Dinitrobenzene<br>**CAS #** 99-65-0<br>**Purity** 99% | (Lot BCBN4329V) | 1,008.9 | µg/mL | +/- 5.8658<br>+/- 12.0605<br>+/- 19.1940 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 43 | Dimethylphthalate<br>**CAS #** 131-11-3<br>**Purity** 99% | (Lot 10117699) | 1,009.2 | µg/mL | +/- 5.8676<br>+/- 12.0640<br>+/- 19.1997 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 44 | 2,6-Dinitrotoluene<br>**CAS #** 606-20-2<br>**Purity** 99% | (Lot 1437483V) | 1,009.1 | µg/mL | +/- 5.8670<br>+/- 12.0628<br>+/- 19.1978 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 45 | 3-Nitroaniline<br>**CAS #** 99-09-2<br>**Purity** 99% | (Lot MKBX1283V) | 1,009.8 | µg/mL | +/- 5.8711<br>+/- 12.0712<br>+/- 19.2112 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 46 | Acenaphthene<br>**CAS #** 83-32-9<br>**Purity** 99% | (Lot MKCC8329) | 1,008.1 | µg/mL | +/- 5.8612<br>+/- 12.0509<br>+/- 19.1788 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 47 | 2,4-Dinitrophenol<br>**CAS #** 51-28-5<br>**Purity** 99% | (Lot STBG3580V) | 2,013.2 | µg/mL | +/- 11.7049<br>+/- 24.0659<br>+/- 38.3005 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 48 | Dibenzofuran<br>**CAS #** 132-64-9<br>**Purity** 99% | (Lot MKCD9952) | 1,007.0 | µg/mL | +/- 5.8548<br>+/- 12.0377<br>+/- 19.1579 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 49 | 4-Nitrophenol<br>**CAS #** 100-02-7<br>**Purity** 99% | (Lot MKBK1842V) | 2,015.4 | µg/mL | +/- 11.7177<br>+/- 24.0922<br>+/- 38.3424 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 50 | 2,4-Dinitrotoluene<br>**CAS #** 121-14-2<br>**Purity** 99% | (Lot MKAA0690V) | 1,009.5 | µg/mL | +/- 5.8693<br>+/- 12.0676<br>+/- 19.2054 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol<br>**CAS #** 58-90-2<br>**Purity** 99% | (Lot PR-30126) | 1,005.3 | µg/mL | +/- 5.8449<br>+/- 12.0174<br>+/- 19.1255 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 52 | Fluorene<br>**CAS #** 86-73-7<br>**Purity** 98% | (Lot 10174662) | 1,007.7 | µg/mL | +/- 5.8591<br>+/- 12.0465<br>+/- 19.1718 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 53 | n-Hexadecane (C16)<br>**CAS #** 544-76-3<br>**Purity** 99% | (Lot SHBJ3997) | 1,009.8 | µg/mL | +/- 5.8711<br>+/- 12.0712<br>+/- 19.2112 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 54 | Diethylphthalate<br>**CAS #** 84-66-2<br>**Purity** 99% | (Lot MKCB0810V) | 1,007.4 | µg/mL | +/- 5.8571<br>+/- 12.0425<br>+/- 19.1655 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 55 | 4-Chlorophenyl phenyl ether<br>**CAS #** 7005-72-3<br>**Purity** 99% | (Lot MKBX5225V) | 1,006.7 | µg/mL | +/- 5.8530<br>+/- 12.0342<br>+/- 19.1522 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | 2-Chlorophenol | | 1,005.6 | µg/mL | +/- | 5.8466 | µg/mL | Gravimetric |
| | **CAS #** 95-57-8 | (Lot STBF2690V) | | | +/- | 12.0210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1312 | µg/mL | Stressed |
| 9 | 1,3-Dichlorobenzene | | 1,009.7 | µg/mL | +/- | 5.8705 | µg/mL | Gravimetric |
| | **CAS #** 541-73-1 | (Lot BCBQ7100V) | | | +/- | 12.0700 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2092 | µg/mL | Stressed |
| 10 | 1,4-Dichlorobenzene | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 106-46-7 | (Lot MKBS4401V) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 11 | Benzyl alcohol | | 1,009.6 | µg/mL | +/- | 5.8699 | µg/mL | Gravimetric |
| | **CAS #** 100-51-6 | (Lot SHBJ0534) | | | +/- | 12.0688 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2073 | µg/mL | Stressed |
| 12 | 1,2-Dichlorobenzene | | 1,007.7 | µg/mL | +/- | 5.8589 | µg/mL | Gravimetric |
| | **CAS #** 95-50-1 | (Lot SHBG3111V) | | | +/- | 12.0461 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1712 | µg/mL | Stressed |
| 13 | 2-Methylphenol (o-cresol) | | 1,008.4 | µg/mL | +/- | 5.8629 | µg/mL | Gravimetric |
| | **CAS #** 95-48-7 | (Lot SHBH6379) | | | +/- | 12.0545 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1845 | µg/mL | Stressed |
| 14 | 2,2'-oxybis(1-chloropropane) | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 108-60-1 | (Lot 7577400) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 15 | Acetophenone | | 1,009.4 | µg/mL | +/- | 5.8687 | µg/mL | Gravimetric |
| | **CAS #** 98-86-2 | (Lot STBG8586) | | | +/- | 12.0664 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2035 | µg/mL | Stressed |
| 16 | 3-Methylphenol (m-cresol) | | 504.9 | µg/mL | +/- | 2.9423 | µg/mL | Gravimetric |
| | **CAS #** 108-39-4 | (Lot SHBD0627V) | | | +/- | 6.0389 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.6077 | µg/mL | Stressed |
| 17 | 4-Methylphenol (p-cresol) | | 501.8 | µg/mL | +/- | 2.9242 | µg/mL | Gravimetric |
| | **CAS #** 106-44-5 | (Lot 49396APV) | | | +/- | 6.0018 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.5487 | µg/mL | Stressed |
| 18 | N-Nitroso-di-n-propylamine | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 621-64-7 | (Lot OPAGF) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 19 | Hexachloroethane | | 1,001.4 | µg/mL | +/- | 5.8222 | µg/mL | Gravimetric |
| | **CAS #** 67-72-1 | (Lot 4H3SF) | | | +/- | 11.9708 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0513 | µg/mL | Stressed |
| 20 | Nitrobenzene | | 1,005.9 | µg/mL | +/- | 5.8484 | µg/mL | Gravimetric |
| | **CAS #** 98-95-3 | (Lot SHBG5577V) | | | +/- | 12.0246 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1370 | µg/mL | Stressed |
| 21 | Isophorone | | 1,009.1 | µg/mL | +/- | 5.8670 | µg/mL | Gravimetric |
| | **CAS #** 78-59-1 | (Lot MKBG2442V) | | | +/- | 12.0629 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1979 | µg/mL | Stressed |
| 22 | 2-Nitrophenol | | 1,008.7 | µg/mL | +/- | 5.8647 | µg/mL | Gravimetric |
| | **CAS #** 88-75-5 | (Lot BCBH7602V) | | | +/- | 12.0581 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1902 | µg/mL | Stressed |
| 23 | 2,4-Dimethylphenol | | 1,008.6 | µg/mL | +/- | 5.8641 | µg/mL | Gravimetric |
| | **CAS #** 105-67-9 | (Lot 10165155) | | | +/- | 12.0569 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1883 | µg/mL | Stressed |

# Reagent

# 571995_00063

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 571995 **Lot No.:** A0140111

**Description :** 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** January 31, 2020 **Storage:** 0°C or colder

**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | 1,4-Dioxane<br>**CAS #** 123-91-1 (Lot SHBJ5124)<br>**Purity** 99% | 1,006.6 µg/mL | +/- 5.8525 µg/mL<br>+/- 12.0330 µg/mL<br>+/- 19.1503 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | N-Nitrosodimethylamine<br>**CAS #** 62-75-9 (Lot 180322JLM)<br>**Purity** 99% | 1,005.1 µg/mL | +/- 5.8437 µg/mL<br>+/- 12.0150 µg/mL<br>+/- 19.1217 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Pyridine<br>**CAS #** 110-86-1 (Lot SHBC7174V)<br>**Purity** 99% | 2,012.7 µg/mL | +/- 11.7020 µg/mL<br>+/- 24.0599 µg/mL<br>+/- 38.2910 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Phenol<br>**CAS #** 108-95-2 (Lot SHBF9719V)<br>**Purity** 99% | 1,008.6 µg/mL | +/- 5.8641 µg/mL<br>+/- 12.0569 µg/mL<br>+/- 19.1883 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Aniline<br>**CAS #** 62-53-3 (Lot K22Z462)<br>**Purity** 99% | 1,006.2 µg/mL | +/- 5.8501 µg/mL<br>+/- 12.0282 µg/mL<br>+/- 19.1427 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Bis(2-chloroethyl)ether<br>**CAS #** 111-44-4 (Lot SHBD4430V)<br>**Purity** 99% | 1,009.5 µg/mL | +/- 5.8693 µg/mL<br>+/- 12.0676 µg/mL<br>+/- 19.2054 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 7 | n-Decane (C10)<br>**CAS #** 124-18-5 (Lot SHBJ8526)<br>**Purity** 99% | 1,010.0 µg/mL | +/- 5.8722 µg/mL<br>+/- 12.0736 µg/mL<br>+/- 19.2150 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 24 | Bis(2-chloroethoxy)methane | | 1,009.6 | µg/mL | +/- | 5.8699 | µg/mL | Gravimetric |
| | **CAS #** 111-91-1 | (Lot 5670100) | | | +/- | 12.0688 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2073 | µg/mL | Stressed |
| 25 | 2,4-Dichlorophenol | | 1,009.0 | µg/mL | +/- | 5.8664 | µg/mL | Gravimetric |
| | **CAS #** 120-83-2 | (Lot BCBJ8113V) | | | +/- | 12.0616 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1959 | µg/mL | Stressed |
| 26 | 1,2,4-Trichlorobenzene | | 1,008.4 | µg/mL | +/- | 5.8629 | µg/mL | Gravimetric |
| | **CAS #** 120-82-1 | (Lot SHBJ0905) | | | +/- | 12.0545 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1845 | µg/mL | Stressed |
| 27 | Naphthalene | | 1,008.3 | µg/mL | +/- | 5.8623 | µg/mL | Gravimetric |
| | **CAS #** 91-20-3 | (Lot MKBW2603V) | | | +/- | 12.0533 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1826 | µg/mL | Stressed |
| 28 | 2,6-Dichlorophenol | | 1,006.8 | µg/mL | +/- | 5.8536 | µg/mL | Gravimetric |
| | **CAS #** 87-65-0 | (Lot MKBP8620V) | | | +/- | 12.0353 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1541 | µg/mL | Stressed |
| 29 | 4-Chloroaniline | | 1,005.3 | µg/mL | +/- | 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 106-47-8 | (Lot BCBJ1580V) | | | +/- | 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1255 | µg/mL | Stressed |
| 30 | Hexachlorobutadiene | | 1,008.6 | µg/mL | +/- | 5.8641 | µg/mL | Gravimetric |
| | **CAS #** 87-68-3 | (Lot J31X013) | | | +/- | 12.0569 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1883 | µg/mL | Stressed |
| 31 | 4-Chloro-3-methylphenol | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 59-50-7 | (Lot STBC7309V) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 32 | 2-Methylnaphthalene | | 1,005.5 | µg/mL | +/- | 5.8461 | µg/mL | Gravimetric |
| | **CAS #** 91-57-6 | (Lot STBF0201V) | | | +/- | 12.0199 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 19.1294 | µg/mL | Stressed |
| 33 | 1-Methylnaphthalene | | 1,002.4 | µg/mL | +/- | 5.8283 | µg/mL | Gravimetric |
| | **CAS #** 90-12-0 | (Lot 523400-9) | | | +/- | 11.9833 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0712 | µg/mL | Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene | | 1,007.2 | µg/mL | +/- | 5.8559 | µg/mL | Gravimetric |
| | **CAS #** 95-94-3 | (Lot MKBW7717V) | | | +/- | 12.0401 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1617 | µg/mL | Stressed |
| 35 | Hexachlorocyclopentadiene | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 77-47-4 | (Lot 0012015) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 36 | 2,4,6-Trichlorophenol | | 1,009.3 | µg/mL | +/- | 5.8682 | µg/mL | Gravimetric |
| | **CAS #** 88-06-2 | (Lot STBF3742V) | | | +/- | 12.0652 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2016 | µg/mL | Stressed |
| 37 | 2,4,5-Trichlorophenol | | 1,009.2 | µg/mL | +/- | 5.8676 | µg/mL | Gravimetric |
| | **CAS #** 95-95-4 | (Lot FHN01) | | | +/- | 12.0640 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1997 | µg/mL | Stressed |
| 38 | 2-Chloronaphthalene | | 1,006.8 | µg/mL | +/- | 5.8536 | µg/mL | Gravimetric |
| | **CAS #** 91-58-7 | (Lot AJ2UI) | | | +/- | 12.0353 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1541 | µg/mL | Stressed |
| 39 | Biphenyl | | 1,006.3 | µg/mL | +/- | 5.8507 | µg/mL | Gravimetric |
| | **CAS #** 92-52-4 | (Lot MKBV9808V) | | | +/- | 12.0294 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1446 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 56 | 4-Nitroaniline | | 1,007.5 | µg/mL | +/- | 5.8579 | µg/mL | Gravimetric |
| | **CAS #** 100-01-6 | (Lot BCBG4702V) | | | +/- | 12.0442 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1681 | µg/mL | Stressed |
| 57 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) | | 2,012.4 | µg/mL | +/- | 11.7003 | µg/mL | Gravimetric |
| | **CAS #** 534-52-1 | (Lot B180716L) | | | +/- | 24.0564 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.2853 | µg/mL | Stressed |
| 58 | Diphenylamine | | 856.1 | µg/mL | +/- | 4.9889 | µg/mL | Gravimetric |
| | **CAS #** 122-39-4 | (Lot MKBN8295V) | | | +/- | 10.2395 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 16.2906 | µg/mL | Stressed |
| 59 | Azobenzene | | 1,009.8 | µg/mL | +/- | 5.8709 | µg/mL | Gravimetric |
| | **CAS #** 103-33-3 | (Lot BCBS6535V) | | | +/- | 12.0709 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 19.2106 | µg/mL | Stressed |
| 60 | 4-Bromophenyl phenyl ether | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 101-55-3 | (Lot STBB9729V) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 61 | Hexachlorobenzene | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 118-74-1 | (Lot LRAB8468) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 62 | Pentachlorophenol | | 2,005.9 | µg/mL | +/- | 11.6625 | µg/mL | Gravimetric |
| | **CAS #** 87-86-5 | (Lot 170717KJA) | | | +/- | 23.9787 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.1617 | µg/mL | Stressed |
| 63 | n-Octadecane (C18) | | 1,004.8 | µg/mL | +/- | 5.8420 | µg/mL | Gravimetric |
| | **CAS #** 593-45-3 | (Lot T7N4E) | | | +/- | 12.0114 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1160 | µg/mL | Stressed |
| 64 | Phenanthrene | | 1,005.3 | µg/mL | +/- | 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 85-01-8 | (Lot MKCB1762V) | | | +/- | 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1255 | µg/mL | Stressed |
| 65 | Anthracene | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 120-12-7 | (Lot MKBR2268V) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 66 | Carbazole | | 1,002.7 | µg/mL | +/- | 5.8298 | µg/mL | Gravimetric |
| | **CAS #** 86-74-8 | (Lot 7528800) | | | +/- | 11.9863 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0761 | µg/mL | Stressed |
| 67 | Di-n-butylphthalate | | 1,005.6 | µg/mL | +/- | 5.8466 | µg/mL | Gravimetric |
| | **CAS #** 84-74-2 | (Lot MKBT0244V) | | | +/- | 12.0210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1312 | µg/mL | Stressed |
| 68 | Fluoranthene | | 1,002.6 | µg/mL | +/- | 5.8294 | µg/mL | Gravimetric |
| | **CAS #** 206-44-0 | (Lot MKBQ6360V) | | | +/- | 11.9856 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0749 | µg/mL | Stressed |
| 69 | Pyrene | | 1,009.3 | µg/mL | +/- | 5.8682 | µg/mL | Gravimetric |
| | **CAS #** 129-00-0 | (Lot BCBT5695) | | | +/- | 12.0652 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2016 | µg/mL | Stressed |
| 70 | Benzyl butyl phthalate | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 85-68-7 | (Lot MKCF0058) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 71 | Benz(a)anthracene | | 1,004.8 | µg/mL | +/- | 5.8422 | µg/mL | Gravimetric |
| | **CAS #** 56-55-3 | (Lot 0012018) | | | +/- | 12.0118 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 19.1166 | µg/mL | Stressed |

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

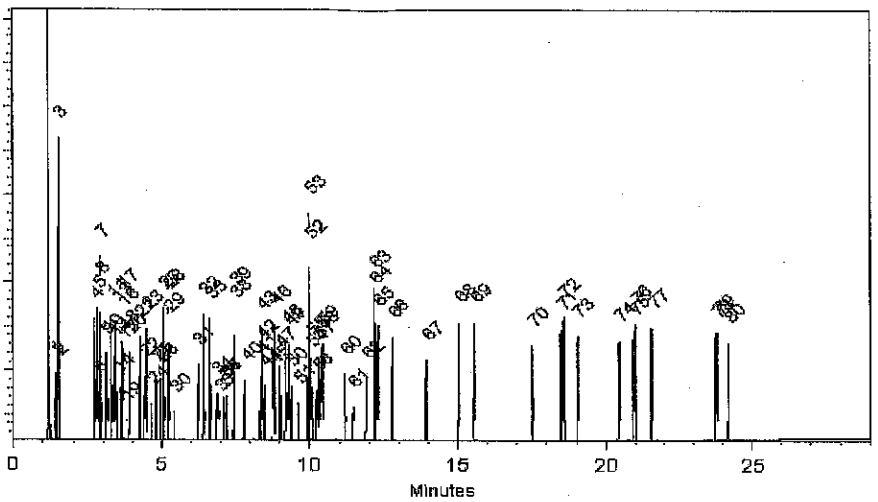
**Carrier Gas:**
hydrogen-constant flow 1.8 mL/min.

**Temp. Program:**
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
340°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

**Date Mixed:** 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 02-Aug-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 72 | Chrysene | | 1,009.4 | µg/mL | +/- | 5.8687 | µg/mL | Gravimetric |
| | **CAS #** 218-01-9 | (Lot 012015) | | | +/- | 12.0664 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2035 | µg/mL | Stressed |
| 73 | Bis(2-ethylhexyl)phthalate | | 1,007.3 | µg/mL | +/- | 5.8565 | µg/mL | Gravimetric |
| | **CAS #** 117-81-7 | (Lot MKBZ3868V) | | | +/- | 12.0413 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1636 | µg/mL | Stressed |
| 74 | Di-n-octyl phthalate | | 1,007.0 | µg/mL | +/- | 5.8548 | µg/mL | Gravimetric |
| | **CAS #** 117-84-0 | (Lot 7170200) | | | +/- | 12.0377 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1579 | µg/mL | Stressed |
| 75 | Benzo(b)fluoranthene | | 1,003.7 | µg/mL | +/- | 5.8356 | µg/mL | Gravimetric |
| | **CAS #** 205-99-2 | (Lot 012012B) | | | +/- | 11.9983 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0951 | µg/mL | Stressed |
| 76 | Benzo(k)fluoranthene | | 1,005.7 | µg/mL | +/- | 5.8472 | µg/mL | Gravimetric |
| | **CAS #** 207-08-9 | (Lot 012012K) | | | +/- | 12.0222 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1332 | µg/mL | Stressed |
| 77 | Benzo(a)pyrene | | 1,008.8 | µg/mL | +/- | 5.8653 | µg/mL | Gravimetric |
| | **CAS #** 50-32-8 | (Lot ER071309-02) | | | +/- | 12.0593 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1921 | µg/mL | Stressed |
| 78 | Indeno(1,2,3-cd)pyrene | | 1,006.9 | µg/mL | +/- | 5.8542 | µg/mL | Gravimetric |
| | **CAS #** 193-39-5 | (Lot ER082107-02) | | | +/- | 12.0365 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1560 | µg/mL | Stressed |
| 79 | Dibenz(a,h)anthracene | | 1,008.7 | µg/mL | +/- | 5.8647 | µg/mL | Gravimetric |
| | **CAS #** 53-70-3 | (Lot ER032211-01) | | | +/- | 12.0581 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1902 | µg/mL | Stressed |
| 80 | Benzo(g,h,i)perylene | | 1,000.2 | µg/mL | +/- | 5.8152 | µg/mL | Gravimetric |
| | **CAS #** 191-24-2 | (Lot ER05121401) | | | +/- | 11.9565 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0285 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Specific Reference Material Notes:**

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 40 | 2-Nitroaniline<br>**CAS #** 88-74-4<br>**Purity** 99% | (Lot MKBK7597V) | 1,007.5 | µg/mL | +/- 5.8577<br>+/- 12.0437<br>+/- 19.1674 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 41 | Acenaphthylene<br>**CAS #** 208-96-8<br>**Purity** 97% | (Lot O03R) | 1,007.2 | µg/mL | +/- 5.8557<br>+/- 12.0395<br>+/- 19.1608 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 42 | 1,3-Dinitrobenzene<br>**CAS #** 99-65-0<br>**Purity** 99% | (Lot BCBN4329V) | 1,008.9 | µg/mL | +/- 5.8658<br>+/- 12.0605<br>+/- 19.1940 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 43 | Dimethylphthalate<br>**CAS #** 131-11-3<br>**Purity** 99% | (Lot 10117699) | 1,009.2 | µg/mL | +/- 5.8676<br>+/- 12.0640<br>+/- 19.1997 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 44 | 2,6-Dinitrotoluene<br>**CAS #** 606-20-2<br>**Purity** 99% | (Lot 1437483V) | 1,009.1 | µg/mL | +/- 5.8670<br>+/- 12.0628<br>+/- 19.1978 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 45 | 3-Nitroaniline<br>**CAS #** 99-09-2<br>**Purity** 99% | (Lot MKBX1283V) | 1,009.8 | µg/mL | +/- 5.8711<br>+/- 12.0712<br>+/- 19.2112 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 46 | Acenaphthene<br>**CAS #** 83-32-9<br>**Purity** 99% | (Lot MKCC8329) | 1,008.1 | µg/mL | +/- 5.8612<br>+/- 12.0509<br>+/- 19.1788 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 47 | 2,4-Dinitrophenol<br>**CAS #** 51-28-5<br>**Purity** 99% | (Lot STBG3580V) | 2,013.2 | µg/mL | +/- 11.7049<br>+/- 24.0659<br>+/- 38.3005 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 48 | Dibenzofuran<br>**CAS #** 132-64-9<br>**Purity** 99% | (Lot MKCD9952) | 1,007.0 | µg/mL | +/- 5.8548<br>+/- 12.0377<br>+/- 19.1579 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 49 | 4-Nitrophenol<br>**CAS #** 100-02-7<br>**Purity** 99% | (Lot MKBK1842V) | 2,015.4 | µg/mL | +/- 11.7177<br>+/- 24.0922<br>+/- 38.3424 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 50 | 2,4-Dinitrotoluene<br>**CAS #** 121-14-2<br>**Purity** 99% | (Lot MKAA0690V) | 1,009.5 | µg/mL | +/- 5.8693<br>+/- 12.0676<br>+/- 19.2054 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol<br>**CAS #** 58-90-2<br>**Purity** 99% | (Lot PR-30126) | 1,005.3 | µg/mL | +/- 5.8449<br>+/- 12.0174<br>+/- 19.1255 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 52 | Fluorene<br>**CAS #** 86-73-7<br>**Purity** 98% | (Lot 10174662) | 1,007.7 | µg/mL | +/- 5.8591<br>+/- 12.0465<br>+/- 19.1718 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 53 | n-Hexadecane (C16)<br>**CAS #** 544-76-3<br>**Purity** 99% | (Lot SHBJ3997) | 1,009.8 | µg/mL | +/- 5.8711<br>+/- 12.0712<br>+/- 19.2112 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 54 | Diethylphthalate<br>**CAS #** 84-66-2<br>**Purity** 99% | (Lot MKCB0810V) | 1,007.4 | µg/mL | +/- 5.8571<br>+/- 12.0425<br>+/- 19.1655 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 55 | 4-Chlorophenyl phenyl ether<br>**CAS #** 7005-72-3<br>**Purity** 99% | (Lot MKBX5225V) | 1,006.7 | µg/mL | +/- 5.8530<br>+/- 12.0342<br>+/- 19.1522 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | 2-Chlorophenol | | 1,005.6 | µg/mL | +/- | 5.8466 | µg/mL | Gravimetric |
| | **CAS #** 95-57-8 | (Lot STBF2690V) | | | +/- | 12.0210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1312 | µg/mL | Stressed |
| 9 | 1,3-Dichlorobenzene | | 1,009.7 | µg/mL | +/- | 5.8705 | µg/mL | Gravimetric |
| | **CAS #** 541-73-1 | (Lot BCBQ7100V) | | | +/- | 12.0700 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2092 | µg/mL | Stressed |
| 10 | 1,4-Dichlorobenzene | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 106-46-7 | (Lot MKBS4401V) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 11 | Benzyl alcohol | | 1,009.6 | µg/mL | +/- | 5.8699 | µg/mL | Gravimetric |
| | **CAS #** 100-51-6 | (Lot SHBJ0534) | | | +/- | 12.0688 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2073 | µg/mL | Stressed |
| 12 | 1,2-Dichlorobenzene | | 1,007.7 | µg/mL | +/- | 5.8589 | µg/mL | Gravimetric |
| | **CAS #** 95-50-1 | (Lot SHBG3111V) | | | +/- | 12.0461 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1712 | µg/mL | Stressed |
| 13 | 2-Methylphenol (o-cresol) | | 1,008.4 | µg/mL | +/- | 5.8629 | µg/mL | Gravimetric |
| | **CAS #** 95-48-7 | (Lot SHBH6379) | | | +/- | 12.0545 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1845 | µg/mL | Stressed |
| 14 | 2,2'-oxybis(1-chloropropane) | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 108-60-1 | (Lot 7577400) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 15 | Acetophenone | | 1,009.4 | µg/mL | +/- | 5.8687 | µg/mL | Gravimetric |
| | **CAS #** 98-86-2 | (Lot STBG8586) | | | +/- | 12.0664 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2035 | µg/mL | Stressed |
| 16 | 3-Methylphenol (m-cresol) | | 504.9 | µg/mL | +/- | 2.9423 | µg/mL | Gravimetric |
| | **CAS #** 108-39-4 | (Lot SHBD0627V) | | | +/- | 6.0389 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.6077 | µg/mL | Stressed |
| 17 | 4-Methylphenol (p-cresol) | | 501.8 | µg/mL | +/- | 2.9242 | µg/mL | Gravimetric |
| | **CAS #** 106-44-5 | (Lot 49396APV) | | | +/- | 6.0018 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.5487 | µg/mL | Stressed |
| 18 | N-Nitroso-di-n-propylamine | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 621-64-7 | (Lot OPAGF) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 19 | Hexachloroethane | | 1,001.4 | µg/mL | +/- | 5.8222 | µg/mL | Gravimetric |
| | **CAS #** 67-72-1 | (Lot 4H3SF) | | | +/- | 11.9708 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0513 | µg/mL | Stressed |
| 20 | Nitrobenzene | | 1,005.9 | µg/mL | +/- | 5.8484 | µg/mL | Gravimetric |
| | **CAS #** 98-95-3 | (Lot SHBG5577V) | | | +/- | 12.0246 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1370 | µg/mL | Stressed |
| 21 | Isophorone | | 1,009.1 | µg/mL | +/- | 5.8670 | µg/mL | Gravimetric |
| | **CAS #** 78-59-1 | (Lot MKBG2442V) | | | +/- | 12.0629 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1979 | µg/mL | Stressed |
| 22 | 2-Nitrophenol | | 1,008.7 | µg/mL | +/- | 5.8647 | µg/mL | Gravimetric |
| | **CAS #** 88-75-5 | (Lot BCBH7602V) | | | +/- | 12.0581 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1902 | µg/mL | Stressed |
| 23 | 2,4-Dimethylphenol | | 1,008.6 | µg/mL | +/- | 5.8641 | µg/mL | Gravimetric |
| | **CAS #** 105-67-9 | (Lot 10165155) | | | +/- | 12.0569 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1883 | µg/mL | Stressed |

# Reagent

# 571995_00064

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 571995 **Lot No.:** A0140111

**Description :** 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** January 31, 2020 **Storage:** 0°C or colder

**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | 1,4-Dioxane<br>**CAS #** 123-91-1 (Lot SHBJ5124)<br>**Purity** 99% | 1,006.6 µg/mL | +/- 5.8525 µg/mL<br>+/- 12.0330 µg/mL<br>+/- 19.1503 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | N-Nitrosodimethylamine<br>**CAS #** 62-75-9 (Lot 180322JLM)<br>**Purity** 99% | 1,005.1 µg/mL | +/- 5.8437 µg/mL<br>+/- 12.0150 µg/mL<br>+/- 19.1217 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Pyridine<br>**CAS #** 110-86-1 (Lot SHBC7174V)<br>**Purity** 99% | 2,012.7 µg/mL | +/- 11.7020 µg/mL<br>+/- 24.0599 µg/mL<br>+/- 38.2910 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Phenol<br>**CAS #** 108-95-2 (Lot SHBF9719V)<br>**Purity** 99% | 1,008.6 µg/mL | +/- 5.8641 µg/mL<br>+/- 12.0569 µg/mL<br>+/- 19.1883 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Aniline<br>**CAS #** 62-53-3 (Lot K22Z462)<br>**Purity** 99% | 1,006.2 µg/mL | +/- 5.8501 µg/mL<br>+/- 12.0282 µg/mL<br>+/- 19.1427 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Bis(2-chloroethyl)ether<br>**CAS #** 111-44-4 (Lot SHBD4430V)<br>**Purity** 99% | 1,009.5 µg/mL | +/- 5.8693 µg/mL<br>+/- 12.0676 µg/mL<br>+/- 19.2054 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 7 | n-Decane (C10)<br>**CAS #** 124-18-5 (Lot SHBJ8526)<br>**Purity** 99% | 1,010.0 µg/mL | +/- 5.8722 µg/mL<br>+/- 12.0736 µg/mL<br>+/- 19.2150 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 24 | Bis(2-chloroethoxy)methane | | 1,009.6 | µg/mL | +/- | 5.8699 | µg/mL | Gravimetric |
| | **CAS #** 111-91-1 | (Lot 5670100) | | | +/- | 12.0688 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2073 | µg/mL | Stressed |
| 25 | 2,4-Dichlorophenol | | 1,009.0 | µg/mL | +/- | 5.8664 | µg/mL | Gravimetric |
| | **CAS #** 120-83-2 | (Lot BCBJ8113V) | | | +/- | 12.0616 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1959 | µg/mL | Stressed |
| 26 | 1,2,4-Trichlorobenzene | | 1,008.4 | µg/mL | +/- | 5.8629 | µg/mL | Gravimetric |
| | **CAS #** 120-82-1 | (Lot SHBJ0905) | | | +/- | 12.0545 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1845 | µg/mL | Stressed |
| 27 | Naphthalene | | 1,008.3 | µg/mL | +/- | 5.8623 | µg/mL | Gravimetric |
| | **CAS #** 91-20-3 | (Lot MKBW2603V) | | | +/- | 12.0533 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1826 | µg/mL | Stressed |
| 28 | 2,6-Dichlorophenol | | 1,006.8 | µg/mL | +/- | 5.8536 | µg/mL | Gravimetric |
| | **CAS #** 87-65-0 | (Lot MKBP8620V) | | | +/- | 12.0353 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1541 | µg/mL | Stressed |
| 29 | 4-Chloroaniline | | 1,005.3 | µg/mL | +/- | 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 106-47-8 | (Lot BCBJ1580V) | | | +/- | 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1255 | µg/mL | Stressed |
| 30 | Hexachlorobutadiene | | 1,008.6 | µg/mL | +/- | 5.8641 | µg/mL | Gravimetric |
| | **CAS #** 87-68-3 | (Lot J31X013) | | | +/- | 12.0569 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1883 | µg/mL | Stressed |
| 31 | 4-Chloro-3-methylphenol | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 59-50-7 | (Lot STBC7309V) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 32 | 2-Methylnaphthalene | | 1,005.5 | µg/mL | +/- | 5.8461 | µg/mL | Gravimetric |
| | **CAS #** 91-57-6 | (Lot STBF0201V) | | | +/- | 12.0199 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 19.1294 | µg/mL | Stressed |
| 33 | 1-Methylnaphthalene | | 1,002.4 | µg/mL | +/- | 5.8283 | µg/mL | Gravimetric |
| | **CAS #** 90-12-0 | (Lot 523400-9) | | | +/- | 11.9833 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0712 | µg/mL | Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene | | 1,007.2 | µg/mL | +/- | 5.8559 | µg/mL | Gravimetric |
| | **CAS #** 95-94-3 | (Lot MKBW7717V) | | | +/- | 12.0401 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1617 | µg/mL | Stressed |
| 35 | Hexachlorocyclopentadiene | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 77-47-4 | (Lot 0012015) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 36 | 2,4,6-Trichlorophenol | | 1,009.3 | µg/mL | +/- | 5.8682 | µg/mL | Gravimetric |
| | **CAS #** 88-06-2 | (Lot STBF3742V) | | | +/- | 12.0652 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2016 | µg/mL | Stressed |
| 37 | 2,4,5-Trichlorophenol | | 1,009.2 | µg/mL | +/- | 5.8676 | µg/mL | Gravimetric |
| | **CAS #** 95-95-4 | (Lot FHN01) | | | +/- | 12.0640 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1997 | µg/mL | Stressed |
| 38 | 2-Chloronaphthalene | | 1,006.8 | µg/mL | +/- | 5.8536 | µg/mL | Gravimetric |
| | **CAS #** 91-58-7 | (Lot AJ2UI) | | | +/- | 12.0353 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1541 | µg/mL | Stressed |
| 39 | Biphenyl | | 1,006.3 | µg/mL | +/- | 5.8507 | µg/mL | Gravimetric |
| | **CAS #** 92-52-4 | (Lot MKBV9808V) | | | +/- | 12.0294 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1446 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 56 | 4-Nitroaniline | | 1,007.5 | µg/mL | +/- | 5.8579 | µg/mL | Gravimetric |
| | **CAS #** 100-01-6 | (Lot BCBG4702V) | | | +/- | 12.0442 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1681 | µg/mL | Stressed |
| 57 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) | | 2,012.4 | µg/mL | +/- | 11.7003 | µg/mL | Gravimetric |
| | **CAS #** 534-52-1 | (Lot B180716L) | | | +/- | 24.0564 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.2853 | µg/mL | Stressed |
| 58 | Diphenylamine | | 856.1 | µg/mL | +/- | 4.9889 | µg/mL | Gravimetric |
| | **CAS #** 122-39-4 | (Lot MKBN8295V) | | | +/- | 10.2395 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 16.2906 | µg/mL | Stressed |
| 59 | Azobenzene | | 1,009.8 | µg/mL | +/- | 5.8709 | µg/mL | Gravimetric |
| | **CAS #** 103-33-3 | (Lot BCBS6535V) | | | +/- | 12.0709 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 19.2106 | µg/mL | Stressed |
| 60 | 4-Bromophenyl phenyl ether | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 101-55-3 | (Lot STBB9729V) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 61 | Hexachlorobenzene | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 118-74-1 | (Lot LRAB8468) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 62 | Pentachlorophenol | | 2,005.9 | µg/mL | +/- | 11.6625 | µg/mL | Gravimetric |
| | **CAS #** 87-86-5 | (Lot 170717KJA) | | | +/- | 23.9787 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.1617 | µg/mL | Stressed |
| 63 | n-Octadecane (C18) | | 1,004.8 | µg/mL | +/- | 5.8420 | µg/mL | Gravimetric |
| | **CAS #** 593-45-3 | (Lot T7N4E) | | | +/- | 12.0114 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1160 | µg/mL | Stressed |
| 64 | Phenanthrene | | 1,005.3 | µg/mL | +/- | 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 85-01-8 | (Lot MKCB1762V) | | | +/- | 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1255 | µg/mL | Stressed |
| 65 | Anthracene | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 120-12-7 | (Lot MKBR2268V) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 66 | Carbazole | | 1,002.7 | µg/mL | +/- | 5.8298 | µg/mL | Gravimetric |
| | **CAS #** 86-74-8 | (Lot 7528800) | | | +/- | 11.9863 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0761 | µg/mL | Stressed |
| 67 | Di-n-butylphthalate | | 1,005.6 | µg/mL | +/- | 5.8466 | µg/mL | Gravimetric |
| | **CAS #** 84-74-2 | (Lot MKBT0244V) | | | +/- | 12.0210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1312 | µg/mL | Stressed |
| 68 | Fluoranthene | | 1,002.6 | µg/mL | +/- | 5.8294 | µg/mL | Gravimetric |
| | **CAS #** 206-44-0 | (Lot MKBQ6360V) | | | +/- | 11.9856 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0749 | µg/mL | Stressed |
| 69 | Pyrene | | 1,009.3 | µg/mL | +/- | 5.8682 | µg/mL | Gravimetric |
| | **CAS #** 129-00-0 | (Lot BCBT5695) | | | +/- | 12.0652 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2016 | µg/mL | Stressed |
| 70 | Benzyl butyl phthalate | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 85-68-7 | (Lot MKCF0058) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 71 | Benz(a)anthracene | | 1,004.8 | µg/mL | +/- | 5.8422 | µg/mL | Gravimetric |
| | **CAS #** 56-55-3 | (Lot 0012018) | | | +/- | 12.0118 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 19.1166 | µg/mL | Stressed |

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

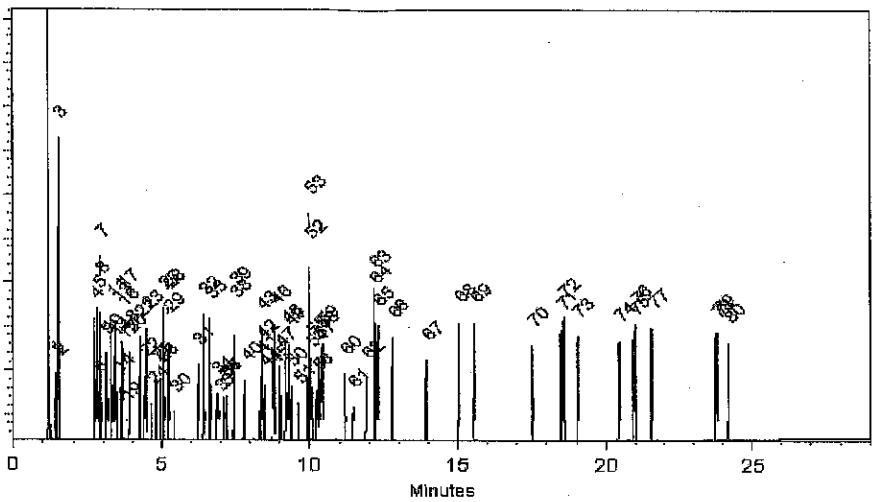
**Carrier Gas:**
hydrogen-constant flow 1.8 mL/min.

**Temp. Program:**
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
340°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

**Date Mixed:** 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 02-Aug-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 72 | Chrysene | | 1,009.4 | µg/mL | +/- | 5.8687 | µg/mL | Gravimetric |
| | **CAS #** 218-01-9 | (Lot 012015) | | | +/- | 12.0664 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2035 | µg/mL | Stressed |
| 73 | Bis(2-ethylhexyl)phthalate | | 1,007.3 | µg/mL | +/- | 5.8565 | µg/mL | Gravimetric |
| | **CAS #** 117-81-7 | (Lot MKBZ3868V) | | | +/- | 12.0413 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1636 | µg/mL | Stressed |
| 74 | Di-n-octyl phthalate | | 1,007.0 | µg/mL | +/- | 5.8548 | µg/mL | Gravimetric |
| | **CAS #** 117-84-0 | (Lot 7170200) | | | +/- | 12.0377 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1579 | µg/mL | Stressed |
| 75 | Benzo(b)fluoranthene | | 1,003.7 | µg/mL | +/- | 5.8356 | µg/mL | Gravimetric |
| | **CAS #** 205-99-2 | (Lot 012012B) | | | +/- | 11.9983 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0951 | µg/mL | Stressed |
| 76 | Benzo(k)fluoranthene | | 1,005.7 | µg/mL | +/- | 5.8472 | µg/mL | Gravimetric |
| | **CAS #** 207-08-9 | (Lot 012012K) | | | +/- | 12.0222 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1332 | µg/mL | Stressed |
| 77 | Benzo(a)pyrene | | 1,008.8 | µg/mL | +/- | 5.8653 | µg/mL | Gravimetric |
| | **CAS #** 50-32-8 | (Lot ER071309-02) | | | +/- | 12.0593 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1921 | µg/mL | Stressed |
| 78 | Indeno(1,2,3-cd)pyrene | | 1,006.9 | µg/mL | +/- | 5.8542 | µg/mL | Gravimetric |
| | **CAS #** 193-39-5 | (Lot ER082107-02) | | | +/- | 12.0365 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1560 | µg/mL | Stressed |
| 79 | Dibenz(a,h)anthracene | | 1,008.7 | µg/mL | +/- | 5.8647 | µg/mL | Gravimetric |
| | **CAS #** 53-70-3 | (Lot ER032211-01) | | | +/- | 12.0581 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1902 | µg/mL | Stressed |
| 80 | Benzo(g,h,i)perylene | | 1,000.2 | µg/mL | +/- | 5.8152 | µg/mL | Gravimetric |
| | **CAS #** 191-24-2 | (Lot ER05121401) | | | +/- | 11.9565 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0285 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Specific Reference Material Notes:**

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 40 | 2-Nitroaniline | | 1,007.5 | µg/mL | +/- 5.8577 | µg/mL | Gravimetric |
| | **CAS #** 88-74-4 | (Lot MKBK7597V) | | | +/- 12.0437 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1674 | µg/mL | Stressed |
| 41 | Acenaphthylene | | 1,007.2 | µg/mL | +/- 5.8557 | µg/mL | Gravimetric |
| | **CAS #** 208-96-8 | (Lot O03R) | | | +/- 12.0395 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- 19.1608 | µg/mL | Stressed |
| 42 | 1,3-Dinitrobenzene | | 1,008.9 | µg/mL | +/- 5.8658 | µg/mL | Gravimetric |
| | **CAS #** 99-65-0 | (Lot BCBN4329V) | | | +/- 12.0605 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1940 | µg/mL | Stressed |
| 43 | Dimethylphthalate | | 1,009.2 | µg/mL | +/- 5.8676 | µg/mL | Gravimetric |
| | **CAS #** 131-11-3 | (Lot 10117699) | | | +/- 12.0640 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1997 | µg/mL | Stressed |
| 44 | 2,6-Dinitrotoluene | | 1,009.1 | µg/mL | +/- 5.8670 | µg/mL | Gravimetric |
| | **CAS #** 606-20-2 | (Lot 1437483V) | | | +/- 12.0628 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1978 | µg/mL | Stressed |
| 45 | 3-Nitroaniline | | 1,009.8 | µg/mL | +/- 5.8711 | µg/mL | Gravimetric |
| | **CAS #** 99-09-2 | (Lot MKBX1283V) | | | +/- 12.0712 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2112 | µg/mL | Stressed |
| 46 | Acenaphthene | | 1,008.1 | µg/mL | +/- 5.8612 | µg/mL | Gravimetric |
| | **CAS #** 83-32-9 | (Lot MKCC8329) | | | +/- 12.0509 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1788 | µg/mL | Stressed |
| 47 | 2,4-Dinitrophenol | | 2,013.2 | µg/mL | +/- 11.7049 | µg/mL | Gravimetric |
| | **CAS #** 51-28-5 | (Lot STBG3580V) | | | +/- 24.0659 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 38.3005 | µg/mL | Stressed |
| 48 | Dibenzofuran | | 1,007.0 | µg/mL | +/- 5.8548 | µg/mL | Gravimetric |
| | **CAS #** 132-64-9 | (Lot MKCD9952) | | | +/- 12.0377 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1579 | µg/mL | Stressed |
| 49 | 4-Nitrophenol | | 2,015.4 | µg/mL | +/- 11.7177 | µg/mL | Gravimetric |
| | **CAS #** 100-02-7 | (Lot MKBK1842V) | | | +/- 24.0922 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 38.3424 | µg/mL | Stressed |
| 50 | 2,4-Dinitrotoluene | | 1,009.5 | µg/mL | +/- 5.8693 | µg/mL | Gravimetric |
| | **CAS #** 121-14-2 | (Lot MKAA0690V) | | | +/- 12.0676 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2054 | µg/mL | Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol | | 1,005.3 | µg/mL | +/- 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 58-90-2 | (Lot PR-30126) | | | +/- 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1255 | µg/mL | Stressed |
| 52 | Fluorene | | 1,007.7 | µg/mL | +/- 5.8591 | µg/mL | Gravimetric |
| | **CAS #** 86-73-7 | (Lot 10174662) | | | +/- 12.0465 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- 19.1718 | µg/mL | Stressed |
| 53 | n-Hexadecane (C16) | | 1,009.8 | µg/mL | +/- 5.8711 | µg/mL | Gravimetric |
| | **CAS #** 544-76-3 | (Lot SHBJ3997) | | | +/- 12.0712 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2112 | µg/mL | Stressed |
| 54 | Diethylphthalate | | 1,007.4 | µg/mL | +/- 5.8571 | µg/mL | Gravimetric |
| | **CAS #** 84-66-2 | (Lot MKCB0810V) | | | +/- 12.0425 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1655 | µg/mL | Stressed |
| 55 | 4-Chlorophenyl phenyl ether | | 1,006.7 | µg/mL | +/- 5.8530 | µg/mL | Gravimetric |
| | **CAS #** 7005-72-3 | (Lot MKBX5225V) | | | +/- 12.0342 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1522 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | 2-Chlorophenol | | 1,005.6 | µg/mL | +/- | 5.8466 | µg/mL | Gravimetric |
| | **CAS #** 95-57-8 | (Lot STBF2690V) | | | +/- | 12.0210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1312 | µg/mL | Stressed |
| 9 | 1,3-Dichlorobenzene | | 1,009.7 | µg/mL | +/- | 5.8705 | µg/mL | Gravimetric |
| | **CAS #** 541-73-1 | (Lot BCBQ7100V) | | | +/- | 12.0700 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2092 | µg/mL | Stressed |
| 10 | 1,4-Dichlorobenzene | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 106-46-7 | (Lot MKBS4401V) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 11 | Benzyl alcohol | | 1,009.6 | µg/mL | +/- | 5.8699 | µg/mL | Gravimetric |
| | **CAS #** 100-51-6 | (Lot SHBJ0534) | | | +/- | 12.0688 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2073 | µg/mL | Stressed |
| 12 | 1,2-Dichlorobenzene | | 1,007.7 | µg/mL | +/- | 5.8589 | µg/mL | Gravimetric |
| | **CAS #** 95-50-1 | (Lot SHBG3111V) | | | +/- | 12.0461 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1712 | µg/mL | Stressed |
| 13 | 2-Methylphenol (o-cresol) | | 1,008.4 | µg/mL | +/- | 5.8629 | µg/mL | Gravimetric |
| | **CAS #** 95-48-7 | (Lot SHBH6379) | | | +/- | 12.0545 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1845 | µg/mL | Stressed |
| 14 | 2,2'-oxybis(1-chloropropane) | | 1,007.6 | µg/mL | +/- | 5.8583 | µg/mL | Gravimetric |
| | **CAS #** 108-60-1 | (Lot 7577400) | | | +/- | 12.0449 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1693 | µg/mL | Stressed |
| 15 | Acetophenone | | 1,009.4 | µg/mL | +/- | 5.8687 | µg/mL | Gravimetric |
| | **CAS #** 98-86-2 | (Lot STBG8586) | | | +/- | 12.0664 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.2035 | µg/mL | Stressed |
| 16 | 3-Methylphenol (m-cresol) | | 504.9 | µg/mL | +/- | 2.9423 | µg/mL | Gravimetric |
| | **CAS #** 108-39-4 | (Lot SHBD0627V) | | | +/- | 6.0389 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.6077 | µg/mL | Stressed |
| 17 | 4-Methylphenol (p-cresol) | | 501.8 | µg/mL | +/- | 2.9242 | µg/mL | Gravimetric |
| | **CAS #** 106-44-5 | (Lot 49396APV) | | | +/- | 6.0018 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.5487 | µg/mL | Stressed |
| 18 | N-Nitroso-di-n-propylamine | | 1,006.6 | µg/mL | +/- | 5.8525 | µg/mL | Gravimetric |
| | **CAS #** 621-64-7 | (Lot OPAGF) | | | +/- | 12.0330 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1503 | µg/mL | Stressed |
| 19 | Hexachloroethane | | 1,001.4 | µg/mL | +/- | 5.8222 | µg/mL | Gravimetric |
| | **CAS #** 67-72-1 | (Lot 4H3SF) | | | +/- | 11.9708 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0513 | µg/mL | Stressed |
| 20 | Nitrobenzene | | 1,005.9 | µg/mL | +/- | 5.8484 | µg/mL | Gravimetric |
| | **CAS #** 98-95-3 | (Lot SHBG5577V) | | | +/- | 12.0246 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1370 | µg/mL | Stressed |
| 21 | Isophorone | | 1,009.1 | µg/mL | +/- | 5.8670 | µg/mL | Gravimetric |
| | **CAS #** 78-59-1 | (Lot MKBG2442V) | | | +/- | 12.0629 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1979 | µg/mL | Stressed |
| 22 | 2-Nitrophenol | | 1,008.7 | µg/mL | +/- | 5.8647 | µg/mL | Gravimetric |
| | **CAS #** 88-75-5 | (Lot BCBH7602V) | | | +/- | 12.0581 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1902 | µg/mL | Stressed |
| 23 | 2,4-Dimethylphenol | | 1,008.6 | µg/mL | +/- | 5.8641 | µg/mL | Gravimetric |
| | **CAS #** 105-67-9 | (Lot 10165155) | | | +/- | 12.0569 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1883 | µg/mL | Stressed |

# Reagent

# 571995_00065

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | 2-Chlorophenol<br>**CAS #** 95-57-8<br>**Purity** 99% | (Lot STBF2690V) | 1,005.6 | µg/mL | +/- 5.8466<br>+/- 12.0210<br>+/- 19.1312 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 9 | 1,3-Dichlorobenzene<br>**CAS #** 541-73-1<br>**Purity** 99% | (Lot BCBQ7100V) | 1,009.7 | µg/mL | +/- 5.8705<br>+/- 12.0700<br>+/- 19.2092 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 10 | 1,4-Dichlorobenzene<br>**CAS #** 106-46-7<br>**Purity** 99% | (Lot MKBS4401V) | 1,007.6 | µg/mL | +/- 5.8583<br>+/- 12.0449<br>+/- 19.1693 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 11 | Benzyl alcohol<br>**CAS #** 100-51-6<br>**Purity** 99% | (Lot SHBJ0534) | 1,009.6 | µg/mL | +/- 5.8699<br>+/- 12.0688<br>+/- 19.2073 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 12 | 1,2-Dichlorobenzene<br>**CAS #** 95-50-1<br>**Purity** 99% | (Lot SHBG3111V) | 1,007.7 | µg/mL | +/- 5.8589<br>+/- 12.0461<br>+/- 19.1712 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 13 | 2-Methylphenol (o-cresol)<br>**CAS #** 95-48-7<br>**Purity** 99% | (Lot SHBH6379) | 1,008.4 | µg/mL | +/- 5.8629<br>+/- 12.0545<br>+/- 19.1845 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 14 | 2,2'-oxybis(1-chloropropane)<br>**CAS #** 108-60-1<br>**Purity** 99% | (Lot 7577400) | 1,007.6 | µg/mL | +/- 5.8583<br>+/- 12.0449<br>+/- 19.1693 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 15 | Acetophenone<br>**CAS #** 98-86-2<br>**Purity** 99% | (Lot STBG8586) | 1,009.4 | µg/mL | +/- 5.8687<br>+/- 12.0664<br>+/- 19.2035 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 16 | 3-Methylphenol (m-cresol)<br>**CAS #** 108-39-4<br>**Purity** 99% | (Lot SHBD0627V) | 504.9 | µg/mL | +/- 2.9423<br>+/- 6.0389<br>+/- 9.6077 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 17 | 4-Methylphenol (p-cresol)<br>**CAS #** 106-44-5<br>**Purity** 99% | (Lot 49396APV) | 501.8 | µg/mL | +/- 2.9242<br>+/- 6.0018<br>+/- 9.5487 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 18 | N-Nitroso-di-n-propylamine<br>**CAS #** 621-64-7<br>**Purity** 99% | (Lot OPAGF) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 19 | Hexachloroethane<br>**CAS #** 67-72-1<br>**Purity** 99% | (Lot 4H3SF) | 1,001.4 | µg/mL | +/- 5.8222<br>+/- 11.9708<br>+/- 19.0513 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 20 | Nitrobenzene<br>**CAS #** 98-95-3<br>**Purity** 99% | (Lot SHBG5577V) | 1,005.9 | µg/mL | +/- 5.8484<br>+/- 12.0246<br>+/- 19.1370 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 21 | Isophorone<br>**CAS #** 78-59-1<br>**Purity** 98% | (Lot MKBG2442V) | 1,009.1 | µg/mL | +/- 5.8670<br>+/- 12.0629<br>+/- 19.1979 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 22 | 2-Nitrophenol<br>**CAS #** 88-75-5<br>**Purity** 99% | (Lot BCBH7602V) | 1,008.7 | µg/mL | +/- 5.8647<br>+/- 12.0581<br>+/- 19.1902 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 23 | 2,4-Dimethylphenol<br>**CAS #** 105-67-9<br>**Purity** 99% | (Lot 10165155) | 1,008.6 | µg/mL | +/- 5.8641<br>+/- 12.0569<br>+/- 19.1883 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 40 | 2-Nitroaniline | | 1,007.5 | µg/mL | +/- 5.8577 | µg/mL | Gravimetric |
| | **CAS #** 88-74-4 | (Lot MKBK7597V) | | | +/- 12.0437 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1674 | µg/mL | Stressed |
| 41 | Acenaphthylene | | 1,007.2 | µg/mL | +/- 5.8557 | µg/mL | Gravimetric |
| | **CAS #** 208-96-8 | (Lot O03R) | | | +/- 12.0395 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- 19.1608 | µg/mL | Stressed |
| 42 | 1,3-Dinitrobenzene | | 1,008.9 | µg/mL | +/- 5.8658 | µg/mL | Gravimetric |
| | **CAS #** 99-65-0 | (Lot BCBN4329V) | | | +/- 12.0605 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1940 | µg/mL | Stressed |
| 43 | Dimethylphthalate | | 1,009.2 | µg/mL | +/- 5.8676 | µg/mL | Gravimetric |
| | **CAS #** 131-11-3 | (Lot 10117699) | | | +/- 12.0640 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1997 | µg/mL | Stressed |
| 44 | 2,6-Dinitrotoluene | | 1,009.1 | µg/mL | +/- 5.8670 | µg/mL | Gravimetric |
| | **CAS #** 606-20-2 | (Lot 1437483V) | | | +/- 12.0628 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1978 | µg/mL | Stressed |
| 45 | 3-Nitroaniline | | 1,009.8 | µg/mL | +/- 5.8711 | µg/mL | Gravimetric |
| | **CAS #** 99-09-2 | (Lot MKBX1283V) | | | +/- 12.0712 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2112 | µg/mL | Stressed |
| 46 | Acenaphthene | | 1,008.1 | µg/mL | +/- 5.8612 | µg/mL | Gravimetric |
| | **CAS #** 83-32-9 | (Lot MKCC8329) | | | +/- 12.0509 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1788 | µg/mL | Stressed |
| 47 | 2,4-Dinitrophenol | | 2,013.2 | µg/mL | +/- 11.7049 | µg/mL | Gravimetric |
| | **CAS #** 51-28-5 | (Lot STBG3580V) | | | +/- 24.0659 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 38.3005 | µg/mL | Stressed |
| 48 | Dibenzofuran | | 1,007.0 | µg/mL | +/- 5.8548 | µg/mL | Gravimetric |
| | **CAS #** 132-64-9 | (Lot MKCD9952) | | | +/- 12.0377 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1579 | µg/mL | Stressed |
| 49 | 4-Nitrophenol | | 2,015.4 | µg/mL | +/- 11.7177 | µg/mL | Gravimetric |
| | **CAS #** 100-02-7 | (Lot MKBK1842V) | | | +/- 24.0922 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 38.3424 | µg/mL | Stressed |
| 50 | 2,4-Dinitrotoluene | | 1,009.5 | µg/mL | +/- 5.8693 | µg/mL | Gravimetric |
| | **CAS #** 121-14-2 | (Lot MKAA0690V) | | | +/- 12.0676 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2054 | µg/mL | Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol | | 1,005.3 | µg/mL | +/- 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 58-90-2 | (Lot PR-30126) | | | +/- 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1255 | µg/mL | Stressed |
| 52 | Fluorene | | 1,007.7 | µg/mL | +/- 5.8591 | µg/mL | Gravimetric |
| | **CAS #** 86-73-7 | (Lot 10174662) | | | +/- 12.0465 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- 19.1718 | µg/mL | Stressed |
| 53 | n-Hexadecane (C16) | | 1,009.8 | µg/mL | +/- 5.8711 | µg/mL | Gravimetric |
| | **CAS #** 544-76-3 | (Lot SHBJ3997) | | | +/- 12.0712 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2112 | µg/mL | Stressed |
| 54 | Diethylphthalate | | 1,007.4 | µg/mL | +/- 5.8571 | µg/mL | Gravimetric |
| | **CAS #** 84-66-2 | (Lot MKCB0810V) | | | +/- 12.0425 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1655 | µg/mL | Stressed |
| 55 | 4-Chlorophenyl phenyl ether | | 1,006.7 | µg/mL | +/- 5.8530 | µg/mL | Gravimetric |
| | **CAS #** 7005-72-3 | (Lot MKBX5225V) | | | +/- 12.0342 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1522 | µg/mL | Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 72 | Chrysene<br>**CAS #** 218-01-9<br>**Purity** 99% | (Lot 012015) | 1,009.4 µg/mL | +/- 5.8687<br>+/- 12.0664<br>+/- 19.2035 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 73 | Bis(2-ethylhexyl)phthalate<br>**CAS #** 117-81-7<br>**Purity** 99% | (Lot MKBZ3868V) | 1,007.3 µg/mL | +/- 5.8565<br>+/- 12.0413<br>+/- 19.1636 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 74 | Di-n-octyl phthalate<br>**CAS #** 117-84-0<br>**Purity** 99% | (Lot 7170200) | 1,007.0 µg/mL | +/- 5.8548<br>+/- 12.0377<br>+/- 19.1579 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 75 | Benzo(b)fluoranthene<br>**CAS #** 205-99-2<br>**Purity** 99% | (Lot 012012B) | 1,003.7 µg/mL | +/- 5.8356<br>+/- 11.9983<br>+/- 19.0951 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 76 | Benzo(k)fluoranthene<br>**CAS #** 207-08-9<br>**Purity** 99% | (Lot 012012K) | 1,005.7 µg/mL | +/- 5.8472<br>+/- 12.0222<br>+/- 19.1332 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 77 | Benzo(a)pyrene<br>**CAS #** 50-32-8<br>**Purity** 99% | (Lot ER071309-02) | 1,008.8 µg/mL | +/- 5.8653<br>+/- 12.0593<br>+/- 19.1921 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 78 | Indeno(1,2,3-cd)pyrene<br>**CAS #** 193-39-5<br>**Purity** 99% | (Lot ER082107-02) | 1,006.9 µg/mL | +/- 5.8542<br>+/- 12.0365<br>+/- 19.1560 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 79 | Dibenz(a,h)anthracene<br>**CAS #** 53-70-3<br>**Purity** 99% | (Lot ER032211-01) | 1,008.7 µg/mL | +/- 5.8647<br>+/- 12.0581<br>+/- 19.1902 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 80 | Benzo(g,h,i)perylene<br>**CAS #** 191-24-2<br>**Purity** 99% | (Lot ER05121401) | 1,000.2 µg/mL | +/- 5.8152<br>+/- 11.9565<br>+/- 19.0285 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| **Solvent:** | Methylene chloride<br>**CAS #** 75-09-2<br>**Purity** 99% | | | | | |

**Specific Reference Material Notes:**

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

$k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 571995 **Lot No.:** A0140111

**Description :** 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** January 31, 2020 **Storage:** 0°C or colder

**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

### CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | 1,4-Dioxane<br>**CAS #** 123-91-1<br>**Purity** 99% | (Lot SHBJ5124) | 1,006.6 µg/mL | +/- 5.8525 µg/mL<br>+/- 12.0330 µg/mL<br>+/- 19.1503 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 2 | N-Nitrosodimethylamine<br>**CAS #** 62-75-9<br>**Purity** 99% | (Lot 180322JLM) | 1,005.1 µg/mL | +/- 5.8437 µg/mL<br>+/- 12.0150 µg/mL<br>+/- 19.1217 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Pyridine<br>**CAS #** 110-86-1<br>**Purity** 99% | (Lot SHBC7174V) | 2,012.7 µg/mL | +/- 11.7020 µg/mL<br>+/- 24.0599 µg/mL<br>+/- 38.2910 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Phenol<br>**CAS #** 108-95-2<br>**Purity** 99% | (Lot SHBF9719V) | 1,008.6 µg/mL | +/- 5.8641 µg/mL<br>+/- 12.0569 µg/mL<br>+/- 19.1883 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Aniline<br>**CAS #** 62-53-3<br>**Purity** 99% | (Lot K22Z462) | 1,006.2 µg/mL | +/- 5.8501 µg/mL<br>+/- 12.0282 µg/mL<br>+/- 19.1427 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Bis(2-chloroethyl)ether<br>**CAS #** 111-44-4<br>**Purity** 99% | (Lot SHBD4430V) | 1,009.5 µg/mL | +/- 5.8693 µg/mL<br>+/- 12.0676 µg/mL<br>+/- 19.2054 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 7 | n-Decane (C10)<br>**CAS #** 124-18-5<br>**Purity** 99% | (Lot SHBJ8526) | 1,010.0 µg/mL | +/- 5.8722 µg/mL<br>+/- 12.0736 µg/mL<br>+/- 19.2150 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24 | Bis(2-chloroethoxy)methane<br>**CAS #** 111-91-1<br>**Purity** 99% | (Lot 5670100) | 1,009.6 | µg/mL | +/- 5.8699<br>+/- 12.0688<br>+/- 19.2073 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 25 | 2,4-Dichlorophenol<br>**CAS #** 120-83-2<br>**Purity** 99% | (Lot BCBJ8113V) | 1,009.0 | µg/mL | +/- 5.8664<br>+/- 12.0616<br>+/- 19.1959 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 26 | 1,2,4-Trichlorobenzene<br>**CAS #** 120-82-1<br>**Purity** 99% | (Lot SHBJ0905) | 1,008.4 | µg/mL | +/- 5.8629<br>+/- 12.0545<br>+/- 19.1845 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 27 | Naphthalene<br>**CAS #** 91-20-3<br>**Purity** 99% | (Lot MKBW2603V) | 1,008.3 | µg/mL | +/- 5.8623<br>+/- 12.0533<br>+/- 19.1826 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 28 | 2,6-Dichlorophenol<br>**CAS #** 87-65-0<br>**Purity** 99% | (Lot MKBP8620V) | 1,006.8 | µg/mL | +/- 5.8536<br>+/- 12.0353<br>+/- 19.1541 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 29 | 4-Chloroaniline<br>**CAS #** 106-47-8<br>**Purity** 99% | (Lot BCBJ1580V) | 1,005.3 | µg/mL | +/- 5.8449<br>+/- 12.0174<br>+/- 19.1255 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 30 | Hexachlorobutadiene<br>**CAS #** 87-68-3<br>**Purity** 99% | (Lot J31X013) | 1,008.6 | µg/mL | +/- 5.8641<br>+/- 12.0569<br>+/- 19.1883 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 31 | 4-Chloro-3-methylphenol<br>**CAS #** 59-50-7<br>**Purity** 99% | (Lot STBC7309V) | 1,006.2 | µg/mL | +/- 5.8501<br>+/- 12.0282<br>+/- 19.1427 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 32 | 2-Methylnaphthalene<br>**CAS #** 91-57-6<br>**Purity** 96% | (Lot STBF0201V) | 1,005.5 | µg/mL | +/- 5.8461<br>+/- 12.0199<br>+/- 19.1294 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 33 | 1-Methylnaphthalene<br>**CAS #** 90-12-0<br>**Purity** 98% | (Lot 523400-9) | 1,002.4 | µg/mL | +/- 5.8283<br>+/- 11.9833<br>+/- 19.0712 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene<br>**CAS #** 95-94-3<br>**Purity** 99% | (Lot MKBW7717V) | 1,007.2 | µg/mL | +/- 5.8559<br>+/- 12.0401<br>+/- 19.1617 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 35 | Hexachlorocyclopentadiene<br>**CAS #** 77-47-4<br>**Purity** 99% | (Lot 0012015) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 36 | 2,4,6-Trichlorophenol<br>**CAS #** 88-06-2<br>**Purity** 99% | (Lot STBF3742V) | 1,009.3 | µg/mL | +/- 5.8682<br>+/- 12.0652<br>+/- 19.2016 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 37 | 2,4,5-Trichlorophenol<br>**CAS #** 95-95-4<br>**Purity** 99% | (Lot FHN01) | 1,009.2 | µg/mL | +/- 5.8676<br>+/- 12.0640<br>+/- 19.1997 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 38 | 2-Chloronaphthalene<br>**CAS #** 91-58-7<br>**Purity** 99% | (Lot AJ2UI) | 1,006.8 | µg/mL | +/- 5.8536<br>+/- 12.0353<br>+/- 19.1541 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 39 | Biphenyl<br>**CAS #** 92-52-4<br>**Purity** 99% | (Lot MKBV9808V) | 1,006.3 | µg/mL | +/- 5.8507<br>+/- 12.0294<br>+/- 19.1446 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 56 | 4-Nitroaniline<br>**CAS #** 100-01-6<br>**Purity** 98% | (Lot BCBG4702V) | 1,007.5 | µg/mL | +/- 5.8579<br>+/- 12.0442<br>+/- 19.1681 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 57 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)<br>**CAS #** 534-52-1<br>**Purity** 99% | (Lot B180716L) | 2,012.4 | µg/mL | +/- 11.7003<br>+/- 24.0564<br>+/- 38.2853 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 58 | Diphenylamine<br>**CAS #** 122-39-4<br>**Purity** 99% | (Lot MKBN8295V) | 856.1 | µg/mL | +/- 4.9889<br>+/- 10.2395<br>+/- 16.2906 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 59 | Azobenzene<br>**CAS #** 103-33-3<br>**Purity** 97% | (Lot BCBS6535V) | 1,009.8 | µg/mL | +/- 5.8709<br>+/- 12.0709<br>+/- 19.2106 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 60 | 4-Bromophenyl phenyl ether<br>**CAS #** 101-55-3<br>**Purity** 99% | (Lot STBB9729V) | 1,007.6 | µg/mL | +/- 5.8583<br>+/- 12.0449<br>+/- 19.1693 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 61 | Hexachlorobenzene<br>**CAS #** 118-74-1<br>**Purity** 99% | (Lot LRAB8468) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 62 | Pentachlorophenol<br>**CAS #** 87-86-5<br>**Purity** 99% | (Lot 170717KJA) | 2,005.9 | µg/mL | +/- 11.6625<br>+/- 23.9787<br>+/- 38.1617 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 63 | n-Octadecane (C18)<br>**CAS #** 593-45-3<br>**Purity** 99% | (Lot T7N4E) | 1,004.8 | µg/mL | +/- 5.8420<br>+/- 12.0114<br>+/- 19.1160 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 64 | Phenanthrene<br>**CAS #** 85-01-8<br>**Purity** 99% | (Lot MKCB1762V) | 1,005.3 | µg/mL | +/- 5.8449<br>+/- 12.0174<br>+/- 19.1255 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 65 | Anthracene<br>**CAS #** 120-12-7<br>**Purity** 99% | (Lot MKBR2268V) | 1,006.2 | µg/mL | +/- 5.8501<br>+/- 12.0282<br>+/- 19.1427 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 66 | Carbazole<br>**CAS #** 86-74-8<br>**Purity** 99% | (Lot 7528800) | 1,002.7 | µg/mL | +/- 5.8298<br>+/- 11.9863<br>+/- 19.0761 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 67 | Di-n-butylphthalate<br>**CAS #** 84-74-2<br>**Purity** 99% | (Lot MKBT0244V) | 1,005.6 | µg/mL | +/- 5.8466<br>+/- 12.0210<br>+/- 19.1312 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 68 | Fluoranthene<br>**CAS #** 206-44-0<br>**Purity** 98% | (Lot MKBQ6360V) | 1,002.6 | µg/mL | +/- 5.8294<br>+/- 11.9856<br>+/- 19.0749 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 69 | Pyrene<br>**CAS #** 129-00-0<br>**Purity** 99% | (Lot BCBT5695) | 1,009.3 | µg/mL | +/- 5.8682<br>+/- 12.0652<br>+/- 19.2016 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 70 | Benzyl butyl phthalate<br>**CAS #** 85-68-7<br>**Purity** 99% | (Lot MKCF0058) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 71 | Benz(a)anthracene<br>**CAS #** 56-55-3<br>**Purity** 96% | (Lot 0012018) | 1,004.8 | µg/mL | +/- 5.8422<br>+/- 12.0118<br>+/- 19.1166 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

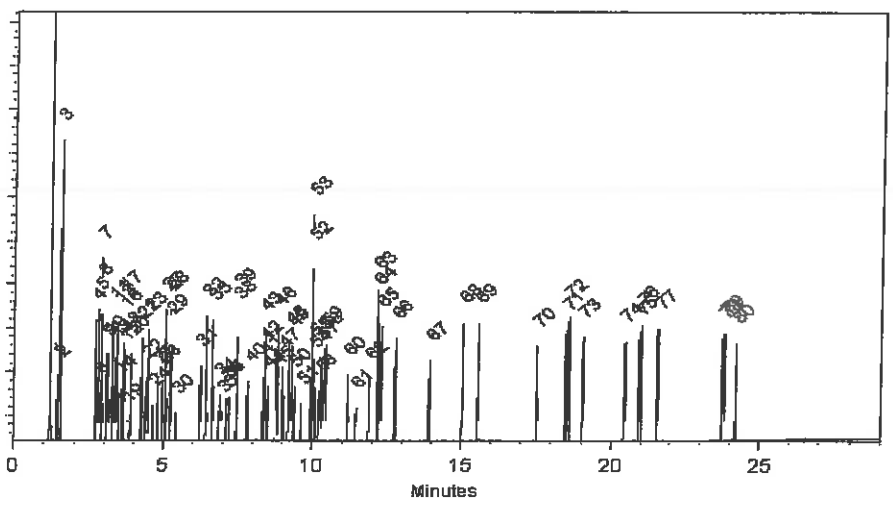
**Carrier Gas:**
hydrogen-constant flow 1.8 mL/min.

**Temp. Program:**
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
340°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mfr Technician

**Date Mixed:** 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 02-Aug-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

# Reagent

# 571995_00068

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | 2-Chlorophenol<br>**CAS #** 95-57-8<br>**Purity** 99% | (Lot STBF2690V) | 1,005.6 | µg/mL | +/- 5.8466<br>+/- 12.0210<br>+/- 19.1312 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 9 | 1,3-Dichlorobenzene<br>**CAS #** 541-73-1<br>**Purity** 99% | (Lot BCBQ7100V) | 1,009.7 | µg/mL | +/- 5.8705<br>+/- 12.0700<br>+/- 19.2092 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 10 | 1,4-Dichlorobenzene<br>**CAS #** 106-46-7<br>**Purity** 99% | (Lot MKBS4401V) | 1,007.6 | µg/mL | +/- 5.8583<br>+/- 12.0449<br>+/- 19.1693 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 11 | Benzyl alcohol<br>**CAS #** 100-51-6<br>**Purity** 99% | (Lot SHBJ0534) | 1,009.6 | µg/mL | +/- 5.8699<br>+/- 12.0688<br>+/- 19.2073 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 12 | 1,2-Dichlorobenzene<br>**CAS #** 95-50-1<br>**Purity** 99% | (Lot SHBG3111V) | 1,007.7 | µg/mL | +/- 5.8589<br>+/- 12.0461<br>+/- 19.1712 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 13 | 2-Methylphenol (o-cresol)<br>**CAS #** 95-48-7<br>**Purity** 99% | (Lot SHBH6379) | 1,008.4 | µg/mL | +/- 5.8629<br>+/- 12.0545<br>+/- 19.1845 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 14 | 2,2'-oxybis(1-chloropropane)<br>**CAS #** 108-60-1<br>**Purity** 99% | (Lot 7577400) | 1,007.6 | µg/mL | +/- 5.8583<br>+/- 12.0449<br>+/- 19.1693 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 15 | Acetophenone<br>**CAS #** 98-86-2<br>**Purity** 99% | (Lot STBG8586) | 1,009.4 | µg/mL | +/- 5.8687<br>+/- 12.0664<br>+/- 19.2035 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 16 | 3-Methylphenol (m-cresol)<br>**CAS #** 108-39-4<br>**Purity** 99% | (Lot SHBD0627V) | 504.9 | µg/mL | +/- 2.9423<br>+/- 6.0389<br>+/- 9.6077 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 17 | 4-Methylphenol (p-cresol)<br>**CAS #** 106-44-5<br>**Purity** 99% | (Lot 49396APV) | 501.8 | µg/mL | +/- 2.9242<br>+/- 6.0018<br>+/- 9.5487 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 18 | N-Nitroso-di-n-propylamine<br>**CAS #** 621-64-7<br>**Purity** 99% | (Lot OPAGF) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 19 | Hexachloroethane<br>**CAS #** 67-72-1<br>**Purity** 99% | (Lot 4H3SF) | 1,001.4 | µg/mL | +/- 5.8222<br>+/- 11.9708<br>+/- 19.0513 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 20 | Nitrobenzene<br>**CAS #** 98-95-3<br>**Purity** 99% | (Lot SHBG5577V) | 1,005.9 | µg/mL | +/- 5.8484<br>+/- 12.0246<br>+/- 19.1370 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 21 | Isophorone<br>**CAS #** 78-59-1<br>**Purity** 98% | (Lot MKBG2442V) | 1,009.1 | µg/mL | +/- 5.8670<br>+/- 12.0629<br>+/- 19.1979 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 22 | 2-Nitrophenol<br>**CAS #** 88-75-5<br>**Purity** 99% | (Lot BCBH7602V) | 1,008.7 | µg/mL | +/- 5.8647<br>+/- 12.0581<br>+/- 19.1902 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 23 | 2,4-Dimethylphenol<br>**CAS #** 105-67-9<br>**Purity** 99% | (Lot 10165155) | 1,008.6 | µg/mL | +/- 5.8641<br>+/- 12.0569<br>+/- 19.1883 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 40 | 2-Nitroaniline | | 1,007.5 | µg/mL | +/- 5.8577 | µg/mL | Gravimetric |
| | **CAS #** 88-74-4 | (Lot MKBK7597V) | | | +/- 12.0437 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1674 | µg/mL | Stressed |
| 41 | Acenaphthylene | | 1,007.2 | µg/mL | +/- 5.8557 | µg/mL | Gravimetric |
| | **CAS #** 208-96-8 | (Lot O03R) | | | +/- 12.0395 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- 19.1608 | µg/mL | Stressed |
| 42 | 1,3-Dinitrobenzene | | 1,008.9 | µg/mL | +/- 5.8658 | µg/mL | Gravimetric |
| | **CAS #** 99-65-0 | (Lot BCBN4329V) | | | +/- 12.0605 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1940 | µg/mL | Stressed |
| 43 | Dimethylphthalate | | 1,009.2 | µg/mL | +/- 5.8676 | µg/mL | Gravimetric |
| | **CAS #** 131-11-3 | (Lot 10117699) | | | +/- 12.0640 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1997 | µg/mL | Stressed |
| 44 | 2,6-Dinitrotoluene | | 1,009.1 | µg/mL | +/- 5.8670 | µg/mL | Gravimetric |
| | **CAS #** 606-20-2 | (Lot 1437483V) | | | +/- 12.0628 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1978 | µg/mL | Stressed |
| 45 | 3-Nitroaniline | | 1,009.8 | µg/mL | +/- 5.8711 | µg/mL | Gravimetric |
| | **CAS #** 99-09-2 | (Lot MKBX1283V) | | | +/- 12.0712 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2112 | µg/mL | Stressed |
| 46 | Acenaphthene | | 1,008.1 | µg/mL | +/- 5.8612 | µg/mL | Gravimetric |
| | **CAS #** 83-32-9 | (Lot MKCC8329) | | | +/- 12.0509 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1788 | µg/mL | Stressed |
| 47 | 2,4-Dinitrophenol | | 2,013.2 | µg/mL | +/- 11.7049 | µg/mL | Gravimetric |
| | **CAS #** 51-28-5 | (Lot STBG3580V) | | | +/- 24.0659 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 38.3005 | µg/mL | Stressed |
| 48 | Dibenzofuran | | 1,007.0 | µg/mL | +/- 5.8548 | µg/mL | Gravimetric |
| | **CAS #** 132-64-9 | (Lot MKCD9952) | | | +/- 12.0377 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1579 | µg/mL | Stressed |
| 49 | 4-Nitrophenol | | 2,015.4 | µg/mL | +/- 11.7177 | µg/mL | Gravimetric |
| | **CAS #** 100-02-7 | (Lot MKBK1842V) | | | +/- 24.0922 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 38.3424 | µg/mL | Stressed |
| 50 | 2,4-Dinitrotoluene | | 1,009.5 | µg/mL | +/- 5.8693 | µg/mL | Gravimetric |
| | **CAS #** 121-14-2 | (Lot MKAA0690V) | | | +/- 12.0676 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2054 | µg/mL | Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol | | 1,005.3 | µg/mL | +/- 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 58-90-2 | (Lot PR-30126) | | | +/- 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1255 | µg/mL | Stressed |
| 52 | Fluorene | | 1,007.7 | µg/mL | +/- 5.8591 | µg/mL | Gravimetric |
| | **CAS #** 86-73-7 | (Lot 10174662) | | | +/- 12.0465 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- 19.1718 | µg/mL | Stressed |
| 53 | n-Hexadecane (C16) | | 1,009.8 | µg/mL | +/- 5.8711 | µg/mL | Gravimetric |
| | **CAS #** 544-76-3 | (Lot SHBJ3997) | | | +/- 12.0712 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2112 | µg/mL | Stressed |
| 54 | Diethylphthalate | | 1,007.4 | µg/mL | +/- 5.8571 | µg/mL | Gravimetric |
| | **CAS #** 84-66-2 | (Lot MKCB0810V) | | | +/- 12.0425 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1655 | µg/mL | Stressed |
| 55 | 4-Chlorophenyl phenyl ether | | 1,006.7 | µg/mL | +/- 5.8530 | µg/mL | Gravimetric |
| | **CAS #** 7005-72-3 | (Lot MKBX5225V) | | | +/- 12.0342 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1522 | µg/mL | Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 72 | Chrysene<br>**CAS #** 218-01-9<br>**Purity** 99% | (Lot 012015) | 1,009.4 µg/mL | +/- 5.8687<br>+/- 12.0664<br>+/- 19.2035 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 73 | Bis(2-ethylhexyl)phthalate<br>**CAS #** 117-81-7<br>**Purity** 99% | (Lot MKBZ3868V) | 1,007.3 µg/mL | +/- 5.8565<br>+/- 12.0413<br>+/- 19.1636 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 74 | Di-n-octyl phthalate<br>**CAS #** 117-84-0<br>**Purity** 99% | (Lot 7170200) | 1,007.0 µg/mL | +/- 5.8548<br>+/- 12.0377<br>+/- 19.1579 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 75 | Benzo(b)fluoranthene<br>**CAS #** 205-99-2<br>**Purity** 99% | (Lot 012012B) | 1,003.7 µg/mL | +/- 5.8356<br>+/- 11.9983<br>+/- 19.0951 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 76 | Benzo(k)fluoranthene<br>**CAS #** 207-08-9<br>**Purity** 99% | (Lot 012012K) | 1,005.7 µg/mL | +/- 5.8472<br>+/- 12.0222<br>+/- 19.1332 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 77 | Benzo(a)pyrene<br>**CAS #** 50-32-8<br>**Purity** 99% | (Lot ER071309-02) | 1,008.8 µg/mL | +/- 5.8653<br>+/- 12.0593<br>+/- 19.1921 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 78 | Indeno(1,2,3-cd)pyrene<br>**CAS #** 193-39-5<br>**Purity** 99% | (Lot ER082107-02) | 1,006.9 µg/mL | +/- 5.8542<br>+/- 12.0365<br>+/- 19.1560 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 79 | Dibenz(a,h)anthracene<br>**CAS #** 53-70-3<br>**Purity** 99% | (Lot ER032211-01) | 1,008.7 µg/mL | +/- 5.8647<br>+/- 12.0581<br>+/- 19.1902 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 80 | Benzo(g,h,i)perylene<br>**CAS #** 191-24-2<br>**Purity** 99% | (Lot ER05121401) | 1,000.2 µg/mL | +/- 5.8152<br>+/- 11.9565<br>+/- 19.0285 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| **Solvent:** | Methylene chloride<br>**CAS #** 75-09-2<br>**Purity** 99% | | | | | |

**Specific Reference Material Notes:**

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

$k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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www.restek.com

# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 571995 **Lot No.:** A0140111

**Description :** 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** January 31, 2020 **Storage:** 0°C or colder

**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

### CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | 1,4-Dioxane<br>**CAS #** 123-91-1<br>**Purity** 99% | (Lot SHBJ5124) | 1,006.6 µg/mL | +/- 5.8525 µg/mL<br>+/- 12.0330 µg/mL<br>+/- 19.1503 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 2 | N-Nitrosodimethylamine<br>**CAS #** 62-75-9<br>**Purity** 99% | (Lot 180322JLM) | 1,005.1 µg/mL | +/- 5.8437 µg/mL<br>+/- 12.0150 µg/mL<br>+/- 19.1217 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Pyridine<br>**CAS #** 110-86-1<br>**Purity** 99% | (Lot SHBC7174V) | 2,012.7 µg/mL | +/- 11.7020 µg/mL<br>+/- 24.0599 µg/mL<br>+/- 38.2910 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Phenol<br>**CAS #** 108-95-2<br>**Purity** 99% | (Lot SHBF9719V) | 1,008.6 µg/mL | +/- 5.8641 µg/mL<br>+/- 12.0569 µg/mL<br>+/- 19.1883 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Aniline<br>**CAS #** 62-53-3<br>**Purity** 99% | (Lot K22Z462) | 1,006.2 µg/mL | +/- 5.8501 µg/mL<br>+/- 12.0282 µg/mL<br>+/- 19.1427 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Bis(2-chloroethyl)ether<br>**CAS #** 111-44-4<br>**Purity** 99% | (Lot SHBD4430V) | 1,009.5 µg/mL | +/- 5.8693 µg/mL<br>+/- 12.0676 µg/mL<br>+/- 19.2054 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 7 | n-Decane (C10)<br>**CAS #** 124-18-5<br>**Purity** 99% | (Lot SHBJ8526) | 1,010.0 µg/mL | +/- 5.8722 µg/mL<br>+/- 12.0736 µg/mL<br>+/- 19.2150 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24 | Bis(2-chloroethoxy)methane<br>**CAS #** 111-91-1<br>**Purity** 99% | (Lot 5670100) | 1,009.6 | µg/mL | +/- 5.8699<br>+/- 12.0688<br>+/- 19.2073 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 25 | 2,4-Dichlorophenol<br>**CAS #** 120-83-2<br>**Purity** 99% | (Lot BCBJ8113V) | 1,009.0 | µg/mL | +/- 5.8664<br>+/- 12.0616<br>+/- 19.1959 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 26 | 1,2,4-Trichlorobenzene<br>**CAS #** 120-82-1<br>**Purity** 99% | (Lot SHBJ0905) | 1,008.4 | µg/mL | +/- 5.8629<br>+/- 12.0545<br>+/- 19.1845 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 27 | Naphthalene<br>**CAS #** 91-20-3<br>**Purity** 99% | (Lot MKBW2603V) | 1,008.3 | µg/mL | +/- 5.8623<br>+/- 12.0533<br>+/- 19.1826 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 28 | 2,6-Dichlorophenol<br>**CAS #** 87-65-0<br>**Purity** 99% | (Lot MKBP8620V) | 1,006.8 | µg/mL | +/- 5.8536<br>+/- 12.0353<br>+/- 19.1541 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 29 | 4-Chloroaniline<br>**CAS #** 106-47-8<br>**Purity** 99% | (Lot BCBJ1580V) | 1,005.3 | µg/mL | +/- 5.8449<br>+/- 12.0174<br>+/- 19.1255 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 30 | Hexachlorobutadiene<br>**CAS #** 87-68-3<br>**Purity** 99% | (Lot J31X013) | 1,008.6 | µg/mL | +/- 5.8641<br>+/- 12.0569<br>+/- 19.1883 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 31 | 4-Chloro-3-methylphenol<br>**CAS #** 59-50-7<br>**Purity** 99% | (Lot STBC7309V) | 1,006.2 | µg/mL | +/- 5.8501<br>+/- 12.0282<br>+/- 19.1427 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 32 | 2-Methylnaphthalene<br>**CAS #** 91-57-6<br>**Purity** 96% | (Lot STBF0201V) | 1,005.5 | µg/mL | +/- 5.8461<br>+/- 12.0199<br>+/- 19.1294 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 33 | 1-Methylnaphthalene<br>**CAS #** 90-12-0<br>**Purity** 98% | (Lot 523400-9) | 1,002.4 | µg/mL | +/- 5.8283<br>+/- 11.9833<br>+/- 19.0712 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene<br>**CAS #** 95-94-3<br>**Purity** 99% | (Lot MKBW7717V) | 1,007.2 | µg/mL | +/- 5.8559<br>+/- 12.0401<br>+/- 19.1617 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 35 | Hexachlorocyclopentadiene<br>**CAS #** 77-47-4<br>**Purity** 99% | (Lot 0012015) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 36 | 2,4,6-Trichlorophenol<br>**CAS #** 88-06-2<br>**Purity** 99% | (Lot STBF3742V) | 1,009.3 | µg/mL | +/- 5.8682<br>+/- 12.0652<br>+/- 19.2016 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 37 | 2,4,5-Trichlorophenol<br>**CAS #** 95-95-4<br>**Purity** 99% | (Lot FHN01) | 1,009.2 | µg/mL | +/- 5.8676<br>+/- 12.0640<br>+/- 19.1997 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 38 | 2-Chloronaphthalene<br>**CAS #** 91-58-7<br>**Purity** 99% | (Lot AJ2UI) | 1,006.8 | µg/mL | +/- 5.8536<br>+/- 12.0353<br>+/- 19.1541 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 39 | Biphenyl<br>**CAS #** 92-52-4<br>**Purity** 99% | (Lot MKBV9808V) | 1,006.3 | µg/mL | +/- 5.8507<br>+/- 12.0294<br>+/- 19.1446 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 56 | 4-Nitroaniline<br>**CAS #** 100-01-6<br>**Purity** 98% | (Lot BCBG4702V) | 1,007.5 | µg/mL | +/- 5.8579<br>+/- 12.0442<br>+/- 19.1681 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 57 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)<br>**CAS #** 534-52-1<br>**Purity** 99% | (Lot B180716L) | 2,012.4 | µg/mL | +/- 11.7003<br>+/- 24.0564<br>+/- 38.2853 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 58 | Diphenylamine<br>**CAS #** 122-39-4<br>**Purity** 99% | (Lot MKBN8295V) | 856.1 | µg/mL | +/- 4.9889<br>+/- 10.2395<br>+/- 16.2906 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 59 | Azobenzene<br>**CAS #** 103-33-3<br>**Purity** 97% | (Lot BCBS6535V) | 1,009.8 | µg/mL | +/- 5.8709<br>+/- 12.0709<br>+/- 19.2106 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 60 | 4-Bromophenyl phenyl ether<br>**CAS #** 101-55-3<br>**Purity** 99% | (Lot STBB9729V) | 1,007.6 | µg/mL | +/- 5.8583<br>+/- 12.0449<br>+/- 19.1693 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 61 | Hexachlorobenzene<br>**CAS #** 118-74-1<br>**Purity** 99% | (Lot LRAB8468) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 62 | Pentachlorophenol<br>**CAS #** 87-86-5<br>**Purity** 99% | (Lot 170717KJA) | 2,005.9 | µg/mL | +/- 11.6625<br>+/- 23.9787<br>+/- 38.1617 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 63 | n-Octadecane (C18)<br>**CAS #** 593-45-3<br>**Purity** 99% | (Lot T7N4E) | 1,004.8 | µg/mL | +/- 5.8420<br>+/- 12.0114<br>+/- 19.1160 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 64 | Phenanthrene<br>**CAS #** 85-01-8<br>**Purity** 99% | (Lot MKCB1762V) | 1,005.3 | µg/mL | +/- 5.8449<br>+/- 12.0174<br>+/- 19.1255 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 65 | Anthracene<br>**CAS #** 120-12-7<br>**Purity** 99% | (Lot MKBR2268V) | 1,006.2 | µg/mL | +/- 5.8501<br>+/- 12.0282<br>+/- 19.1427 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 66 | Carbazole<br>**CAS #** 86-74-8<br>**Purity** 99% | (Lot 7528800) | 1,002.7 | µg/mL | +/- 5.8298<br>+/- 11.9863<br>+/- 19.0761 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 67 | Di-n-butylphthalate<br>**CAS #** 84-74-2<br>**Purity** 99% | (Lot MKBT0244V) | 1,005.6 | µg/mL | +/- 5.8466<br>+/- 12.0210<br>+/- 19.1312 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 68 | Fluoranthene<br>**CAS #** 206-44-0<br>**Purity** 98% | (Lot MKBQ6360V) | 1,002.6 | µg/mL | +/- 5.8294<br>+/- 11.9856<br>+/- 19.0749 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 69 | Pyrene<br>**CAS #** 129-00-0<br>**Purity** 99% | (Lot BCBT5695) | 1,009.3 | µg/mL | +/- 5.8682<br>+/- 12.0652<br>+/- 19.2016 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 70 | Benzyl butyl phthalate<br>**CAS #** 85-68-7<br>**Purity** 99% | (Lot MKCF0058) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 71 | Benz(a)anthracene<br>**CAS #** 56-55-3<br>**Purity** 96% | (Lot 0012018) | 1,004.8 | µg/mL | +/- 5.8422<br>+/- 12.0118<br>+/- 19.1166 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

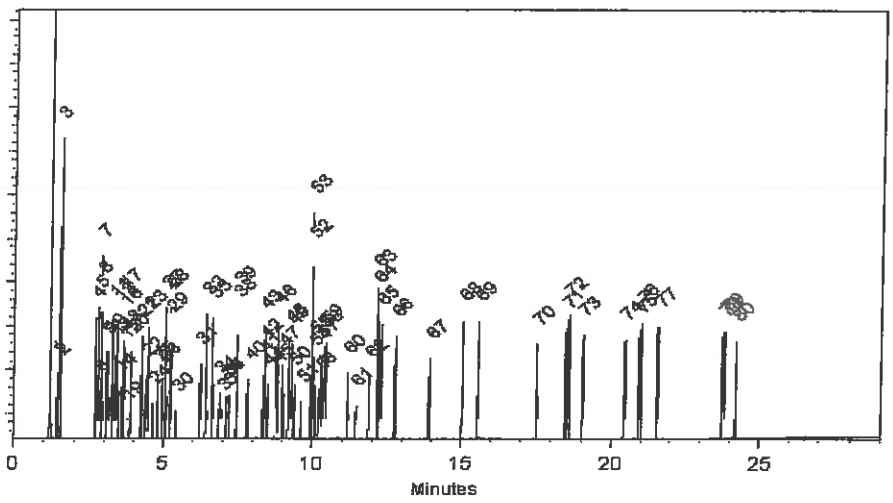
**Carrier Gas:**
hydrogen-constant flow 1.8 mL/min.

**Temp. Program:**
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
340°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mfr Technician

**Date Mixed:** 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 02-Aug-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

# Reagent

# 571995_00069

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | 2-Chlorophenol<br>**CAS #** 95-57-8<br>**Purity** 99% | (Lot STBF2690V) | 1,005.6 | µg/mL | +/- 5.8466<br>+/- 12.0210<br>+/- 19.1312 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 9 | 1,3-Dichlorobenzene<br>**CAS #** 541-73-1<br>**Purity** 99% | (Lot BCBQ7100V) | 1,009.7 | µg/mL | +/- 5.8705<br>+/- 12.0700<br>+/- 19.2092 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 10 | 1,4-Dichlorobenzene<br>**CAS #** 106-46-7<br>**Purity** 99% | (Lot MKBS4401V) | 1,007.6 | µg/mL | +/- 5.8583<br>+/- 12.0449<br>+/- 19.1693 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 11 | Benzyl alcohol<br>**CAS #** 100-51-6<br>**Purity** 99% | (Lot SHBJ0534) | 1,009.6 | µg/mL | +/- 5.8699<br>+/- 12.0688<br>+/- 19.2073 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 12 | 1,2-Dichlorobenzene<br>**CAS #** 95-50-1<br>**Purity** 99% | (Lot SHBG3111V) | 1,007.7 | µg/mL | +/- 5.8589<br>+/- 12.0461<br>+/- 19.1712 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 13 | 2-Methylphenol (o-cresol)<br>**CAS #** 95-48-7<br>**Purity** 99% | (Lot SHBH6379) | 1,008.4 | µg/mL | +/- 5.8629<br>+/- 12.0545<br>+/- 19.1845 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 14 | 2,2'-oxybis(1-chloropropane)<br>**CAS #** 108-60-1<br>**Purity** 99% | (Lot 7577400) | 1,007.6 | µg/mL | +/- 5.8583<br>+/- 12.0449<br>+/- 19.1693 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 15 | Acetophenone<br>**CAS #** 98-86-2<br>**Purity** 99% | (Lot STBG8586) | 1,009.4 | µg/mL | +/- 5.8687<br>+/- 12.0664<br>+/- 19.2035 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 16 | 3-Methylphenol (m-cresol)<br>**CAS #** 108-39-4<br>**Purity** 99% | (Lot SHBD0627V) | 504.9 | µg/mL | +/- 2.9423<br>+/- 6.0389<br>+/- 9.6077 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 17 | 4-Methylphenol (p-cresol)<br>**CAS #** 106-44-5<br>**Purity** 99% | (Lot 49396APV) | 501.8 | µg/mL | +/- 2.9242<br>+/- 6.0018<br>+/- 9.5487 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 18 | N-Nitroso-di-n-propylamine<br>**CAS #** 621-64-7<br>**Purity** 99% | (Lot OPAGF) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 19 | Hexachloroethane<br>**CAS #** 67-72-1<br>**Purity** 99% | (Lot 4H3SF) | 1,001.4 | µg/mL | +/- 5.8222<br>+/- 11.9708<br>+/- 19.0513 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 20 | Nitrobenzene<br>**CAS #** 98-95-3<br>**Purity** 99% | (Lot SHBG5577V) | 1,005.9 | µg/mL | +/- 5.8484<br>+/- 12.0246<br>+/- 19.1370 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 21 | Isophorone<br>**CAS #** 78-59-1<br>**Purity** 98% | (Lot MKBG2442V) | 1,009.1 | µg/mL | +/- 5.8670<br>+/- 12.0629<br>+/- 19.1979 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 22 | 2-Nitrophenol<br>**CAS #** 88-75-5<br>**Purity** 99% | (Lot BCBH7602V) | 1,008.7 | µg/mL | +/- 5.8647<br>+/- 12.0581<br>+/- 19.1902 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 23 | 2,4-Dimethylphenol<br>**CAS #** 105-67-9<br>**Purity** 99% | (Lot 10165155) | 1,008.6 | µg/mL | +/- 5.8641<br>+/- 12.0569<br>+/- 19.1883 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 40 | 2-Nitroaniline | | 1,007.5 | µg/mL | +/- 5.8577 | µg/mL | Gravimetric |
| | **CAS #** 88-74-4 | (Lot MKBK7597V) | | | +/- 12.0437 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1674 | µg/mL | Stressed |
| 41 | Acenaphthylene | | 1,007.2 | µg/mL | +/- 5.8557 | µg/mL | Gravimetric |
| | **CAS #** 208-96-8 | (Lot O03R) | | | +/- 12.0395 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- 19.1608 | µg/mL | Stressed |
| 42 | 1,3-Dinitrobenzene | | 1,008.9 | µg/mL | +/- 5.8658 | µg/mL | Gravimetric |
| | **CAS #** 99-65-0 | (Lot BCBN4329V) | | | +/- 12.0605 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1940 | µg/mL | Stressed |
| 43 | Dimethylphthalate | | 1,009.2 | µg/mL | +/- 5.8676 | µg/mL | Gravimetric |
| | **CAS #** 131-11-3 | (Lot 10117699) | | | +/- 12.0640 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1997 | µg/mL | Stressed |
| 44 | 2,6-Dinitrotoluene | | 1,009.1 | µg/mL | +/- 5.8670 | µg/mL | Gravimetric |
| | **CAS #** 606-20-2 | (Lot 1437483V) | | | +/- 12.0628 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1978 | µg/mL | Stressed |
| 45 | 3-Nitroaniline | | 1,009.8 | µg/mL | +/- 5.8711 | µg/mL | Gravimetric |
| | **CAS #** 99-09-2 | (Lot MKBX1283V) | | | +/- 12.0712 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2112 | µg/mL | Stressed |
| 46 | Acenaphthene | | 1,008.1 | µg/mL | +/- 5.8612 | µg/mL | Gravimetric |
| | **CAS #** 83-32-9 | (Lot MKCC8329) | | | +/- 12.0509 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1788 | µg/mL | Stressed |
| 47 | 2,4-Dinitrophenol | | 2,013.2 | µg/mL | +/- 11.7049 | µg/mL | Gravimetric |
| | **CAS #** 51-28-5 | (Lot STBG3580V) | | | +/- 24.0659 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 38.3005 | µg/mL | Stressed |
| 48 | Dibenzofuran | | 1,007.0 | µg/mL | +/- 5.8548 | µg/mL | Gravimetric |
| | **CAS #** 132-64-9 | (Lot MKCD9952) | | | +/- 12.0377 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1579 | µg/mL | Stressed |
| 49 | 4-Nitrophenol | | 2,015.4 | µg/mL | +/- 11.7177 | µg/mL | Gravimetric |
| | **CAS #** 100-02-7 | (Lot MKBK1842V) | | | +/- 24.0922 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 38.3424 | µg/mL | Stressed |
| 50 | 2,4-Dinitrotoluene | | 1,009.5 | µg/mL | +/- 5.8693 | µg/mL | Gravimetric |
| | **CAS #** 121-14-2 | (Lot MKAA0690V) | | | +/- 12.0676 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2054 | µg/mL | Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol | | 1,005.3 | µg/mL | +/- 5.8449 | µg/mL | Gravimetric |
| | **CAS #** 58-90-2 | (Lot PR-30126) | | | +/- 12.0174 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1255 | µg/mL | Stressed |
| 52 | Fluorene | | 1,007.7 | µg/mL | +/- 5.8591 | µg/mL | Gravimetric |
| | **CAS #** 86-73-7 | (Lot 10174662) | | | +/- 12.0465 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- 19.1718 | µg/mL | Stressed |
| 53 | n-Hexadecane (C16) | | 1,009.8 | µg/mL | +/- 5.8711 | µg/mL | Gravimetric |
| | **CAS #** 544-76-3 | (Lot SHBJ3997) | | | +/- 12.0712 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.2112 | µg/mL | Stressed |
| 54 | Diethylphthalate | | 1,007.4 | µg/mL | +/- 5.8571 | µg/mL | Gravimetric |
| | **CAS #** 84-66-2 | (Lot MKCB0810V) | | | +/- 12.0425 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1655 | µg/mL | Stressed |
| 55 | 4-Chlorophenyl phenyl ether | | 1,006.7 | µg/mL | +/- 5.8530 | µg/mL | Gravimetric |
| | **CAS #** 7005-72-3 | (Lot MKBX5225V) | | | +/- 12.0342 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 19.1522 | µg/mL | Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 72 | Chrysene<br>**CAS #** 218-01-9<br>**Purity** 99% | (Lot 012015) | 1,009.4 µg/mL | +/- 5.8687<br>+/- 12.0664<br>+/- 19.2035 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 73 | Bis(2-ethylhexyl)phthalate<br>**CAS #** 117-81-7<br>**Purity** 99% | (Lot MKBZ3868V) | 1,007.3 µg/mL | +/- 5.8565<br>+/- 12.0413<br>+/- 19.1636 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 74 | Di-n-octyl phthalate<br>**CAS #** 117-84-0<br>**Purity** 99% | (Lot 7170200) | 1,007.0 µg/mL | +/- 5.8548<br>+/- 12.0377<br>+/- 19.1579 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 75 | Benzo(b)fluoranthene<br>**CAS #** 205-99-2<br>**Purity** 99% | (Lot 012012B) | 1,003.7 µg/mL | +/- 5.8356<br>+/- 11.9983<br>+/- 19.0951 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 76 | Benzo(k)fluoranthene<br>**CAS #** 207-08-9<br>**Purity** 99% | (Lot 012012K) | 1,005.7 µg/mL | +/- 5.8472<br>+/- 12.0222<br>+/- 19.1332 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 77 | Benzo(a)pyrene<br>**CAS #** 50-32-8<br>**Purity** 99% | (Lot ER071309-02) | 1,008.8 µg/mL | +/- 5.8653<br>+/- 12.0593<br>+/- 19.1921 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 78 | Indeno(1,2,3-cd)pyrene<br>**CAS #** 193-39-5<br>**Purity** 99% | (Lot ER082107-02) | 1,006.9 µg/mL | +/- 5.8542<br>+/- 12.0365<br>+/- 19.1560 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 79 | Dibenz(a,h)anthracene<br>**CAS #** 53-70-3<br>**Purity** 99% | (Lot ER032211-01) | 1,008.7 µg/mL | +/- 5.8647<br>+/- 12.0581<br>+/- 19.1902 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 80 | Benzo(g,h,i)perylene<br>**CAS #** 191-24-2<br>**Purity** 99% | (Lot ER05121401) | 1,000.2 µg/mL | +/- 5.8152<br>+/- 11.9565<br>+/- 19.0285 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| **Solvent:** | Methylene chloride<br>**CAS #** 75-09-2<br>**Purity** 99% | | | | | |

**Specific Reference Material Notes:**

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

$k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 571995 **Lot No.:** A0140111

**Description :** 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** January 31, 2020 **Storage:** 0°C or colder

**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | 1,4-Dioxane<br>**CAS #** 123-91-1<br>**Purity** 99% | (Lot SHBJ5124) | 1,006.6 µg/mL | +/- 5.8525 µg/mL<br>+/- 12.0330 µg/mL<br>+/- 19.1503 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 2 | N-Nitrosodimethylamine<br>**CAS #** 62-75-9<br>**Purity** 99% | (Lot 180322JLM) | 1,005.1 µg/mL | +/- 5.8437 µg/mL<br>+/- 12.0150 µg/mL<br>+/- 19.1217 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Pyridine<br>**CAS #** 110-86-1<br>**Purity** 99% | (Lot SHBC7174V) | 2,012.7 µg/mL | +/- 11.7020 µg/mL<br>+/- 24.0599 µg/mL<br>+/- 38.2910 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Phenol<br>**CAS #** 108-95-2<br>**Purity** 99% | (Lot SHBF9719V) | 1,008.6 µg/mL | +/- 5.8641 µg/mL<br>+/- 12.0569 µg/mL<br>+/- 19.1883 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Aniline<br>**CAS #** 62-53-3<br>**Purity** 99% | (Lot K22Z462) | 1,006.2 µg/mL | +/- 5.8501 µg/mL<br>+/- 12.0282 µg/mL<br>+/- 19.1427 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Bis(2-chloroethyl)ether<br>**CAS #** 111-44-4<br>**Purity** 99% | (Lot SHBD4430V) | 1,009.5 µg/mL | +/- 5.8693 µg/mL<br>+/- 12.0676 µg/mL<br>+/- 19.2054 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 7 | n-Decane (C10)<br>**CAS #** 124-18-5<br>**Purity** 99% | (Lot SHBJ8526) | 1,010.0 µg/mL | +/- 5.8722 µg/mL<br>+/- 12.0736 µg/mL<br>+/- 19.2150 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24 | Bis(2-chloroethoxy)methane<br>**CAS #** 111-91-1<br>**Purity** 99% | (Lot 5670100) | 1,009.6 | µg/mL | +/- 5.8699<br>+/- 12.0688<br>+/- 19.2073 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 25 | 2,4-Dichlorophenol<br>**CAS #** 120-83-2<br>**Purity** 99% | (Lot BCBJ8113V) | 1,009.0 | µg/mL | +/- 5.8664<br>+/- 12.0616<br>+/- 19.1959 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 26 | 1,2,4-Trichlorobenzene<br>**CAS #** 120-82-1<br>**Purity** 99% | (Lot SHBJ0905) | 1,008.4 | µg/mL | +/- 5.8629<br>+/- 12.0545<br>+/- 19.1845 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 27 | Naphthalene<br>**CAS #** 91-20-3<br>**Purity** 99% | (Lot MKBW2603V) | 1,008.3 | µg/mL | +/- 5.8623<br>+/- 12.0533<br>+/- 19.1826 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 28 | 2,6-Dichlorophenol<br>**CAS #** 87-65-0<br>**Purity** 99% | (Lot MKBP8620V) | 1,006.8 | µg/mL | +/- 5.8536<br>+/- 12.0353<br>+/- 19.1541 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 29 | 4-Chloroaniline<br>**CAS #** 106-47-8<br>**Purity** 99% | (Lot BCBJ1580V) | 1,005.3 | µg/mL | +/- 5.8449<br>+/- 12.0174<br>+/- 19.1255 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 30 | Hexachlorobutadiene<br>**CAS #** 87-68-3<br>**Purity** 99% | (Lot J31X013) | 1,008.6 | µg/mL | +/- 5.8641<br>+/- 12.0569<br>+/- 19.1883 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 31 | 4-Chloro-3-methylphenol<br>**CAS #** 59-50-7<br>**Purity** 99% | (Lot STBC7309V) | 1,006.2 | µg/mL | +/- 5.8501<br>+/- 12.0282<br>+/- 19.1427 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 32 | 2-Methylnaphthalene<br>**CAS #** 91-57-6<br>**Purity** 96% | (Lot STBF0201V) | 1,005.5 | µg/mL | +/- 5.8461<br>+/- 12.0199<br>+/- 19.1294 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 33 | 1-Methylnaphthalene<br>**CAS #** 90-12-0<br>**Purity** 98% | (Lot 523400-9) | 1,002.4 | µg/mL | +/- 5.8283<br>+/- 11.9833<br>+/- 19.0712 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene<br>**CAS #** 95-94-3<br>**Purity** 99% | (Lot MKBW7717V) | 1,007.2 | µg/mL | +/- 5.8559<br>+/- 12.0401<br>+/- 19.1617 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 35 | Hexachlorocyclopentadiene<br>**CAS #** 77-47-4<br>**Purity** 99% | (Lot 0012015) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 36 | 2,4,6-Trichlorophenol<br>**CAS #** 88-06-2<br>**Purity** 99% | (Lot STBF3742V) | 1,009.3 | µg/mL | +/- 5.8682<br>+/- 12.0652<br>+/- 19.2016 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 37 | 2,4,5-Trichlorophenol<br>**CAS #** 95-95-4<br>**Purity** 99% | (Lot FHN01) | 1,009.2 | µg/mL | +/- 5.8676<br>+/- 12.0640<br>+/- 19.1997 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 38 | 2-Chloronaphthalene<br>**CAS #** 91-58-7<br>**Purity** 99% | (Lot AJ2UI) | 1,006.8 | µg/mL | +/- 5.8536<br>+/- 12.0353<br>+/- 19.1541 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 39 | Biphenyl<br>**CAS #** 92-52-4<br>**Purity** 99% | (Lot MKBV9808V) | 1,006.3 | µg/mL | +/- 5.8507<br>+/- 12.0294<br>+/- 19.1446 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 56 | 4-Nitroaniline<br>**CAS #** 100-01-6<br>**Purity** 98% | (Lot BCBG4702V) | 1,007.5 | µg/mL | +/- 5.8579<br>+/- 12.0442<br>+/- 19.1681 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 57 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)<br>**CAS #** 534-52-1<br>**Purity** 99% | (Lot B180716L) | 2,012.4 | µg/mL | +/- 11.7003<br>+/- 24.0564<br>+/- 38.2853 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 58 | Diphenylamine<br>**CAS #** 122-39-4<br>**Purity** 99% | (Lot MKBN8295V) | 856.1 | µg/mL | +/- 4.9889<br>+/- 10.2395<br>+/- 16.2906 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 59 | Azobenzene<br>**CAS #** 103-33-3<br>**Purity** 97% | (Lot BCBS6535V) | 1,009.8 | µg/mL | +/- 5.8709<br>+/- 12.0709<br>+/- 19.2106 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 60 | 4-Bromophenyl phenyl ether<br>**CAS #** 101-55-3<br>**Purity** 99% | (Lot STBB9729V) | 1,007.6 | µg/mL | +/- 5.8583<br>+/- 12.0449<br>+/- 19.1693 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 61 | Hexachlorobenzene<br>**CAS #** 118-74-1<br>**Purity** 99% | (Lot LRAB8468) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 62 | Pentachlorophenol<br>**CAS #** 87-86-5<br>**Purity** 99% | (Lot 170717KJA) | 2,005.9 | µg/mL | +/- 11.6625<br>+/- 23.9787<br>+/- 38.1617 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 63 | n-Octadecane (C18)<br>**CAS #** 593-45-3<br>**Purity** 99% | (Lot T7N4E) | 1,004.8 | µg/mL | +/- 5.8420<br>+/- 12.0114<br>+/- 19.1160 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 64 | Phenanthrene<br>**CAS #** 85-01-8<br>**Purity** 99% | (Lot MKCB1762V) | 1,005.3 | µg/mL | +/- 5.8449<br>+/- 12.0174<br>+/- 19.1255 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 65 | Anthracene<br>**CAS #** 120-12-7<br>**Purity** 99% | (Lot MKBR2268V) | 1,006.2 | µg/mL | +/- 5.8501<br>+/- 12.0282<br>+/- 19.1427 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 66 | Carbazole<br>**CAS #** 86-74-8<br>**Purity** 99% | (Lot 7528800) | 1,002.7 | µg/mL | +/- 5.8298<br>+/- 11.9863<br>+/- 19.0761 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 67 | Di-n-butylphthalate<br>**CAS #** 84-74-2<br>**Purity** 99% | (Lot MKBT0244V) | 1,005.6 | µg/mL | +/- 5.8466<br>+/- 12.0210<br>+/- 19.1312 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 68 | Fluoranthene<br>**CAS #** 206-44-0<br>**Purity** 98% | (Lot MKBQ6360V) | 1,002.6 | µg/mL | +/- 5.8294<br>+/- 11.9856<br>+/- 19.0749 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 69 | Pyrene<br>**CAS #** 129-00-0<br>**Purity** 99% | (Lot BCBT5695) | 1,009.3 | µg/mL | +/- 5.8682<br>+/- 12.0652<br>+/- 19.2016 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 70 | Benzyl butyl phthalate<br>**CAS #** 85-68-7<br>**Purity** 99% | (Lot MKCF0058) | 1,006.6 | µg/mL | +/- 5.8525<br>+/- 12.0330<br>+/- 19.1503 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 71 | Benz(a)anthracene<br>**CAS #** 56-55-3<br>**Purity** 96% | (Lot 0012018) | 1,004.8 | µg/mL | +/- 5.8422<br>+/- 12.0118<br>+/- 19.1166 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

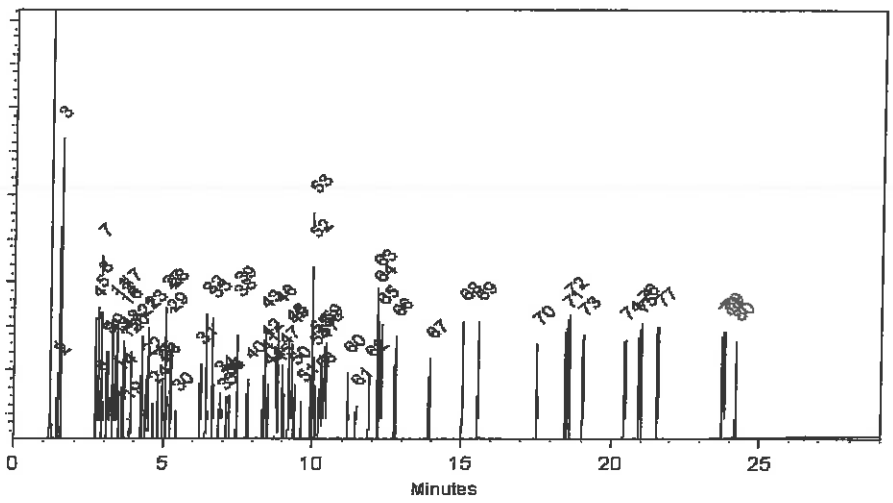
**Carrier Gas:**
hydrogen-constant flow 1.8 mL/min.

**Temp. Program:**
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
340°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mfr Technician

**Date Mixed:** 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 02-Aug-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

# Reagent

# 571995_00090

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 571995 **Lot No.:** A0136052

**Description :** 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2019 **Storage:** 0°C or colder

**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

**CERTIFIED VALUES**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | 1,4-Dioxane<br>**CAS #** 123-91-1 (Lot SHBH5677)<br>**Purity** 99% | 1,002.0 µg/mL | +/- 5.8257 µg/mL<br>+/- 11.9780 µg/mL<br>+/- 19.0628 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | N-Nitrosodimethylamine<br>**CAS #** 62-75-9 (Lot 161108JLM)<br>**Purity** 99% | 1,002.0 µg/mL | +/- 5.8257 µg/mL<br>+/- 11.9780 µg/mL<br>+/- 19.0628 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Pyridine<br>**CAS #** 110-86-1 (Lot SHBC7174V)<br>**Purity** 99% | 2,011.2 µg/mL | +/- 11.6933 µg/mL<br>+/- 24.0420 µg/mL<br>+/- 38.2625 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Phenol<br>**CAS #** 108-95-2 (Lot SHBF1351V)<br>**Purity** 99% | 1,005.1 µg/mL | +/- 5.8439 µg/mL<br>+/- 12.0154 µg/mL<br>+/- 19.1224 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Aniline<br>**CAS #** 62-53-3 (Lot K22Z462)<br>**Purity** 99% | 1,002.6 µg/mL | +/- 5.8292 µg/mL<br>+/- 11.9851 µg/mL<br>+/- 19.0742 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Bis(2-chloroethyl)ether<br>**CAS #** 111-44-4 (Lot SHBD4430V)<br>**Purity** 99% | 1,001.4 µg/mL | +/- 5.8222 µg/mL<br>+/- 11.9708 µg/mL<br>+/- 19.0513 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 7 | n-Decane (C10)<br>**CAS #** 124-18-5 (Lot SHBH3926V)<br>**Purity** 99% | 1,000.7 µg/mL | +/- 5.8180 µg/mL<br>+/- 11.9620 µg/mL<br>+/- 19.0374 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | 2-Chlorophenol | | 1,007.1 | µg/mL | +/- | 5.8552 | µg/mL | Gravimetric |
| | **CAS #** 95-57-8 | (Lot STBF2690V) | | | +/- | 12.0385 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1592 | µg/mL | Stressed |
| 9 | 1,3-Dichlorobenzene | | 1,001.0 | µg/mL | +/- | 5.8199 | µg/mL | Gravimetric |
| | **CAS #** 541-73-1 | (Lot BCBM5751V) | | | +/- | 11.9660 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0437 | µg/mL | Stressed |
| 10 | 1,4-Dichlorobenzene | | 1,004.4 | µg/mL | +/- | 5.8397 | µg/mL | Gravimetric |
| | **CAS #** 106-46-7 | (Lot MKBS4401V) | | | +/- | 12.0067 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1084 | µg/mL | Stressed |
| 11 | Benzyl alcohol | | 1,005.2 | µg/mL | +/- | 5.8443 | µg/mL | Gravimetric |
| | **CAS #** 100-51-6 | (Lot SHBC1850V) | | | +/- | 12.0162 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1236 | µg/mL | Stressed |
| 12 | 1,2-Dichlorobenzene | | 1,001.2 | µg/mL | +/- | 5.8211 | µg/mL | Gravimetric |
| | **CAS #** 95-50-1 | (Lot 68996CMV) | | | +/- | 11.9684 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0475 | µg/mL | Stressed |
| 13 | 2-Methylphenol (o-cresol) | | 1,001.6 | µg/mL | +/- | 5.8234 | µg/mL | Gravimetric |
| | **CAS #** 95-48-7 | (Lot SHBH6379) | | | +/- | 11.9732 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0551 | µg/mL | Stressed |
| 14 | 2,2'-oxybis(1-chloropropane) | | 1,006.7 | µg/mL | +/- | 5.8528 | µg/mL | Gravimetric |
| | **CAS #** 108-60-1 | (Lot 5510800) | | | +/- | 12.0336 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1513 | µg/mL | Stressed |
| 15 | Acetophenone | | 1,005.5 | µg/mL | +/- | 5.8459 | µg/mL | Gravimetric |
| | **CAS #** 98-86-2 | (Lot STBG7113) | | | +/- | 12.0194 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1287 | µg/mL | Stressed |
| 16 | 3-Methylphenol (m-cresol) | | 501.0 | µg/mL | +/- | 2.9196 | µg/mL | Gravimetric |
| | **CAS #** 108-39-4 | (Lot SHBD0627V) | | | +/- | 5.9923 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.5334 | µg/mL | Stressed |
| 17 | 4-Methylphenol (p-cresol) | | 501.7 | µg/mL | +/- | 2.9235 | µg/mL | Gravimetric |
| | **CAS #** 106-44-5 | (Lot 49396APV) | | | +/- | 6.0002 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 9.5461 | µg/mL | Stressed |
| 18 | N-Nitroso-di-n-propylamine | | 1,003.1 | µg/mL | +/- | 5.8323 | µg/mL | Gravimetric |
| | **CAS #** 621-64-7 | (Lot NOPCF) | | | +/- | 11.9915 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0843 | µg/mL | Stressed |
| 19 | Hexachloroethane | | 1,003.4 | µg/mL | +/- | 5.8339 | µg/mL | Gravimetric |
| | **CAS #** 67-72-1 | (Lot 4H3SF) | | | +/- | 11.9947 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0894 | µg/mL | Stressed |
| 20 | Nitrobenzene | | 1,002.3 | µg/mL | +/- | 5.8273 | µg/mL | Gravimetric |
| | **CAS #** 98-95-3 | (Lot SHBG5577V) | | | +/- | 11.9812 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0678 | µg/mL | Stressed |
| 21 | Isophorone | | 1,003.3 | µg/mL | +/- | 5.8334 | µg/mL | Gravimetric |
| | **CAS #** 78-59-1 | (Lot MKBG2442V) | | | +/- | 11.9938 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0879 | µg/mL | Stressed |
| 22 | 2-Nitrophenol | | 1,007.7 | µg/mL | +/- | 5.8587 | µg/mL | Gravimetric |
| | **CAS #** 88-75-5 | (Lot BCBH7602V) | | | +/- | 12.0457 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1706 | µg/mL | Stressed |
| 23 | 2,4-Dimethylphenol | | 1,000.9 | µg/mL | +/- | 5.8191 | µg/mL | Gravimetric |
| | **CAS #** 105-67-9 | (Lot 10165155) | | | +/- | 11.9644 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0412 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 24 | Bis(2-chloroethoxy)methane | | 1,001.3 | µg/mL | +/- | 5.8215 | µg/mL | Gravimetric |
| | **CAS #** 111-91-1 | (Lot 4621000) | | | +/- | 11.9692 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0488 | µg/mL | Stressed |
| 25 | 2,4-Dichlorophenol | | 1,003.1 | µg/mL | +/- | 5.8323 | µg/mL | Gravimetric |
| | **CAS #** 120-83-2 | (Lot BCBH1617V) | | | +/- | 11.9915 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0843 | µg/mL | Stressed |
| 26 | 1,2,4-Trichlorobenzene | | 1,005.0 | µg/mL | +/- | 5.8432 | µg/mL | Gravimetric |
| | **CAS #** 120-82-1 | (Lot SHBJ0905) | | | +/- | 12.0138 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1198 | µg/mL | Stressed |
| 27 | Naphthalene | | 1,000.5 | µg/mL | +/- | 5.8168 | µg/mL | Gravimetric |
| | **CAS #** 91-20-3 | (Lot MKBW2603V) | | | +/- | 11.9596 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0336 | µg/mL | Stressed |
| 28 | 2,6-Dichlorophenol | | 1,001.3 | µg/mL | +/- | 5.8215 | µg/mL | Gravimetric |
| | **CAS #** 87-65-0 | (Lot MKBP8620V) | | | +/- | 11.9692 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0488 | µg/mL | Stressed |
| 29 | 4-Chloroaniline | | 1,001.3 | µg/mL | +/- | 5.8215 | µg/mL | Gravimetric |
| | **CAS #** 106-47-8 | (Lot BCBJ1580V) | | | +/- | 11.9692 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0488 | µg/mL | Stressed |
| 30 | Hexachlorobutadiene | | 1,002.5 | µg/mL | +/- | 5.8284 | µg/mL | Gravimetric |
| | **CAS #** 87-68-3 | (Lot J31X013) | | | +/- | 11.9835 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0716 | µg/mL | Stressed |
| 31 | 4-Chloro-3-methylphenol | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 59-50-7 | (Lot STBC7309V) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 32 | 2-Methylnaphthalene | | 1,007.7 | µg/mL | +/- | 5.8587 | µg/mL | Gravimetric |
| | **CAS #** 91-57-6 | (Lot STBG8884) | | | +/- | 12.0459 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 19.1708 | µg/mL | Stressed |
| 33 | 1-Methylnaphthalene | | 1,005.5 | µg/mL | +/- | 5.8463 | µg/mL | Gravimetric |
| | **CAS #** 90-12-0 | (Lot 525000-9) | | | +/- | 12.0202 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1300 | µg/mL | Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene | | 1,004.3 | µg/mL | +/- | 5.8389 | µg/mL | Gravimetric |
| | **CAS #** 95-94-3 | (Lot MKBW7717V) | | | +/- | 12.0051 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1059 | µg/mL | Stressed |
| 35 | Hexachlorocyclopentadiene | | 1,007.1 | µg/mL | +/- | 5.8552 | µg/mL | Gravimetric |
| | **CAS #** 77-47-4 | (Lot 0012017H) | | | +/- | 12.0385 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1592 | µg/mL | Stressed |
| 36 | 2,4,6-Trichlorophenol | | 1,003.5 | µg/mL | +/- | 5.8342 | µg/mL | Gravimetric |
| | **CAS #** 88-06-2 | (Lot STBF3742V) | | | +/- | 11.9955 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0907 | µg/mL | Stressed |
| 37 | 2,4,5-Trichlorophenol | | 1,006.4 | µg/mL | +/- | 5.8513 | µg/mL | Gravimetric |
| | **CAS #** 95-95-4 | (Lot FHN01) | | | +/- | 12.0306 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1465 | µg/mL | Stressed |
| 38 | 2-Chloronaphthalene | | 1,002.9 | µg/mL | +/- | 5.8308 | µg/mL | Gravimetric |
| | **CAS #** 91-58-7 | (Lot AJ2UI) | | | +/- | 11.9883 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0792 | µg/mL | Stressed |
| 39 | Biphenyl | | 1,001.2 | µg/mL | +/- | 5.8211 | µg/mL | Gravimetric |
| | **CAS #** 92-52-4 | (Lot MKBV9808V) | | | +/- | 11.9684 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0475 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 40 | 2-Nitroaniline | | 1,004.5 | µg/mL | +/- | 5.8401 | µg/mL | Gravimetric |
| | **CAS #** 88-74-4 | (Lot MKBK7597V) | | | +/- | 12.0075 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1097 | µg/mL | Stressed |
| 41 | Acenaphthylene | | 1,006.0 | µg/mL | +/- | 5.8491 | µg/mL | Gravimetric |
| | **CAS #** 208-96-8 | (Lot O03R) | | | +/- | 12.0260 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 19.1392 | µg/mL | Stressed |
| 42 | 1,3-Dinitrobenzene | | 1,001.8 | µg/mL | +/- | 5.8246 | µg/mL | Gravimetric |
| | **CAS #** 99-65-0 | (Lot BCBN4329V) | | | +/- | 11.9756 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0590 | µg/mL | Stressed |
| 43 | Dimethylphthalate | | 1,003.7 | µg/mL | +/- | 5.8358 | µg/mL | Gravimetric |
| | **CAS #** 131-11-3 | (Lot 10117699) | | | +/- | 11.9987 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0957 | µg/mL | Stressed |
| 44 | 2,6-Dinitrotoluene | | 1,000.7 | µg/mL | +/- | 5.8183 | µg/mL | Gravimetric |
| | **CAS #** 606-20-2 | (Lot BCBB8606V) | | | +/- | 11.9628 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0387 | µg/mL | Stressed |
| 45 | 3-Nitroaniline | | 1,005.2 | µg/mL | +/- | 5.8443 | µg/mL | Gravimetric |
| | **CAS #** 99-09-2 | (Lot MKBX1283V) | | | +/- | 12.0162 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1236 | µg/mL | Stressed |
| 46 | Acenaphthene | | 1,005.9 | µg/mL | +/- | 5.8482 | µg/mL | Gravimetric |
| | **CAS #** 83-32-9 | (Lot MKCC8329) | | | +/- | 12.0242 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1363 | µg/mL | Stressed |
| 47 | 2,4-Dinitrophenol | | 2,008.3 | µg/mL | +/- | 11.6766 | µg/mL | Gravimetric |
| | **CAS #** 51-28-5 | (Lot STBF9439V) | | | +/- | 24.0077 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.2080 | µg/mL | Stressed |
| 48 | Dibenzofuran | | 1,005.5 | µg/mL | +/- | 5.8463 | µg/mL | Gravimetric |
| | **CAS #** 132-64-9 | (Lot MKBW2691V) | | | +/- | 12.0202 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1300 | µg/mL | Stressed |
| 49 | 4-Nitrophenol | | 2,009.3 | µg/mL | +/- | 11.6824 | µg/mL | Gravimetric |
| | **CAS #** 100-02-7 | (Lot MKBV0501V) | | | +/- | 24.0197 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.2270 | µg/mL | Stressed |
| 50 | 2,4-Dinitrotoluene | | 1,003.9 | µg/mL | +/- | 5.8366 | µg/mL | Gravimetric |
| | **CAS #** 121-14-2 | (Lot MKAA0690V) | | | +/- | 12.0003 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0983 | µg/mL | Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol | | 1,001.9 | µg/mL | +/- | 5.8253 | µg/mL | Gravimetric |
| | **CAS #** 58-90-2 | (Lot B180305L) | | | +/- | 11.9772 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0615 | µg/mL | Stressed |
| 52 | Fluorene | | 1,002.0 | µg/mL | +/- | 5.8257 | µg/mL | Gravimetric |
| | **CAS #** 86-73-7 | (Lot 10193329) | | | +/- | 11.9780 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0628 | µg/mL | Stressed |
| 53 | n-Hexadecane (C16) | | 1,001.6 | µg/mL | +/- | 5.8234 | µg/mL | Gravimetric |
| | **CAS #** 544-76-3 | (Lot SHBG2582V) | | | +/- | 11.9732 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0551 | µg/mL | Stressed |
| 54 | Diethylphthalate | | 1,003.3 | µg/mL | +/- | 5.8335 | µg/mL | Gravimetric |
| | **CAS #** 84-66-2 | (Lot MKBV9622V) | | | +/- | 11.9939 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0881 | µg/mL | Stressed |
| 55 | 4-Chlorophenyl phenyl ether | | 1,001.1 | µg/mL | +/- | 5.8203 | µg/mL | Gravimetric |
| | **CAS #** 7005-72-3 | (Lot MKBX5225V) | | | +/- | 11.9668 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0450 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 56 | 4-Nitroaniline | | 1,003.1 | µg/mL | +/- | 5.8319 | µg/mL | Gravimetric |
| | **CAS #** 100-01-6 | (Lot BCBG4702V) | | | +/- | 11.9907 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0830 | µg/mL | Stressed |
| 57 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) | | 2,003.7 | µg/mL | +/- | 11.6495 | µg/mL | Gravimetric |
| | **CAS #** 534-52-1 | (Lot LC25844V) | | | +/- | 23.9520 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.1192 | µg/mL | Stressed |
| 58 | Diphenylamine | | 852.3 | µg/mL | +/- | 4.9555 | µg/mL | Gravimetric |
| | **CAS #** 122-39-4 | (Lot MKBN8295V) | | | +/- | 10.1888 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 16.2154 | µg/mL | Stressed |
| 59 | Azobenzene | | 1,005.5 | µg/mL | +/- | 5.8463 | µg/mL | Gravimetric |
| | **CAS #** 103-33-3 | (Lot BCBQ0927V) | | | +/- | 12.0202 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1300 | µg/mL | Stressed |
| 60 | 4-Bromophenyl phenyl ether | | 1,022.3 | µg/mL | +/- | 5.9439 | µg/mL | Gravimetric |
| | **CAS #** 101-55-3 | (Lot STBB9729V) | | | +/- | 12.2210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.4496 | µg/mL | Stressed |
| 61 | Hexachlorobenzene | | 1,002.5 | µg/mL | +/- | 5.8288 | µg/mL | Gravimetric |
| | **CAS #** 118-74-1 | (Lot 7013600) | | | +/- | 11.9843 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0729 | µg/mL | Stressed |
| 62 | Pentachlorophenol | | 2,002.1 | µg/mL | +/- | 11.6406 | µg/mL | Gravimetric |
| | **CAS #** 87-86-5 | (Lot 170306KJA) | | | +/- | 23.9336 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.0900 | µg/mL | Stressed |
| 63 | n-Octadecane (C18) | | 1,002.9 | µg/mL | +/- | 5.8308 | µg/mL | Gravimetric |
| | **CAS #** 593-45-3 | (Lot OGCDK) | | | +/- | 11.9883 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0792 | µg/mL | Stressed |
| 64 | Phenanthrene | | 1,001.1 | µg/mL | +/- | 5.8203 | µg/mL | Gravimetric |
| | **CAS #** 85-01-8 | (Lot MKCB1762V) | | | +/- | 11.9668 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0450 | µg/mL | Stressed |
| 65 | Anthracene | | 1,000.3 | µg/mL | +/- | 5.8156 | µg/mL | Gravimetric |
| | **CAS #** 120-12-7 | (Lot MKBV7759V) | | | +/- | 11.9573 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0298 | µg/mL | Stressed |
| 66 | Carbazole | | 1,000.5 | µg/mL | +/- | 5.8168 | µg/mL | Gravimetric |
| | **CAS #** 86-74-8 | (Lot 6489700) | | | +/- | 11.9596 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0336 | µg/mL | Stressed |
| 67 | Di-n-butylphthalate | | 1,005.7 | µg/mL | +/- | 5.8470 | µg/mL | Gravimetric |
| | **CAS #** 84-74-2 | (Lot MKBT0244V) | | | +/- | 12.0218 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1325 | µg/mL | Stressed |
| 68 | Fluoranthene | | 1,005.5 | µg/mL | +/- | 5.8463 | µg/mL | Gravimetric |
| | **CAS #** 206-44-0 | (Lot MKBQ6360V) | | | +/- | 12.0204 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1302 | µg/mL | Stressed |
| 69 | Pyrene | | 1,005.8 | µg/mL | +/- | 5.8478 | µg/mL | Gravimetric |
| | **CAS #** 129-00-0 | (Lot BCBT5695) | | | +/- | 12.0234 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1351 | µg/mL | Stressed |
| 70 | Benzyl butyl phthalate | | 1,000.3 | µg/mL | +/- | 5.8156 | µg/mL | Gravimetric |
| | **CAS #** 85-68-7 | (Lot MKBZ4553V) | | | +/- | 11.9571 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0295 | µg/mL | Stressed |
| 71 | Benz(a)anthracene | | 1,003.1 | µg/mL | +/- | 5.8323 | µg/mL | Gravimetric |
| | **CAS #** 56-55-3 | (Lot 0012012) | | | +/- | 11.9915 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0842 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 72 | Chrysene | | 1,004.6 | µg/mL | +/- | 5.8408 | µg/mL | Gravimetric |
| | **CAS #** 218-01-9 | (Lot 012015) | | | +/- | 12.0091 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1122 | µg/mL | Stressed |
| 73 | Bis(2-ethylhexyl)phthalate | | 1,002.7 | µg/mL | +/- | 5.8296 | µg/mL | Gravimetric |
| | **CAS #** 117-81-7 | (Lot MKBZ3868V) | | | +/- | 11.9859 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0754 | µg/mL | Stressed |
| 74 | Di-n-octyl phthalate | | 1,007.9 | µg/mL | +/- | 5.8602 | µg/mL | Gravimetric |
| | **CAS #** 117-84-0 | (Lot 6016000) | | | +/- | 12.0489 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1756 | µg/mL | Stressed |
| 75 | Benzo(b)fluoranthene | | 1,003.6 | µg/mL | +/- | 5.8350 | µg/mL | Gravimetric |
| | **CAS #** 205-99-2 | (Lot 012012B) | | | +/- | 11.9971 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0932 | µg/mL | Stressed |
| 76 | Benzo(k)fluoranthene | | 1,006.2 | µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 207-08-9 | (Lot 012017K) | | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1427 | µg/mL | Stressed |
| 77 | Benzo(a)pyrene | | 1,002.1 | µg/mL | +/- | 5.8261 | µg/mL | Gravimetric |
| | **CAS #** 50-32-8 | (Lot ER071309-02) | | | +/- | 11.9788 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0640 | µg/mL | Stressed |
| 78 | Indeno(1,2,3-cd)pyrene | | 1,004.0 | µg/mL | +/- | 5.8373 | µg/mL | Gravimetric |
| | **CAS #** 193-39-5 | (Lot ER082107-02) | | | +/- | 12.0019 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1008 | µg/mL | Stressed |
| 79 | Dibenz(a,h)anthracene | | 1,001.9 | µg/mL | +/- | 5.8249 | µg/mL | Gravimetric |
| | **CAS #** 53-70-3 | (Lot ER032211-01) | | | +/- | 11.9764 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0602 | µg/mL | Stressed |
| 80 | Benzo(g,h,i)perylene | | 1,000.9 | µg/mL | +/- | 5.8195 | µg/mL | Gravimetric |
| | **CAS #** 191-24-2 | (Lot ER05121401) | | | +/- | 11.9652 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0425 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Specific Reference Material Notes:**

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

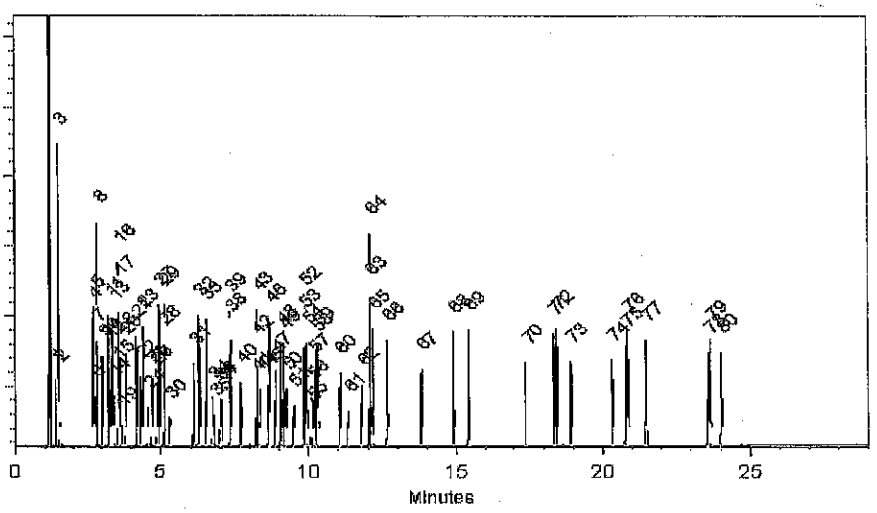
**Carrier Gas:**
hydrogen-constant flow 1.8 mL/min.

**Temp. Program:**
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
340°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician **Date Mixed:** 12-Mar-2018 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 27-Mar-2018

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

# Reagent

# 8081ABResPS_00027

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #2222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32415 **Lot No.:** A0129369

**Description :** Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB #3 2,000 µg/mL, Hexane/Toluene ( 50:50), 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** July 31, 2021 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|---|
| 1 | alpha-BHC | | 2,012.0 µg/mL | | +/- 11.8075 | µg/mL | Gravimetric |
| | **CAS #** 319-84-6 | (Lot 0911942) | | | +/- 91.6450 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 132.3230 | µg/mL | Stressed |
| 2 | gamma-BHC (Lindane) | | 2,010.5 µg/mL | | +/- 11.7987 | µg/mL | Gravimetric |
| | **CAS #** 58-89-9 | (Lot 6357300) | | | +/- 91.5767 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 132.2244 | µg/mL | Stressed |
| 3 | beta-BHC | | 2,011.9 µg/mL | | +/- 11.8072 | µg/mL | Gravimetric |
| | **CAS #** 319-85-7 | (Lot SZBD116XV) | | | +/- 91.6423 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- 132.3191 | µg/mL | Stressed |
| 4 | delta-BHC | | 2,017.0 µg/mL | | +/- 11.8369 | µg/mL | Gravimetric |
| | **CAS #** 319-86-8 | (Lot ER02101401) | | | +/- 91.8728 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 132.6518 | µg/mL | Stressed |
| 5 | Heptachlor | | 2,011.5 µg/mL | | +/- 11.8046 | µg/mL | Gravimetric |
| | **CAS #** 76-44-8 | (Lot NT056422) | | | +/- 91.6223 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 132.2901 | µg/mL | Stressed |
| 6 | Aldrin | | 2,009.0 µg/mL | | +/- 11.7899 | µg/mL | Gravimetric |
| | **CAS #** 309-00-2 | (Lot 5923100) | | | +/- 91.5084 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- 132.1257 | µg/mL | Stressed |
| 7 | Heptachlor epoxide (isomer B) | | 2,007.0 µg/mL | | +/- 11.7782 | µg/mL | Gravimetric |
| | **CAS #** 1024-57-3 | (Lot ER121511-01) | | | +/- 91.4173 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 131.9942 | µg/mL | Stressed |

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

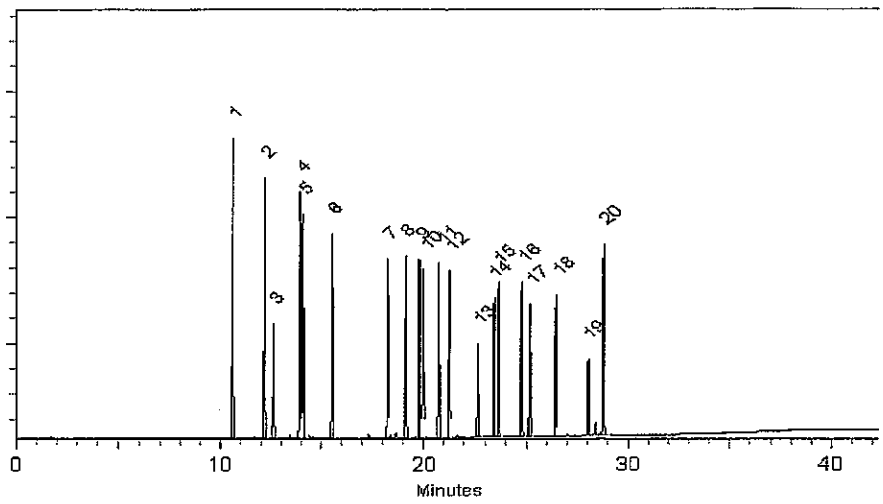
**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
150°C to 300°C
@ 4°C/min. ( hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
300°C

**Det. Type:**
ECD




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

**Date Mixed:** 24-Jul-2017 **Balance:** B442140311

Diane Shaffer - Operations Tech-ARM QC

**Date Passed:** 25-Jul-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | trans-Chlordane | | 2,007.0 | µg/mL | +/- | 11.7782 | µg/mL | Gravimetric |
| | **CAS #** 5103-74-2 | (Lot ER061906-04) | | | +/- | 91.4173 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 131.9942 | µg/mL | Stressed |
| 9 | cis-Chlordane | | 2,006.0 | µg/mL | +/- | 11.7723 | µg/mL | Gravimetric |
| | **CAS #** 5103-71-9 | (Lot ER062410-01) | | | +/- | 91.3717 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 131.9284 | µg/mL | Stressed |
| 10 | Endosulfan I | | 2,013.0 | µg/mL | +/- | 11.8134 | µg/mL | Gravimetric |
| | **CAS #** 959-98-8 | (Lot ER012105-02) | | | +/- | 91.6906 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.3888 | µg/mL | Stressed |
| 11 | 4,4'-DDE | | 2,008.5 | µg/mL | +/- | 11.7870 | µg/mL | Gravimetric |
| | **CAS #** 72-55-9 | (Lot GHYQG) | | | +/- | 91.4856 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.0928 | µg/mL | Stressed |
| 12 | Dieldrin | | 2,006.0 | µg/mL | +/- | 11.7723 | µg/mL | Gravimetric |
| | **CAS #** 60-57-1 | (Lot ER030105-03) | | | +/- | 91.3717 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 131.9284 | µg/mL | Stressed |
| 13 | Endrin | | 2,019.3 | µg/mL | +/- | 11.8503 | µg/mL | Gravimetric |
| | **CAS #** 72-20-8 | (Lot 6429800) | | | +/- | 91.9771 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 132.8025 | µg/mL | Stressed |
| 14 | 4,4'-DDD | | 2,014.9 | µg/mL | +/- | 11.8244 | µg/mL | Gravimetric |
| | **CAS #** 72-54-8 | (Lot ER061207-01) | | | +/- | 91.7762 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 132.5124 | µg/mL | Stressed |
| 15 | Endosulfan II | | 2,007.5 | µg/mL | +/- | 11.7811 | µg/mL | Gravimetric |
| | **CAS #** 33213-65-9 | (Lot ER102407-02) | | | +/- | 91.4401 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.0271 | µg/mL | Stressed |
| 16 | Endrin aldehyde | | 2,008.5 | µg/mL | +/- | 11.7870 | µg/mL | Gravimetric |
| | **CAS #** 7421-93-4 | (Lot ER082306-01) | | | +/- | 91.4856 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.0928 | µg/mL | Stressed |
| 17 | 4,4'-DDT | | 2,009.0 | µg/mL | +/- | 11.7899 | µg/mL | Gravimetric |
| | **CAS #** 50-29-3 | (Lot S37912V) | | | +/- | 91.5084 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.1257 | µg/mL | Stressed |
| 18 | Endosulfan sulfate | | 2,009.3 | µg/mL | +/- | 11.7916 | µg/mL | Gravimetric |
| | **CAS #** 1031-07-8 | (Lot SZBC213XV) | | | +/- | 91.5211 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 132.1441 | µg/mL | Stressed |
| 19 | Methoxychlor | | 2,015.4 | µg/mL | +/- | 11.8273 | µg/mL | Gravimetric |
| | **CAS #** 72-43-5 | (Lot 6429900) | | | +/- | 91.7985 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 132.5446 | µg/mL | Stressed |
| 20 | Endrin ketone | | 2,007.5 | µg/mL | +/- | 11.7811 | µg/mL | Gravimetric |
| | **CAS #** 53494-70-5 | (Lot 160405JLM) | | | +/- | 91.4401 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.0271 | µg/mL | Stressed |

**Solvent:** Hexane/Toluene (50:50)
**CAS #** 110-54-3/108-88-3
**Purity** 99%

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# 8081ABResPS_00030

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32415 **Lot No.:** A0133751

**Description :** Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB #3 2,000 µg/mL, Hexane/Toluene ( 50:50), 1mL/ampul

1 x 1mL
Received 8/13/18
AMB

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** April 30, 2022 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | alpha-BHC<br>**CAS #** 319-84-6 (Lot 0911942)<br>**Purity** 99% | 2,017.5 µg/mL | +/- 11.8398 µg/mL<br>+/- 91.8956 µg/mL<br>+/- 132.6847 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | gamma-BHC (Lindane)<br>**CAS #** 58-89-9 (Lot 6815700)<br>**Purity** 99% | 2,010.5 µg/mL | +/- 11.7987 µg/mL<br>+/- 91.5767 µg/mL<br>+/- 132.2244 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | beta-BHC<br>**CAS #** 319-85-7 (Lot BCBS8692V)<br>**Purity** 98% | 2,014.9 µg/mL | +/- 11.8244 µg/mL<br>+/- 91.7762 µg/mL<br>+/- 132.5124 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | delta-BHC<br>**CAS #** 319-86-8 (Lot ER02101401)<br>**Purity** 99% | 2,010.0 µg/mL | +/- 11.7958 µg/mL<br>+/- 91.5539 µg/mL<br>+/- 132.1915 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Heptachlor<br>**CAS #** 76-44-8 (Lot NT057754)<br>**Purity** 99% | 2,016.5 µg/mL | +/- 11.8340 µg/mL<br>+/- 91.8500 µg/mL<br>+/- 132.6190 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Aldrin<br>**CAS #** 309-00-2 (Lot 6869200)<br>**Purity** 97% | 2,010.8 µg/mL | +/- 11.8006 µg/mL<br>+/- 91.5908 µg/mL<br>+/- 132.2447 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 7 | Heptachlor epoxide (isomer B)<br>**CAS #** 1024-57-3 (Lot ER121511-01)<br>**Purity** 99% | 2,017.5 µg/mL | +/- 11.8398 µg/mL<br>+/- 91.8956 µg/mL<br>+/- 132.6847 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | trans-Chlordane | | 2,012.5 | µg/mL | +/- | 11.8105 | µg/mL | Gravimetric |
| | **CAS #** 5103-74-2 | (Lot ER061906-04) | | | +/- | 91.6678 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.3559 | µg/mL | Stressed |
| 9 | cis-Chlordane | | 2,014.0 | µg/mL | +/- | 11.8193 | µg/mL | Gravimetric |
| | **CAS #** 5103-71-9 | (Lot ER062410-01) | | | +/- | 91.7361 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.4545 | µg/mL | Stressed |
| 10 | Endosulfan I | | 2,010.0 | µg/mL | +/- | 11.7958 | µg/mL | Gravimetric |
| | **CAS #** 959-98-8 | (Lot ER012105-02) | | | +/- | 91.5539 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.1915 | µg/mL | Stressed |
| 11 | 4,4'-DDE | | 2,011.0 | µg/mL | +/- | 11.8017 | µg/mL | Gravimetric |
| | **CAS #** 72-55-9 | (Lot ER011106-01) | | | +/- | 91.5995 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.2572 | µg/mL | Stressed |
| 12 | Dieldrin | | 2,011.0 | µg/mL | +/- | 11.8017 | µg/mL | Gravimetric |
| | **CAS #** 60-57-1 | (Lot 5416800) | | | +/- | 91.5995 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.2572 | µg/mL | Stressed |
| 13 | Endrin | | 2,016.4 | µg/mL | +/- | 11.8331 | µg/mL | Gravimetric |
| | **CAS #** 72-20-8 | (Lot 6898800) | | | +/- | 91.8432 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 132.6091 | µg/mL | Stressed |
| 14 | 4,4'-DDD | | 2,010.5 | µg/mL | +/- | 11.7987 | µg/mL | Gravimetric |
| | **CAS #** 72-54-8 | (Lot HAN02-KNCK) | | | +/- | 91.5767 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.2244 | µg/mL | Stressed |
| 15 | Endosulfan II | | 2,009.5 | µg/mL | +/- | 11.7929 | µg/mL | Gravimetric |
| | **CAS #** 33213-65-9 | (Lot 6815600) | | | +/- | 91.5312 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.1586 | µg/mL | Stressed |
| 16 | Endrin aldehyde | | 2,007.5 | µg/mL | +/- | 11.7811 | µg/mL | Gravimetric |
| | **CAS #** 7421-93-4 | (Lot ER082306-01) | | | +/- | 91.4401 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.0271 | µg/mL | Stressed |
| 17 | 4,4'-DDT | | 2,012.5 | µg/mL | +/- | 11.8105 | µg/mL | Gravimetric |
| | **CAS #** 50-29-3 | (Lot S37912V) | | | +/- | 91.6678 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.3559 | µg/mL | Stressed |
| 18 | Endosulfan sulfate | | 2,020.0 | µg/mL | +/- | 11.8545 | µg/mL | Gravimetric |
| | **CAS #** 1031-07-8 | (Lot BCBR9875V) | | | +/- | 92.0094 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.8491 | µg/mL | Stressed |
| 19 | Methoxychlor | | 2,018.5 | µg/mL | +/- | 11.8457 | µg/mL | Gravimetric |
| | **CAS #** 72-43-5 | (Lot 6736800) | | | +/- | 91.9411 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.7505 | µg/mL | Stressed |
| 20 | Endrin ketone | | 2,015.5 | µg/mL | +/- | 11.8281 | µg/mL | Gravimetric |
| | **CAS #** 53494-70-5 | (Lot 160405JLM) | | | +/- | 91.8045 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 132.5532 | µg/mL | Stressed |

**Solvent:** Hexane/Toluene (50:50)
**CAS #** 110-54-3/108-88-3
**Purity** 99%

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

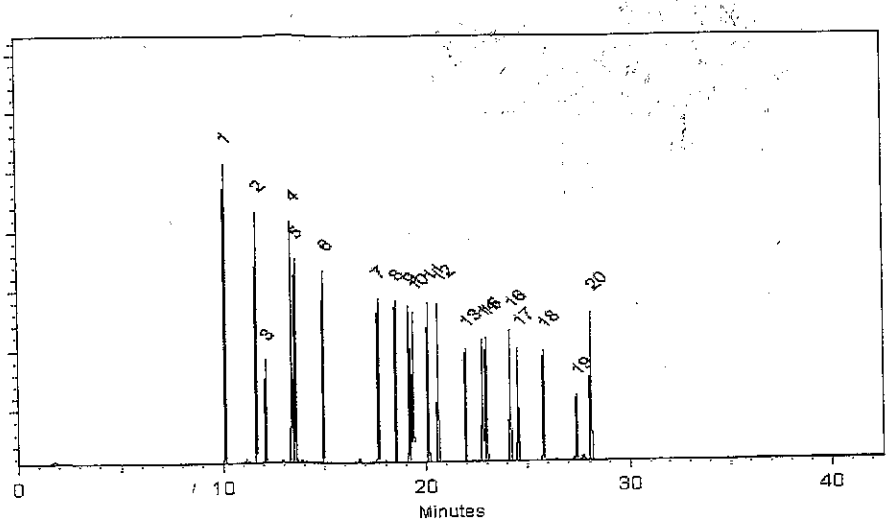
**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
150°C to 300°C
@ 4°C/min. ( hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
300°C

**Det. Type:**
ECD




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

**Date Mixed:** 27-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 02-Jan-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

$k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# 8081EvalBStk2_00020

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

# CERTIFICATE OF ANALYSIS

**Catalog No:** M-8081-DS
**Description:** 4,4'-DDT & Endrin
**Lot:** 217101288
**Solvent:** Hexane
**Hazards:** *Refer to SDS for complete safety information*



**Signal Word: Danger**

**Date Certified:** Oct 30, 2017
**Expiration:** Nov 30, 2018
**Sample Size:** 1 mL
**Components:** 2
**Storage Condition:** Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

| Component | CAS # | Purity % (GC/MS) | Prepared Concentration[1] (µg/mL) | Certified Analyte Concentration[2] (µg/mL) |
|---|---|---|---|---|
| 4,4'-DDT | 50-29-3 | 98.2 | 200.6 | 197.0 |
| Endrin | 72-20-8 | 98.1 | 200.8 | 197.0 |

Received 03.28.18 KDK

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager



*For use in routine laboratory analysis.*

**AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015**

QR-ORG/INO-001
Rev. 4/17

# Reagent

# 8081HCBStkSS_00038

# Certificate of Analysis

## Hexachlorobenzene Solution

**Product Number:** EPA-1125 **Page:** 1 of 1

**Lot Number:** CR-5129 **Lot Issue Date:** 08-Nov-2017 **Expiration Date:** 31-Dec-2021

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

| Analyte | CAS# | Analyte Lot | True Value |
|---|---|---|---|
| hexachlorobenzene | 000118-74-1 | RM03125 | 1003 ± 5 µg/mL |

**Matrix:** acetone

**Storage:** Store at Room Temperature (15° to 30°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ISO 9001
Registered
TUV USA, Inc.



250 SMITH STREET ▪ NORTH KINGSTOWN, RHODE ISLAND 02852 ▪ WWW.ULTRASCI.COM

# Reagent

# 8081ToxPS_00039

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32071 **Lot No.:** A0128388

**Description :** Toxaphene Standard

Toxaphene Standard 5,000 µg/mL, Isooctane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** September 30, 2021 **Storage:** 10°C or colder

## C E R T I F I E D V A L U E S

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Toxaphene | 5,034.0 µg/mL | +/- 29.5423 µg/mL | Gravimetric |
| | **CAS #** 8001-35-2 (Lot NT057448) | | +/- 159.5474 µg/mL | Unstressed |
| | **Purity** ----% | | +/- 208.4220 µg/mL | Stressed |

**Solvent:** Isooctane
**CAS #** 540-84-1
**Purity** 99%

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

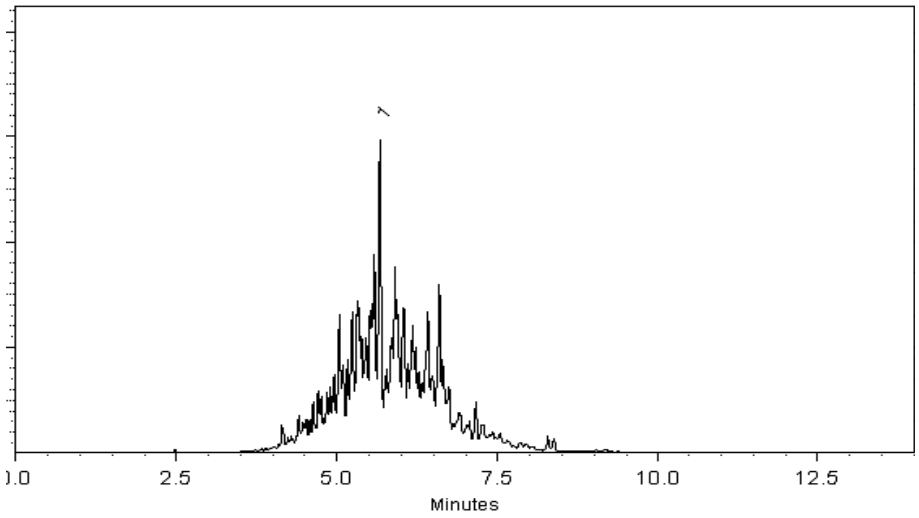
**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
200°C to 300°C
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
300°C

**Det. Type:**
ECD




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician

**Date Mixed:** 12-Jun-2017 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 03-Jul-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# 8082 LCS_00050

Report Date: 01-Oct-2018 10:51:38 Chrom Revision: 2.3 19-Jul-2018 15:14:50

# Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\SGC_P3\20180928-74499.b\09281805.D

Lims ID: 8082 LCS 50 Inj. Date: 28-Sep-2018 11:44:22

Worklist ID: 280-0074499-005 Instrument: SGC_P3

Method: PCB_P3

Detector 1: GC ECD1A

| Compound | Amount Added | Amount Recovered | %Rec | Limits 1 46_PCB_1 |
|---|---|---|---|---|
| 1 PCB-1016 | 200.0 | 180.6 | 90.3 | 40-140 |
| 1 PCB-1016-1 | 200.0 | 156.3 | 78.2 | 40-140 |
| 1 PCB-1016-2 | 200.0 | 191.8 | 95.9 | 40-140 |
| 1 PCB-1016-3 | 200.0 | 185.7 | 92.9 | 40-140 |
| 1 PCB-1016-4 | 200.0 | 185.0 | 92.5 | 40-140 |
| 1 PCB-1016-5 | 200.0 | 184.2 | 92.1 | 40-140 |
| 12 PCB-1260 | 200.0 | 199.0 | 99.5 | 60-130 |
| 12 PCB-1260-1 | 200.0 | 187.2 | 93.6 | 60-130 |
| 12 PCB-1260-2 | 200.0 | 183.9 | 91.9 | 60-130 |
| 12 PCB-1260-3 | 200.0 | 209.6 | 104.8 | 60-130 |
| 12 PCB-1260-4 | 200.0 | 212.0 | 106.0 | 60-130 |
| 12 PCB-1260-5 | 200.0 | 202.3 | 101.2 | 60-130 |

Detector 2: GC ECD2B

| Compound | Amount Added | Amount Recovered | %Rec | Limits 1 46_PCB_1 |
|---|---|---|---|---|
| 1 PCB-1016 | 200.0 | 178.9 | 89.4 | 40-140 |
| 1 PCB-1016-1 | 200.0 | 184.9 | 92.4 | 40-140 |
| 1 PCB-1016-2 | 200.0 | 180.4 | 90.2 | 40-140 |
| 1 PCB-1016-3 | 200.0 | 174.7 | 87.4 | 40-140 |
| 1 PCB-1016-4 | 200.0 | 178.7 | 89.4 | 40-140 |
| 1 PCB-1016-5 | 200.0 | 175.5 | 87.7 | 40-140 |
| 12 PCB-1260 | 200.0 | 173.4 | 86.7 | 60-130 |
| 12 PCB-1260-1 | 200.0 | 166.1 | 83.0 | 60-130 |
| 12 PCB-1260-2 | 200.0 | 155.3 | 77.6 | 60-130 |
| 12 PCB-1260-3 | 200.0 | 182.1 | 91.0 | 60-130 |
| 12 PCB-1260-4 | 200.0 | 183.7 | 91.9 | 60-130 |
| 12 PCB-1260-5 | 200.0 | 179.6 | 89.8 | 60-130 |

Samples for Limit Group: 1, Lims Prep Method: 3546_PCB_1YR

| | | |
|---|---|---|
| 280-114730-A-1-A | 280-114730-A-2-A | 280-114730-A-3-A |
| 280-114730-A-4-A | 280-114730-A-5-A | 280-114730-A-6-A |
| 280-114730-A-7-A | 280-114730-A-8-A | 280-114730-A-9-A |
| 280-114730-A-10-A | 280-114730-A-12-A | 280-114730-A-13-A |
| 280-114730-A-14-A | 280-114730-A-15-A | 280-114730-A-16-A |
| 280-114730-A-17-A | 280-114730-A-18-A | 280-114730-A-20-A |

# Reagent

# 8082LCSSTOCK_00038

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32039 **Lot No.:** A0119290

**Description :** Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** August 31, 2022 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

**CERTIFIED VALUES**

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | Aroclor 1016<br>**CAS #** 12674-11-2<br>**Purity** ----% | (Lot W-125-01) | 1,005.0 µg/mL | +/- 5.8567<br>+/- 31.8448<br>+/- 41.6041 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | Aroclor 1260<br>**CAS #** 11096-82-5<br>**Purity** ----% | (Lot W-129-06) | 1,007.2 µg/mL | +/- 5.8695<br>+/- 31.9145<br>+/- 41.6951 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

# 8082LCSSTOCK_00039

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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# CERTIFIED REFERENCE MATERIAL

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Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32039 **Lot No.:** A0119290

**Description :** Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** August 31, 2022 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | Aroclor 1016<br>**CAS #** 12674-11-2<br>**Purity** ----% | (Lot W-125-01) | 1,005.0 µg/mL | +/- 5.8567<br>+/- 31.8448<br>+/- 41.6041 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | Aroclor 1260<br>**CAS #** 11096-82-5<br>**Purity** ----% | (Lot W-129-06) | 1,007.2 µg/mL | +/- 5.8695<br>+/- 31.9145<br>+/- 41.6951 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

# 8270_LCS_Main_00060

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING




# Reagent ID: 8270_LCS_Main_00060

| | | | |
|---|---|---|---|
| | | Expiration Date: | 05/31/2019 |
| Description: | USE IN CONJUCTION WITH 8270_LCS_S | Laboratory: | TestAmerica Denver |
| No. of Bottles: | 4 | Prepared By: | Becker, Chad B |
| Storage Location: | North Prep | Solvent: | P&T Methanol |
| Reagent Volume: | 500.000 mL | Solvent Lot: | MethanolP&T_00214 |
| Creation Date: | 12/06/2018 | | |
| Open Date: | | | |
| Container(s): | 5463425, 5463426, 5463427, 5463428 | | |

Comment:
Make full volume.Place all stocks in a sonication bath for 5 minutes before use.
Dilute to 500mL in P&T MeOH
40mL of MS-570666 or 571995 "8270 List 1 Std 1 MegaMix"
20mL of MS-569731 "Benzoic Acid"
10mL of "OP-572556" HCP
1 year expiration
Exchange /MeCl2 verification
All Standards in fridge.

## Reagent Analyte Information

| Analyte | Source ID | Source Exp. Date | Source Conc. | Source Conc. Units | Final Conc. | Final Conc. Units |
|---|---|---|---|---|---|---|
| 1,1'-Biphenyl | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 1,2,4,5-Tetrachlorobenzene | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 1,2,4-Trichlorobenzene | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 1,2-Dichlorobenzene | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 1,2-Diphenylhydrazine | 571995_00054 | 01/31/2020 | 1010.97500 | ug/mL | 80.87796 | ug/mL |
| 1,3-Dichlorobenzene | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 1,3-Dinitrobenzene | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 1,4-Dichlorobenzene | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 1,4-Dioxane | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 1-Methylnaphthalene | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 2,2'-oxybis[1-chloropropane] | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 2,3,4,6-Tetrachlorophenol | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 2,4,5-Trichlorophenol | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 2,4,6-Trichlorophenol | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 2,4-Dichlorophenol | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |
| 2,4-Dimethylphenol | 571995_00054 | 01/31/2020 | 1000.00000 | ug/mL | 80.00000 | ug/mL |

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\chromna\Denver\ChromData\SMS_Y\20181210-77018.b\Y22464.D

Lims ID: 8270_LCS_Main_00060 Inj. Date: 10-Dec-2018 19:31:30

Worklist ID: 280-0077018-011 Instrument: SMS_Y

Method: SMSY_8270C

| Compound | Amount Added | Amount Recovered | %Rec | Limits 1 3520C | Limits 2 3520C |
|---|---|---|---|---|---|
| 15 1,4-Dioxane | 80.0 | 74.2 | 92.7 | 40-110 | |
| 17 N-Nitrosodimethylamine | 80.0 | 77.3 | 96.7 | 48-121 | |
| 18 Pyridine | 160.0 | 146.7 | 91.7 | 34-112 | |
| 28 Phenol | 80.0 | 79.1 | 98.8 | 50-127 | 10-115 |
| 30 Aniline | 80.0 | 73.0 | 91.3 | 34-106 | |
| 31 Bis(2-chloroethyl)ether | 80.0 | 82.2 | 102.7 | 53-132 | |
| 34 2-Chlorophenol | 80.0 | 76.3 | 95.4 | 54-124 | |
| 35 n-Decane | 80.0 | 76.0 | 95.0 | 14-120 | |
| 37 1,3-Dichlorobenzene | 80.0 | 75.4 | 94.3 | 31-124 | |
| 38 1,4-Dichlorobenzene | 80.0 | 75.1 | 93.9 | 34-123 | |
| 39 Benzyl alcohol | 80.0 | 72.7 | 90.9 | 54-124 | |
| 40 1,2-Dichlorobenzene | 80.0 | 74.7 | 93.3 | 36-123 | |
| 41 2-Methylphenol | 80.0 | 77.7 | 97.2 | 55-123 | 40-110 |
| 43 2,2'-oxybis[1-chloropro | 80.0 | 77.5 | 96.8 | 44-132 | |
| 44 Indene | 80.0 | 78.3 | 97.9 | 49-111 | |
| 46 3-Methylphenol | 80.0 | 78.7 | 98.4 | 51-124 | |
| 47 4-Methylphenol | 80.0 | 78.7 | 98.4 | 51-124 | 30-110 |
| 48 3 & 4 Methylphenol | 80.0 | 78.7 | 98.4 | 51-124 | |
| 50 N-Nitrosodi-n-propylami | 80.0 | 77.1 | 96.4 | 57-117 | |
| 51 Acetophenone | 80.0 | 76.6 | 95.7 | 46-127 | |
| 53 Hexachloroethane | 80.0 | 74.0 | 92.5 | 27-123 | |
| 54 Nitrobenzene | 80.0 | 75.8 | 94.8 | 59-117 | |
| 57 Isophorone | 80.0 | 76.3 | 95.4 | 58-111 | |
| 58 2-Nitrophenol | 80.0 | 75.0 | 93.7 | 61-121 | |
| 59 2,4-Dimethylphenol | 80.0 | 76.1 | 95.1 | 33-117 | |
| 63 Bis(2-chloroethoxy)meth | 80.0 | 74.9 | 93.7 | 62-114 | |
| 64 Benzoic acid | 80.0 | 71.9 | 89.9 | 41-111 | |
| 68 2,4-Dichlorophenol | 80.0 | 77.0 | 96.3 | 62-119 | |
| 69 1,2,4-Trichlorobenzene | 80.0 | 73.3 | 91.6 | 44-117 | |
| 71 Naphthalene | 80.0 | 76.1 | 95.2 | 50-119 | |
| 72 4-Chloroaniline | 80.0 | 71.5 | 89.3 | 30-99 | |
| 73 2,6-Dichlorophenol | 80.0 | 75.8 | 94.8 | 63-118 | |
| 75 Hexachlorobutadiene | 80.0 | 76.5 | 95.6 | 36-118 | |
| 83 4-Chloro-3-methylphenol | 80.0 | 77.7 | 97.2 | 65-121 | |
| 86 2-Methylnaphthalene | 80.0 | 76.1 | 95.2 | 53-119 | 45-105 |
| 88 1-Methylnaphthalene | 80.0 | 76.8 | 96.0 | 54-116 | |
| 89 1,2,4,5-Tetrachlorobenz | 80.0 | 73.7 | 92.2 | 57-117 | |
| 90 Hexachlorocyclopentadie | 160.0 | 148.8 | 93.0 | 10-106 | |
| 92 2,4,6-Trichlorophenol | 80.0 | 78.1 | 97.6 | 60-137 | |
| 94 2,4,5-Trichlorophenol | 80.0 | 75.9 | 94.8 | 60-129 | |
| 98 1,1'-Biphenyl | 80.0 | 73.9 | 92.4 | 52-130 | |

Preliminary Report

Sample Path: \\chromna\Denver\ChromData\SMS_Y\20181210-77018.b\Y22464.D

| Compound | Amount Added | Amount Recovered | %Rec | Limits 1 3520C | Limits 2 3520C |
|---|---|---|---|---|---|
| 99 2-Chloronaphthalene | 80.0 | 73.2 | 91.5 | 51-128 | |
| 101 2-Nitroaniline | 80.0 | 75.6 | 94.4 | 57-133 | |
| 104 Dimethyl phthalate | 80.0 | 74.8 | 93.6 | 59-131 | |
| 105 1,3-Dinitrobenzene | 80.0 | 78.7 | 98.3 | 65-135 | |
| 106 2,6-Dinitrotoluene | 80.0 | 76.5 | 95.7 | 65-135 | |
| 107 Acenaphthylene | 80.0 | 73.3 | 91.6 | 55-123 | |
| 108 3-Nitroaniline | 80.0 | 71.4 | 89.2 | 27-111 | |
| 109 Acenaphthene | 80.0 | 73.0 | 91.2 | 54-129 | |
| 111 2,4-Dinitrophenol | 160.0 | 145.3 | 90.8 | 56-121 | |
| 112 4-Nitrophenol | 160.0 | 150.3 | 93.9 | 50-140 | |
| 114 2,4-Dinitrotoluene | 80.0 | 75.1 | 93.9 | 65-135 | |
| 116 Dibenzofuran | 80.0 | 74.6 | 93.2 | 56-128 | |
| 119 2,3,4,6-Tetrachlorophen | 80.0 | 75.8 | 94.7 | 64-128 | |
| 123 Diethyl phthalate | 80.0 | 74.4 | 93.0 | 60-133 | |
| 124 Hexadecane | 80.0 | 76.6 | 95.8 | 47-129 | |
| 127 4-Chlorophenyl phenyl e | 80.0 | 75.1 | 93.9 | 56-130 | |
| 129 Fluorene | 80.0 | 75.4 | 94.3 | 51-133 | |
| 130 4-Nitroaniline | 80.0 | 74.4 | 92.9 | 54-128 | |
| 131 4,6-Dinitro-2-methylphe | 160.0 | 169.2 | 105.7 | 63-122 | |
| 134 Diphenylamine | 68.0 | 63.4 | 93.2 | 60-124 | |
| 135 N-Nitrosodiphenylamine | 80.0 | 74.4 | 92.9 | 63-116 | |
| 136 1,2-Diphenylhydrazine | 80.9 | 78.1 | 96.6 | 55-128 | |
| 137 Azobenzene | 80.0 | 77.3 | 96.6 | 55-128 | |
| 148 4-Bromophenyl phenyl et | 80.0 | 74.5 | 93.2 | 65-115 | |
| 151 Hexachlorobenzene | 80.0 | 76.0 | 95.0 | 65-114 | |
| 155 Pentachlorophenol | 160.0 | 165.4 | 103.4 | 56-115 | |
| 158 n-Octadecane | 80.0 | 77.3 | 96.6 | | |
| 161 Phenanthrene | 80.0 | 73.9 | 92.3 | 63-119 | |
| 162 Anthracene | 80.0 | 75.1 | 93.8 | 65-116 | |
| 164 Carbazole | 80.0 | 74.2 | 92.7 | 68-116 | |
| 168 Di-n-butyl phthalate | 80.0 | 75.7 | 94.7 | 65-118 | |
| 175 Fluoranthene | 80.0 | 75.6 | 94.5 | 65-118 | |
| 178 Pyrene | 80.0 | 69.9 | 87.4 | 59-124 | |
| 187 Butyl benzyl phthalate | 80.0 | 71.2 | 88.9 | 64-121 | |
| 191 Benzo[a]anthracene | 80.0 | 68.3 | 85.3 | 63-120 | |
| 192 Chrysene | 80.0 | 72.6 | 90.7 | 65-122 | |
| 193 Bis(2-ethylhexyl) phtha | 80.0 | 74.9 | 93.6 | 61-123 | 40-125 |
| 195 Di-n-octyl phthalate | 80.0 | 74.6 | 93.2 | 56-119 | |
| 196 Benzo[b]fluoranthene | 80.0 | 72.9 | 91.2 | 64-122 | |
| 198 Benzo[k]fluoranthene | 80.0 | 72.9 | 91.1 | 69-125 | |
| 201 Benzo[a]pyrene | 80.0 | 73.4 | 91.7 | 62-114 | |
| 207 Indeno[1,2,3-cd]pyrene | 80.0 | 79.1 | 98.9 | 53-116 | |
| 208 Dibenz(a,h)anthracene | 80.0 | 76.9 | 96.2 | 60-120 | |
| 209 Benzo[g,h,i]perylene | 80.0 | 74.5 | 93.1 | 60-122 | |

# Reagent

# 8270Surrogate_00130

# Preliminary Report

TestAmerica Denver

Recovery Report

Data File: \\chromna\Denver\ChromData\SMS_G6\20181219-77367.b\G6_36905.D
Lims ID: 8270Surrogate_00130
Client ID:
Sample Type: Client
Inject. Date: 19-Dec-2018 19:06:30 ALS Bottle#: 9 Worklist Smp#: 33
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 8270Surrogate_00130
Operator ID: HOEFLERA Instrument ID: SMS_G6

Method: \\chromna\Denver\ChromData\SMS_G6\20181219-77367.b\SMSG6_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 20-Dec-2018 11:06:02 Calib Date: 29-Nov-2018 12:35:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SMS_G6\20181129-76654.b\G6_36542.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 7 2-Fluorophenol | 100.0 | 89.7 | 89.69 |
| $ 8 Phenol-d5 | 100.0 | 87.9 | 87.94 |
| $ 9 Nitrobenzene-d5 | 100.0 | 86.4 | 86.40 |
| $ 11 2-Fluorobiphenyl | 100.0 | 83.3 | 83.30 |
| $ 12 2,4,6-Tribromophenol | 100.0 | 88.0 | 87.97 |
| $ 13 Terphenyl-d14 | 100.0 | 84.8 | 84.76 |

Fridge 4

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8270Surrogate_00130

# Reagent ID: 8270Surrogate_00130

| | | | |
|---|---|---|---|
| Description: | 8270 Surrogate 100ug/ml | Expiration Date: | 12/12/2019 |
| No. of Bottles: | 2 | Laboratory: | TestAmerica Denver |
| Storage Location: | North Prep | Prepared By: | Rood, Coady M |
| Reagent Volume: | 1000.000 mL | Solvent: | ACETONE |
| Creation Date: | 12/17/2018 | Solvent Lot: | Acetone_00250 |
| Open Date: | | | |
| Container(s): | 5484310, 5484311 | | |
| Comment: | Sonicate 8270SurrStkHL 5 mins before use.<br>Take 20mL of 8270SurstkHL and dilute to 1000mL in acetone.<br>One year expiration date.<br>Split into 4x250mL bottles. Requires solvent exchange to MeCl2 prior to submission for verification. | | |

## Reagent Analyte Information

| Analyte | Source ID | Source Exp. Date | Source Conc. | Source Conc. Units | Final Conc. | Final Conc. Units |
|---|---|---|---|---|---|---|
| 2,4,6 - Tribromophenol | 8270SurStkHL_00299 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2,4,6-Tribromophenol | 8270SurStkHL_00299 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2-Fluorobiphenyl | 8270SurStkHL_00299 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2-Fluorophenol | 8270SurStkHL_00299 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Nitrobenzene-d5 | 8270SurStkHL_00299 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Phenol-d5 | 8270SurStkHL_00299 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Phenol-d6 | 8270SurStkHL_00299 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Terphenyl-d14 | 8270SurStkHL_00299 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2,4,6 - Tribromophenol | 8270SurStkHL_00300 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2,4,6-Tribromophenol | 8270SurStkHL_00300 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2-Fluorobiphenyl | 8270SurStkHL_00300 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2-Fluorophenol | 8270SurStkHL_00300 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Nitrobenzene-d5 | 8270SurStkHL_00300 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Phenol-d5 | 8270SurStkHL_00300 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Phenol-d6 | 8270SurStkHL_00300 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Terphenyl-d14 | 8270SurStkHL_00300 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2,4,6 - Tribromophenol | 8270SurStkHL_00305 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING




## Reagent ID: 8270Surrogate_00130

| | | | |
|---|---|---|---|
| Description: | 8270 Surrogate 100ug/ml | Expiration Date: | 12/12/2019 |
| No. of Bottles: | 2 | Laboratory: | TestAmerica Denver |
| Storage Location: | North Prep | Prepared By: | Rood, Coady M |
| Reagent Volume: | 1000.000 mL | Solvent: | ACETONE |
| Creation Date: | 12/17/2018 | Solvent Lot: | Acetone_00250 |
| Open Date: | | | |
| Container(s): | 5484310, 5484311 | | |
| Comment: | Sonicate 8270SurrStkHL 5 mins before use.<br>Take 20mL of 8270SurstkHL and dilute to 1000mL in acetone.<br>One year expiration date.<br>Split into 4x250mL bottles. Requires solvent exchange to MeCl2 prior to submission for verification. | | |

### Reagent Analyte Information

| Analyte | Source ID | Source Exp. Date | Source Conc. | Source Conc. Units | Final Conc. | Final Conc. Units |
|---|---|---|---|---|---|---|
| 2,4,6-Tribromophenol | 8270SurStkHL_00305 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2-Fluorobiphenyl | 8270SurStkHL_00305 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2-Fluorophenol | 8270SurStkHL_00305 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Nitrobenzene-d5 | 8270SurStkHL_00305 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Phenol-d5 | 8270SurStkHL_00305 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Phenol-d6 | 8270SurStkHL_00305 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Terphenyl-d14 | 8270SurStkHL_00305 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2,4,6 - Tribromophenol | 8270SurStkHL_00306 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2,4,6-Tribromophenol | 8270SurStkHL_00306 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2-Fluorobiphenyl | 8270SurStkHL_00306 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| 2-Fluorophenol | 8270SurStkHL_00306 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Nitrobenzene-d5 | 8270SurStkHL_00306 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Phenol-d5 | 8270SurStkHL_00306 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Phenol-d6 | 8270SurStkHL_00306 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |
| Terphenyl-d14 | 8270SurStkHL_00306 | 09/30/2023 | 5000.00000 | ug/mL | 100.00000 | ug/mL |

## Source Reagents

| Reagent | Description | Type | Expiration | Vendor | Vendor Lot # | Vendor Cat Lot # | Volume Used | Volume Units |
|---|---|---|---|---|---|---|---|---|
| 8270SurStkHL_00299 | 5000 ug/ml of each compound | ASTD | 09/30/23 | Restek | A01411581 | 567685 | 5.00000 | mL |
| 8270SurStkHL_00300 | 5000 ug/ml of each compound | ASTD | 09/30/23 | Restek | A01411581 | 567685 | 5.00000 | mL |
| 8270SurStkHL_00305 | 5000 ug/ml of each compound | ASTD | 09/30/23 | Restek | A01411581 | 567685 | 5.00000 | mL |
| 8270SurStkHL_00306 | 5000 ug/ml of each compound | ASTD | 09/30/23 | Restek | A01411581 | 567685 | 5.00000 | mL |

# Reagent

# 8270SurStkHL_00299

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Tech Tips:**
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

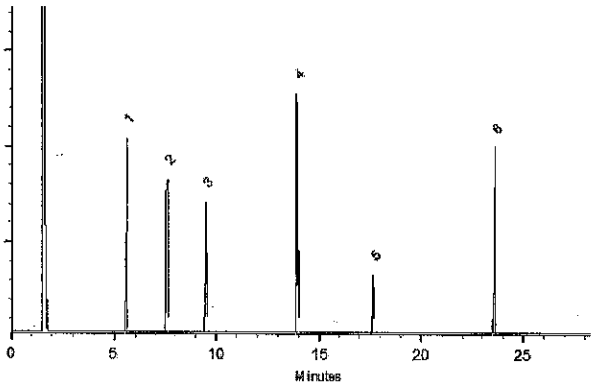
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Fallon - Mix Technician

**Date Mixed:** 14-Sep-2018 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM GC

**Date Passed:** 18-Sep-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

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# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 567685 **Lot No.:** A0141581

**Description :** 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2023 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use.

**CERTIFIED VALUES**

| Elution Order | Compound | | Grav. Conc. (weight/volume) | | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|---|
| 1 | 2-Fluorophenol<br>**CAS #** 367-12-4<br>**Purity** 99% | (Lot STBF3761V) | 5,002.0 | µg/mL | +/- 29.0821<br>+/- 145.9751<br>+/- 177.1352 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | Phenol-d5<br>**CAS #** 4165-62-2<br>**Purity** 99% | (Lot CD-105) | 5,000.6 | µg/mL | +/- 29.0739<br>+/- 145.9343<br>+/- 177.0856 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Nitrobenzene-d5<br>**CAS #** 4165-60-0<br>**Purity** 99% | (Lot PR-29603) | 5,006.0 | µg/mL | +/- 29.1053<br>+/- 146.0919<br>+/- 177.2768 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | 2-Fluorobiphenyl<br>**CAS #** 321-60-8<br>**Purity** 99% | (Lot M09E045) | 5,000.8 | µg/mL | +/- 29.0751<br>+/- 145.9401<br>+/- 177.0927 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | 2,4,6-Tribromophenol<br>**CAS #** 118-79-6<br>**Purity** 99% | (Lot 29699MJV) | 5,000.8 | µg/mL | +/- 29.0751<br>+/- 145.9401<br>+/- 177.0927 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | p-Terphenyl-d14<br>**CAS #** 1718-51-0<br>**Purity** 99% | (Lot PR-21037) | 5,001.0 | µg/mL | +/- 29.0762<br>+/- 145.9459<br>+/- 177.0998 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

# Reagent

# 8270SurStkHL_00300

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Tech Tips:**
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

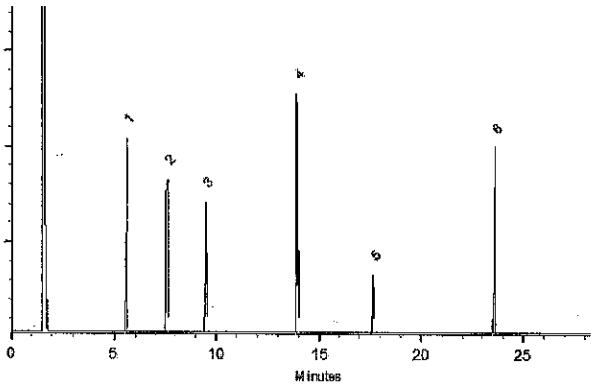
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Fallon - Mix Technician

**Date Mixed:** 14-Sep-2018 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM GC

**Date Passed:** 18-Sep-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 567685 **Lot No.:** A0141581

**Description :** 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2023 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use.

**CERTIFIED VALUES**

| Elution Order | Compound | | Grav. Conc. (weight/volume) | | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|---|
| 1 | 2-Fluorophenol<br>**CAS #** 367-12-4<br>**Purity** 99% | (Lot STBF3761V) | 5,002.0 | µg/mL | +/- 29.0821<br>+/- 145.9751<br>+/- 177.1352 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | Phenol-d5<br>**CAS #** 4165-62-2<br>**Purity** 99% | (Lot CD-105) | 5,000.6 | µg/mL | +/- 29.0739<br>+/- 145.9343<br>+/- 177.0856 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Nitrobenzene-d5<br>**CAS #** 4165-60-0<br>**Purity** 99% | (Lot PR-29603) | 5,006.0 | µg/mL | +/- 29.1053<br>+/- 146.0919<br>+/- 177.2768 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | 2-Fluorobiphenyl<br>**CAS #** 321-60-8<br>**Purity** 99% | (Lot M09E045) | 5,000.8 | µg/mL | +/- 29.0751<br>+/- 145.9401<br>+/- 177.0927 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | 2,4,6-Tribromophenol<br>**CAS #** 118-79-6<br>**Purity** 99% | (Lot 29699MJV) | 5,000.8 | µg/mL | +/- 29.0751<br>+/- 145.9401<br>+/- 177.0927 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | p-Terphenyl-d14<br>**CAS #** 1718-51-0<br>**Purity** 99% | (Lot PR-21037) | 5,001.0 | µg/mL | +/- 29.0762<br>+/- 145.9459<br>+/- 177.0998 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

# Reagent

# 8270SurStkHL_00305

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Tech Tips:**
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

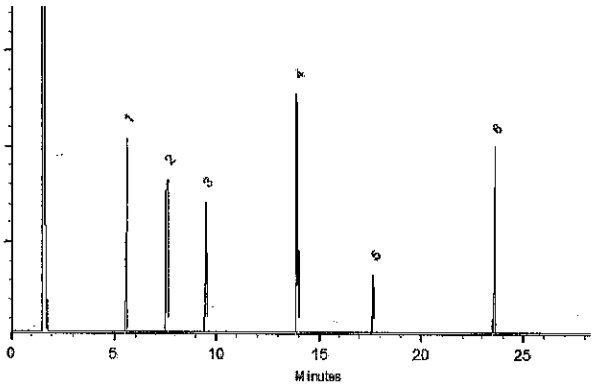
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Fallon - Mix Technician

**Date Mixed:** 14-Sep-2018 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM GC

**Date Passed:** 18-Sep-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 567685 **Lot No.:** A0141581

**Description :** 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2023 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use.

**CERTIFIED VALUES**

| Elution Order | Compound | | Grav. Conc. (weight/volume) | | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|---|
| 1 | 2-Fluorophenol<br>**CAS #** 367-12-4<br>**Purity** 99% | (Lot STBF3761V) | 5,002.0 | µg/mL | +/- 29.0821<br>+/- 145.9751<br>+/- 177.1352 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | Phenol-d5<br>**CAS #** 4165-62-2<br>**Purity** 99% | (Lot CD-105) | 5,000.6 | µg/mL | +/- 29.0739<br>+/- 145.9343<br>+/- 177.0856 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Nitrobenzene-d5<br>**CAS #** 4165-60-0<br>**Purity** 99% | (Lot PR-29603) | 5,006.0 | µg/mL | +/- 29.1053<br>+/- 146.0919<br>+/- 177.2768 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | 2-Fluorobiphenyl<br>**CAS #** 321-60-8<br>**Purity** 99% | (Lot M09E045) | 5,000.8 | µg/mL | +/- 29.0751<br>+/- 145.9401<br>+/- 177.0927 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | 2,4,6-Tribromophenol<br>**CAS #** 118-79-6<br>**Purity** 99% | (Lot 29699MJV) | 5,000.8 | µg/mL | +/- 29.0751<br>+/- 145.9401<br>+/- 177.0927 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | p-Terphenyl-d14<br>**CAS #** 1718-51-0<br>**Purity** 99% | (Lot PR-21037) | 5,001.0 | µg/mL | +/- 29.0762<br>+/- 145.9459<br>+/- 177.0998 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

# Reagent

# 8270SurStkHL_00306

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Tech Tips:**
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

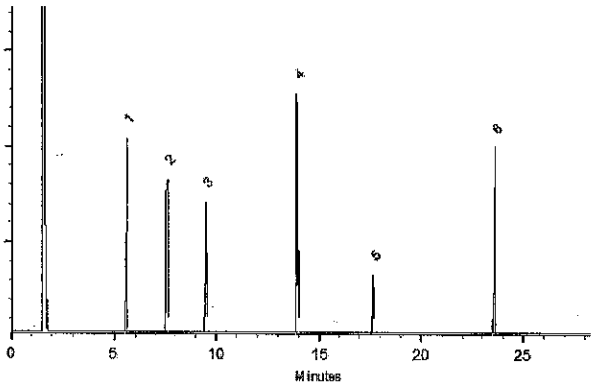
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Fallon - Mix Technician

**Date Mixed:** 14-Sep-2018 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM GC

**Date Passed:** 18-Sep-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 567685 **Lot No.:** A0141581

**Description :** 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2023 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|---|
| 1 | 2-Fluorophenol | | 5,002.0 | µg/mL | +/- 29.0821 | µg/mL | Gravimetric |
| | **CAS #** 367-12-4 | (Lot STBF3761V) | | | +/- 145.9751 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 177.1352 | µg/mL | Stressed |
| 2 | Phenol-d5 | | 5,000.6 | µg/mL | +/- 29.0739 | µg/mL | Gravimetric |
| | **CAS #** 4165-62-2 | (Lot CD-105) | | | +/- 145.9343 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 177.0856 | µg/mL | Stressed |
| 3 | Nitrobenzene-d5 | | 5,006.0 | µg/mL | +/- 29.1053 | µg/mL | Gravimetric |
| | **CAS #** 4165-60-0 | (Lot PR-29603) | | | +/- 146.0919 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 177.2768 | µg/mL | Stressed |
| 4 | 2-Fluorobiphenyl | | 5,000.8 | µg/mL | +/- 29.0751 | µg/mL | Gravimetric |
| | **CAS #** 321-60-8 | (Lot M09E045) | | | +/- 145.9401 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 177.0927 | µg/mL | Stressed |
| 5 | 2,4,6-Tribromophenol | | 5,000.8 | µg/mL | +/- 29.0751 | µg/mL | Gravimetric |
| | **CAS #** 118-79-6 | (Lot 29699MJV) | | | +/- 145.9401 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 177.0927 | µg/mL | Stressed |
| 6 | p-Terphenyl-d14 | | 5,001.0 | µg/mL | +/- 29.0762 | µg/mL | Gravimetric |
| | **CAS #** 1718-51-0 | (Lot PR-21037) | | | +/- 145.9459 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 177.0998 | µg/mL | Stressed |

# Reagent

# AR_1248_RES_00013

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## Certificate of Analysis

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3292.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32010 **Lot No.:** A0130978

**Description :** Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** December 31, 2023 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Aroclor 1248 | 1,001.6 µg/mL | +/- 5.8779 | µg/mL | Gravimetric |
| | **CAS #** 12672-29-6 (Lot W-108-07) | | +/- 31.7447 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.4691 | µg/mL | Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

# AR_1248_RESss_00011

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110 Benner Circle
Bellefonte, PA 16823-8812
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# CERTIFIED REFERENCE MATERIAL

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Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32010.SEC **Lot No.:** A0124143

**Description :** Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** April 30, 2023 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Aroclor 1248 | 1,008.0 µg/mL | +/- 5.9872 | µg/mL | Gravimetric |
| | **CAS #** 12672-29-6.SEC (Lot 106-248) | | +/- 31.9609 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.7443 | µg/mL | Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

# AR_1660_RES_00002

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# Certificate of Analysis

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Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32039 **Lot No.:** A0134815

**Description :** Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** May 31, 2024 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Aroclor 1016 | 1,001.3 µg/mL | +/- 5.8348 | µg/mL | Gravimetric |
| | **CAS #** 12674-11-2 (Lot 164887) | | +/- 31.7260 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.4488 | µg/mL | Stressed |
| 2 | Aroclor 1260 | 1,000.0 µg/mL | +/- 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 11096-82-5 (Lot 155463) | | +/- 31.6864 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.3971 | µg/mL | Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

# AR_1660_RESss_00011

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32039.SEC **Lot No.:** A0133256

**Description :** Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** March 31, 2024 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

**CERTIFIED VALUES**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Aroclor 1016 | 1,008.0 µg/mL | +/- 5.9872 µg/mL | Gravimetric |
| | **CAS #** 12674-11-2.SEC (Lot NTO1016) | | +/- 31.9609 µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.7443 µg/mL | Stressed |
| 2 | Aroclor 1260 | 1,004.0 µg/mL | +/- 5.9635 µg/mL | Gravimetric |
| | **CAS #** 11096-82-5.SEC (Lot 021-020-1A) | | +/- 31.8340 µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.5787 µg/mL | Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

# AR_2154_RES_00002

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110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569745 **Lot No.:** A0131802

**Description :** PCB-1221/1254 Standard

PCB-1221/1254 Standard 1,000µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** January 31, 2024 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

**CERTIFIED VALUES**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Aroclor 1221 | 1,006.0 µg/mL | +/- 5.9753 | µg/mL | Gravimetric |
| | **CAS #** 11104-28-2 (Lot 2781200) | | +/- 31.8975 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.6615 | µg/mL | Stressed |
| 2 | Aroclor 1254 | 1,002.0 µg/mL | +/- 5.9516 | µg/mL | Gravimetric |
| | **CAS #** 11097-69-1 (Lot 124-191-B) | | +/- 31.7706 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.4958 | µg/mL | Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

# AR_2154_RESss_00002

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569745.SEC **Lot No.:** A0131779

**Description :** PCB-1221/1254 Standard

PCB-1221/1254 Standard 1,000µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** January 31, 2024 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

### CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Aroclor 1221 | 1,000.0 µg/mL | +/- 5.9397 | µg/mL | Gravimetric |
| | **CAS #** 11104-28-2.SEC (Lot W-126-07) | | +/- 31.7072 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.4130 | µg/mL | Stressed |
| 2 | Aroclor 1254 | 1,002.0 µg/mL | +/- 5.9516 | µg/mL | Gravimetric |
| | **CAS #** 11097-69-1.SEC (Lot RM00922) | | +/- 31.7706 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.4958 | µg/mL | Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

---

# AR_3262_RES_00002

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569746 **Lot No.:** A0132023

**Description :** PCB-1232/1262 Standard

PCB-1232/1262 Standard 1,000µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** >1 mL

**Expiration Date :** January 31, 2024 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | | Expanded Uncertainty (95% C.L.; K=2) | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Aroclor 1232 | | 1,004.0 | µg/mL | +/- 5.9635 | µg/mL | Gravimetric |
| | CAS # 11141-16-5 | (Lot W-107-05) | | | +/- 31.8340 | µg/mL | Unstressed |
| | Purity ----% | | | | +/- 41.5787 | µg/mL | Stressed |
| 2 | Aroclor 1262 | | 1,002.0 | µg/mL | +/- 5.9516 | µg/mL | Gravimetric |
| | CAS # 37324-23-5 | (Lot 3067100) | | | +/- 31.7706 | µg/mL | Unstressed |
| | Purity ----% | | | | +/- 41.4958 | µg/mL | Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

# AR_3262_RESss_00001

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569746.SEC **Lot No.:** A0134307

**Description :** PCB-1232/1262 Standard

PCB-1232/1262 Standard 1,000µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** April 30, 2024 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

**CERTIFIED VALUES**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Aroclor 1232 | 1,006.0 µg/mL | +/- 5.9753 | µg/mL | Gravimetric |
| | **CAS #** 11141-16-5.SEC (Lot 130604JLM) | | +/- 31.8975 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.6615 | µg/mL | Stressed |
| 2 | Aroclor 1262 | 1,006.0 µg/mL | +/- 5.9753 | µg/mL | Gravimetric |
| | **CAS #** 37324-23-5.SEC (Lot W-130-05) | | +/- 31.8975 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.6615 | µg/mL | Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

# AR_4268_RES_00002

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569747 **Lot No.:** A0133093

**Description :** PCB-1242/1268 Standard

PCB-1242/1268 Standard 1,000µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** March 31, 2024 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Aroclor 1242 | 1,008.0 µg/mL | +/- 5.9872 | µg/mL | Gravimetric |
| | **CAS #** 53469-21-9 (Lot 01141-A) | | +/- 31.9609 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.7443 | µg/mL | Stressed |
| 2 | Aroclor 1268 | 1,000.0 µg/mL | +/- 5.9397 | µg/mL | Gravimetric |
| | **CAS #** 11100-14-4 (Lot 2743900) | | +/- 31.7072 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.4130 | µg/mL | Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

# AR_4268_RESss_00001

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569747.SEC **Lot No.:** A0133202

**Description :** PCB-1242/1268 Standard

PCB-1242/1268 Standard 1,000µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** March 31, 2024 **Storage:** 25°C nominal

**Handling:** This product contains PCBs.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Aroclor 1242 | 1,000.0 µg/mL | +/- 10.0737 µg/mL | Gravimetric |
| | **CAS #** 53469-21-9.SEC (Lot NTO1020) | | +/- 32.7345 µg/mL | Unstressed |
| | **Purity** ----% | | +/- 42.2047 µg/mL | Stressed |
| 2 | Aroclor 1268 | 1,008.0 µg/mL | +/- 10.1543 µg/mL | Gravimetric |
| | **CAS #** 11100-14-4.SEC (Lot W-131-05) | | +/- 32.9964 µg/mL | Unstressed |
| | **Purity** ----% | | +/- 42.5423 µg/mL | Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

# Reagent

---

# AR_SURR_RES_00099

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

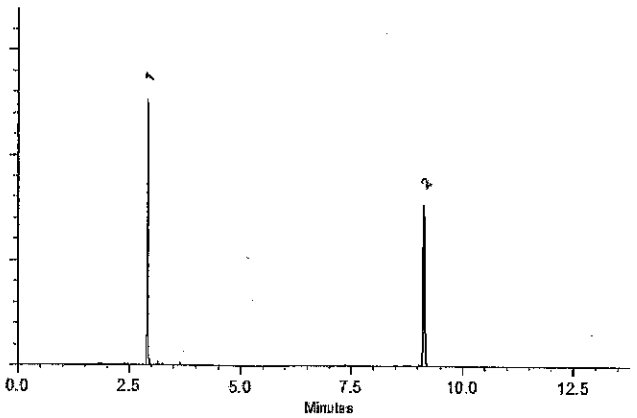
**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
200°C to 300°C
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
300°C

**Det. Type:**
ECD




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

**Date Mixed:** 29-Aug-2018 **Balance:** B707717271

Justine Albertson - Operations Tech-ARM QC

**Date Passed:** 04-Sep-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32000 **Lot No.:** A0141110

**Description :** Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** November 30, 2024 **Storage:** 10°C or colder

**Handling:** Contains PCBs - sonicate prior to use.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | 2,4,5,6-Tetrachloro-m-xylene<br>**CAS #** 877-09-8 (Lot 0052481)<br>**Purity** 98% | 201.4 µg/mL | +/- 1.1736 µg/mL<br>+/- 6.3813 µg/mL<br>+/- 8.3370 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | Decachlorobiphenyl (BZ# 209)<br>**CAS #** 2051-24-3 (Lot ER071509-01)<br>**Purity** 99% | 200.6 µg/mL | +/- 1.1690 µg/mL<br>+/- 6.3563 µg/mL<br>+/- 8.3043 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Acetone
**CAS #** 67-64-1
**Purity** 99%

# Reagent

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# AR_SURR_RES_00101

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32000 **Lot No.:** A0141110

**Description :** Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** November 30, 2024 **Storage:** 10°C or colder

**Handling:** Contains PCBs - sonicate prior to use.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | 2,4,5,6-Tetrachloro-m-xylene<br>**CAS #** 877-09-8<br>**Purity** 98% | (Lot 0052481) | 201.4 µg/mL | +/- 1.1736<br>+/- 6.3813<br>+/- 8.3370 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | Decachlorobiphenyl (BZ# 209)<br>**CAS #** 2051-24-3<br>**Purity** 99% | (Lot ER071509-01) | 200.6 µg/mL | +/- 1.1690<br>+/- 6.3563<br>+/- 8.3043 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Acetone
**CAS #** 67-64-1
**Purity** 99%

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

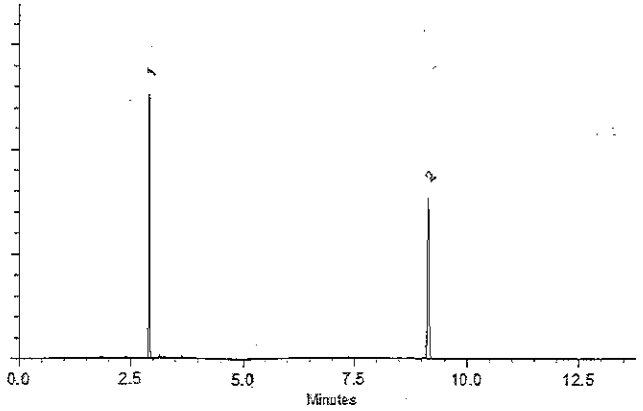
**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
200°C to 300°C
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
300°C

**Det. Type:**
ECD




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

**Date Mixed:** 29-Aug-2018 **Balance:** B707717271

Justine Albertson - Operations Tech-ARM QC

**Date Passed:** 04-Sep-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

$k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# BNB stock_00016

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32279 **Lot No.:** A0127264

**Description :** 1-Bromo-2-nitrobenzene Standard

1-Bromo-2-nitrobenzene Standard 1000 µg/mL, Acetone, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** August 31, 2020 **Storage:** 10°C or colder

**CERTIFIED VALUES**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | 1-Bromo-2-nitrobenzene | 1,004.0 µg/mL | +/- 5.9635 | µg/mL | Gravimetric |
| | **CAS #** 577-19-5 (Lot 643872/1) | | +/- 56.3065 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 57.6234 | µg/mL | Stressed |

**Solvent:** Acetone
**CAS #** 67-64-1
**Purity** 99%

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

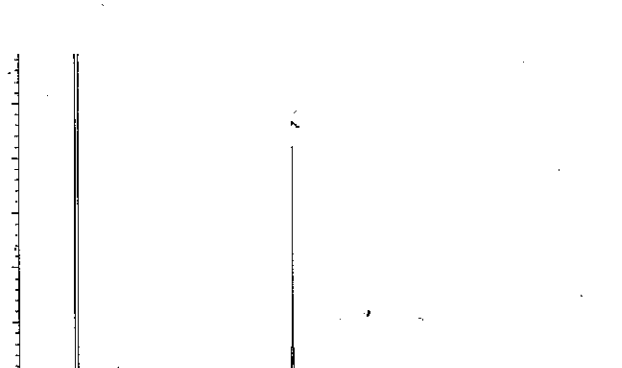
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

**Date Mixed:** 03-May-2017 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

**Date Passed:** 05-May-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

## General Certified Reference Material Notes

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# BNB stock_00017

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Certificate #3222.02

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32279 **Lot No.:** A0127264

**Description :** 1-Bromo-2-nitrobenzene Standard

1-Bromo-2-nitrobenzene Standard 1000 µg/mL, Acetone, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** August 31, 2020 **Storage:** 10°C or colder

**CERTIFIED VALUES**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | 1-Bromo-2-nitrobenzene | 1,004.0 µg/mL | +/- 5.9635 | µg/mL | Gravimetric |
| | **CAS #** 577-19-5 (Lot 643872/1) | | +/- 56.3065 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 57.6234 | µg/mL | Stressed |

**Solvent:** Acetone
**CAS #** 67-64-1
**Purity** 99%

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

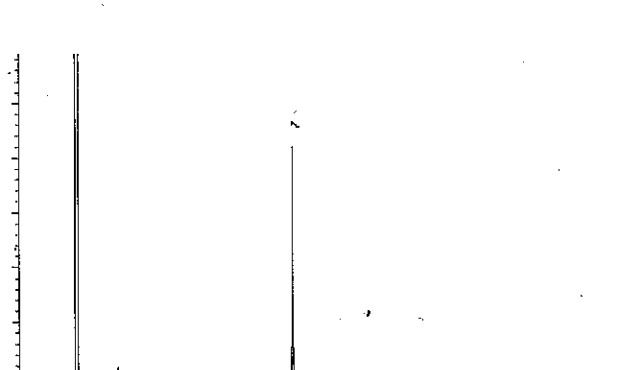
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

**Date Mixed:** 03-May-2017 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

**Date Passed:** 05-May-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

## General Certified Reference Material Notes

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# MS-47548-U_00015

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# Certificate of Analysis

## Description: EPA 8270 GC/MS Tuning Solution II, 1x1ml, 1000µg/ml in methylene chloride

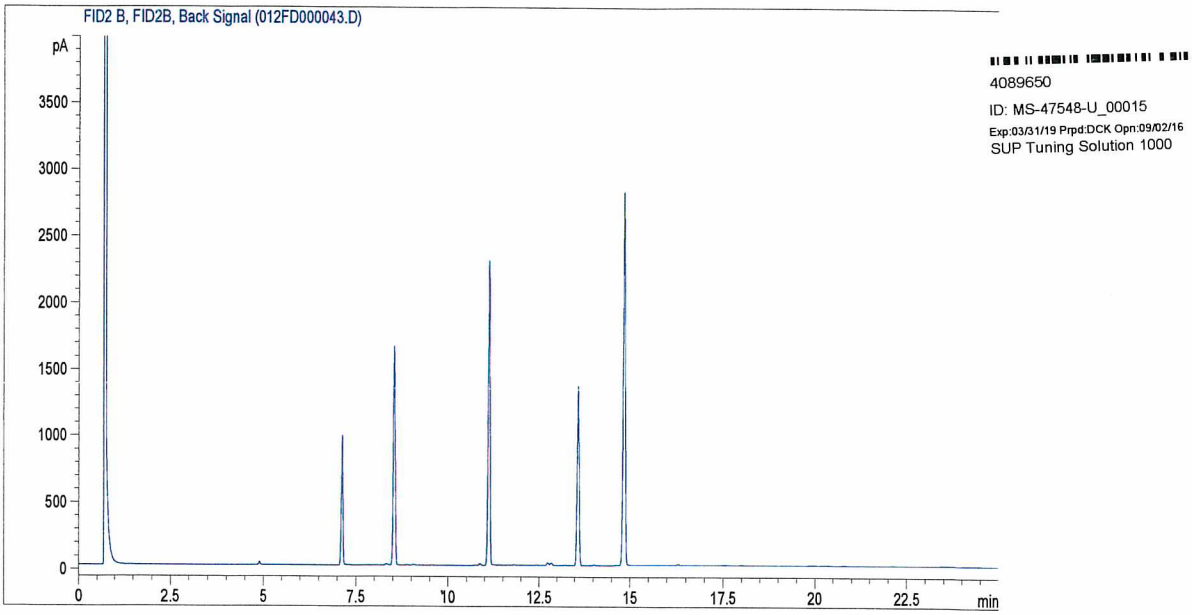
Part Number: 47548-U

Lot Number: XA19099V

Expiration Date: March 2019

Storage: Refrigerate

Analytical Method Parameters:
Column: Equity-5; 30 m x 0.53 mm, 1.5 µm df
150 °C to 280 °C (8.75 min) at 8 °C/min
Detector: FID; 310 °C
Injection Volume: 1µL




| Elution | Analyte | Lot Number | CAS Number | Chromatographic Purity % | Certified Gravimetric Conc. µg/mL | Expanded Uncertainty µg/mL | Analytical Conc. µg/mL |
|---|---|---|---|---|---|---|---|
| 1. | Pentachlorophenol | LC17897 | 87-86-5 | 97.5 | 1000.0 | ±38 | 945.6 |
| 2. | Decafluorotriphenylphosphine | LC14010 | 5074-71-5 | 98.6 | 986.0 | ±44 | 961.5 |
| 3. | Benzidine | LB83682 | 92-87-5 | 99.9 | 999.0 | ±38 | 1009.6 |
| 4. | 4,4'-DDT | LA83013 | 50-29-3 | 98.0 | 980.8 | ±36 | 961.0 |
| | Internal Standard | N/A | N/A | N/A | N/A | N/A | N/A |

# Reagent

# MS-48379_00015

# Certificate of Composition

Reference Material

FAMPHUR, 1X1ML, CH2CL2, 200UG/ML

**Product ID** 48379
**Lot** **LRAB9515**
**Expiration Date** August 2021
**Storage Conditions** Room Temperature
**Solvent/Matrix** METHYLENE CHLORIDE

5306043
ID: MS-48379_00015
Exp: 08/31/21 Prpd: DCK
SUP Famphur 200 ug/mL

| *Analyte* | *Assigned Value* [1] | *Units* | *Raw Material Purity, %* | *Raw Material Lot No.* | CAS |
|---|---|---|---|---|---|
| FAMPHUR | 199 ± 6 | µg/ml | 98.7 | LC04349 | 52-85-7 |

1 Assigned value - the gravimetrically prepared value. Uncertainty is based on gravimetric preparation.

Traceability: The standard was manufactured under an ISO/IEC 17025:2005 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were preformed gravimetrically.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

Robert O'Brien - Program Manager

Mark Pooler - QA Supervisor

**Certification Date** August 21, 2018
**Version** -8212018

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# Reagent

# MS-567684_00019

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

4101728
ID: MS-567684_00019
Exp: 07/31/20 Prpd: DCK
RES 8270 Internal Std Mix

**Catalog No. :** 567684 **Lot No.:** A0112833

**Description :** 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** July 31, 2020 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | 1,4-Dichlorobenzene-d4<br>**CAS #** 3855-82-1<br>**Purity** 99% | (Lot PR-18488) | 2,014.8 µg/mL | +/- 11.7142<br>+/- 89.5186<br>+/- 98.3528 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | Naphthalene-d8<br>**CAS #** 1146-65-2<br>**Purity** 99% | (Lot M-1452) | 2,015.8 µg/mL | +/- 11.7202<br>+/- 89.5645<br>+/- 98.4032 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Acenaphthene-d10<br>**CAS #** 15067-26-2<br>**Purity** 97% | (Lot PR-21070) | 2,002.0 µg/mL | +/- 11.6397<br>+/- 88.9491<br>+/- 97.7271 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Phenanthrene-d10<br>**CAS #** 1517-22-2<br>**Purity** 99% | (Lot PR-23065) | 2,007.1 µg/mL | +/- 11.6693<br>+/- 89.1750<br>+/- 97.9753 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Chrysene-d12<br>**CAS #** 1719-03-5<br>**Purity** 99% | (Lot PR-25081) | 2,013.2 µg/mL | +/- 11.7047<br>+/- 89.4460<br>+/- 98.2730 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Perylene-d12<br>**CAS #** 1520-96-3<br>**Purity** 99% | (Lot PR-24113) | 2,005.4 µg/mL | +/- 11.6598<br>+/- 89.1024<br>+/- 97.8955 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

# Reagent

# MS-567684_00020

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

5035055
ID: MS-567684_00020
Exp: 08/31/22 Prpd: OCK
RES 8270 Internal Std Mix

**Catalog No. :** 567684 **Lot No.:** A0129635

**Description :** 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** August 31, 2022 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive.

### CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | 1,4-Dichlorobenzene-d4<br>**CAS #** 3855-82-1 (Lot PR-18488)<br>**Purity** 99% | 2,014.1 µg/mL | +/- 11.7102 µg/mL<br>+/- 90.7163 µg/mL<br>+/- 100.6609 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | Naphthalene-d8<br>**CAS #** 1146-65-2 (Lot M-1452)<br>**Purity** 99% | 2,004.1 µg/mL | +/- 11.6520 µg/mL<br>+/- 90.2659 µg/mL<br>+/- 100.1611 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Acenaphthene-d10<br>**CAS #** 15067-26-2 (Lot PR-25444)<br>**Purity** 99% | 2,011.1 µg/mL | +/- 11.6927 µg/mL<br>+/- 90.5811 µg/mL<br>+/- 100.5110 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Phenanthrene-d10<br>**CAS #** 1517-22-2 (Lot PR-27621)<br>**Purity** 99% | 2,014.5 µg/mL | +/- 11.7125 µg/mL<br>+/- 90.7343 µg/mL<br>+/- 100.6809 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Chrysene-d12<br>**CAS #** 1719-03-5 (Lot PR-27952)<br>**Purity** 99% | 2,013.6 µg/mL | +/- 11.7072 µg/mL<br>+/- 90.6938 µg/mL<br>+/- 100.6359 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Perylene-d12<br>**CAS #** 1520-96-3 (Lot PR-27342)<br>**Purity** 99% | 2,012.2 µg/mL | +/- 11.6991 µg/mL<br>+/- 90.6307 µg/mL<br>+/- 100.5659 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

# Reagent

# MS-567685_00004

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**Catalog No. :** 567685 **Lot No.:** A0130500

4941881
ID: MS-567685_00004
Exp: 09/30/22 Prpd: DCK
8270 Surrogates 5000ug/mL

**Description :** 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2022 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | 2-Fluorophenol | | 5,009.8 µg/mL | +/- 29.1274 µg/mL | | Gravimetric |
| | **CAS #** 367-12-4 | (Lot STBD7945V) | | +/- 146.2028 µg/mL | | Unstressed |
| | **Purity** 99% | | | +/- 177.4114 µg/mL | | Stressed |
| 2 | Phenol-d5 | | 5,013.6 µg/mL | +/- 29.1495 µg/mL | | Gravimetric |
| | **CAS #** 4165-62-2 | (Lot X-479) | | +/- 146.3137 µg/mL | | Unstressed |
| | **Purity** 99% | | | +/- 177.5460 µg/mL | | Stressed |
| 3 | Nitrobenzene-d5 | | 5,000.0 µg/mL | +/- 29.0704 µg/mL | | Gravimetric |
| | **CAS #** 4165-60-0 | (Lot PR-25462) | | +/- 145.9168 µg/mL | | Unstressed |
| | **Purity** 99% | | | +/- 177.0644 µg/mL | | Stressed |
| 4 | 2-Fluorobiphenyl | | 5,001.2 µg/mL | +/- 29.0774 µg/mL | | Gravimetric |
| | **CAS #** 321-60-8 | (Lot B19Z016) | | +/- 145.9518 µg/mL | | Unstressed |
| | **Purity** 99% | | | +/- 177.1069 µg/mL | | Stressed |
| 5 | 2,4,6-Tribromophenol | | 5,002.6 µg/mL | +/- 29.0855 µg/mL | | Gravimetric |
| | **CAS #** 118-79-6 | (Lot 29699MJV) | | +/- 145.9926 µg/mL | | Unstressed |
| | **Purity** 99% | | | +/- 177.1564 µg/mL | | Stressed |
| 6 | p-Terphenyl-d14 | | 5,004.0 µg/mL | +/- 29.0937 µg/mL | | Gravimetric |
| | **CAS #** 1718-51-0 | (Lot PR-27278) | | +/- 146.0335 µg/mL | | Unstressed |
| | **Purity** 99% | | | +/- 177.2060 µg/mL | | Stressed |

# Reagent

# MS-568023_00043

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

5199826
ID: MS-568023_00043
Exp: 06/30/20 Prpd: DCK
RES HSLA Famphur 2000ug/m

**Catalog No. :** 568023 **Lot No.:** A0139090

**Description :** 8270 Famphur Standard

8270 Famphur Standard 2,000µg/mL, Methylene Chloride, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** June 30, 2020 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

### CERTIFIED VALUES

| Component # | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Famphur | 2,014.9 µg/mL | +/- 18.7373 | µg/mL | Gravimetric |
| | **CAS #** 52-85-7 (Lot 6789600) | | +/- 87.6407 | µg/mL | Unstressed |
| | **Purity** 98% | | +/- 87.6775 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

Brandon Reish - Mix Technician

**Date Mixed:** 21-Jun-2018 **Balance:** B345965662

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

# Reagent

# MS-568023_00044

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

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5306176
ID: MS-568023_00044
Exp: 07/31/20 Prpd: DCK
RES HSLA Famphur 2000ug/m

**Catalog No. :** 568023 **Lot No.:** A0139949

**Description :** 8270 Famphur Standard

8270 Famphur Standard 2,000µg/mL, Methylene Chloride, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** July 31, 2020 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

### CERTIFIED VALUES

| Component # | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Famphur<br>CAS # 52-85-7<br>Purity 96% (Lot 5006000) | 1,996.8 µg/mL | +/- 18.5692 µg/mL<br>+/- 86.8543 µg/mL<br>+/- 86.8907 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

Greg Dawson - Mix Technician

**Date Mixed:** 24-Jul-2018 **Balance:** 1128353505

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

# Reagent

# MS-569730 AFC_00007

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## Certificate of Analysis

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Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

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5306168
ID: MS-569730 AFC_00007
Exp: 10/31/19 Prpd: DCK
HSLA Amine Mix (2015) 200

5306172
ID: MS-569730 HSL_00008
Exp: 10/31/19 Prpd: DCK
HSLA Amine Mix (2015) 200

**Catalog No. :** 569730 **Lot No.:** A0137351

**Description :** 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** October 31, 2019 **Storage:** 10°C or colder

**Handling:** Contains carcinogen/reproductive toxin.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | Benzidine | | 2,000.3 µg/mL | +/- 11.6301 | µg/mL | Gravimetric |
| | **CAS #** 92-87-5 | (Lot 171228KJA) | | +/- 23.9121 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 38.0558 | µg/mL | Stressed |
| 2 | 3,3'-Dichlorobenzidine | | 2,005.7 µg/mL | +/- 11.6611 | µg/mL | Gravimetric |
| | **CAS #** 91-94-1 | (Lot 180328JNA) | | +/- 23.9759 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 38.1572 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569730 HSL_00008

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# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

5306168
ID: MS-569730 AFC_00007
Exp: 10/31/19 Prpd: DCK
HSLA Amine Mix (2015) 200

5306172
ID: MS-569730 HSL_00008
Exp: 10/31/19 Prpd: DCK
HSLA Amine Mix (2015) 200

**Catalog No. :** 569730 **Lot No.:** A0137351

**Description :** 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** October 31, 2019 **Storage:** 10°C or colder

**Handling:** Contains carcinogen/reproductive toxin.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | Benzidine | | 2,000.3 µg/mL | +/- 11.6301 | µg/mL | Gravimetric |
| | **CAS #** 92-87-5 | (Lot 171228KJA) | | +/- 23.9121 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 38.0558 | µg/mL | Stressed |
| 2 | 3,3'-Dichlorobenzidine | | 2,005.7 µg/mL | +/- 11.6611 | µg/mL | Gravimetric |
| | **CAS #** 91-94-1 | (Lot 180328JNA) | | +/- 23.9759 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- 38.1572 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569730SEC_00004

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569730.SEC **Lot No.:** A0131614

**Description :** 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** April 30, 2019 **Storage:** 10°C or colder

**Handling:** Contains carcinogen/reproductive toxin.

5163418
ID: MS-569730SEC_00004
Exp: 04/30/19 Prpd: DCK
RES HSLB Amine Mix 2000ug

5163449
ID: MS-569730SECa_00004
Exp: 04/30/19 Prpd: DCK
RES Benzidine 2000ug/mL

### CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Benzidine<br>**CAS #** 92-87-5.SEC (Lot 2715900)<br>**Purity** 99% | 2,004.0 µg/mL | +/- 11.7606 µg/mL<br>+/- 24.0092 µg/mL<br>+/- 38.1590 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | 3,3'-Dichlorobenzidine<br>**CAS #** 91-94-1.SEC (Lot 5340500)<br>**Purity** 99% | 2,014.0 µg/mL | +/- 11.8193 µg/mL<br>+/- 24.1290 µg/mL<br>+/- 38.3494 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569730SECa_00004

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**Catalog No. :** 569730.SEC **Lot No.:** A0131614

**Description :** 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** April 30, 2019 **Storage:** 10°C or colder

**Handling:** Contains carcinogen/reproductive toxin.

5163418
ID: MS-569730SEC_00004
Exp: 04/30/19 Prpd: DCK
RES HSLB Amine Mix 2000ug

5163449
ID: MS-569730SECa_00004
Exp: 04/30/19 Prpd: DCK
RES Benzidine 2000ug/mL

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Benzidine<br>**CAS #** 92-87-5.SEC (Lot 2715900)<br>**Purity** 99% | 2,004.0 µg/mL | +/- 11.7606 µg/mL<br>+/- 24.0092 µg/mL<br>+/- 38.1590 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | 3,3'-Dichlorobenzidine<br>**CAS #** 91-94-1.SEC (Lot 5340500)<br>**Purity** 99% | 2,014.0 µg/mL | +/- 11.8193 µg/mL<br>+/- 24.1290 µg/mL<br>+/- 38.3494 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569731.SEC_00003

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5163391
ID: MS-569731.SEC_00003
Exp: 05/31/19 Prpd: DCK
8270 List 1 #10 2,000ug/m

**Catalog No. :** 569731.SEC **Lot No.:** A0132859

**Description :** 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** May 31, 2019 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

### CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Indene | 2,017.0 µg/mL | +/- 11.7541 µg/mL | Gravimetric |
| | **CAS #** 95-13-6.SEC (Lot IG5TI) | | +/- 113.0940 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 115.7401 µg/mL | Stressed |
| 2 | Benzoic acid | 2,008.5 µg/mL | +/- 11.7046 µg/mL | Gravimetric |
| | **CAS #** 65-85-0.SEC (Lot QD3UO) | | +/- 112.6174 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 115.2524 µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569731_00079

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4944222
ID: MS-569731_00079
Exp: 03/31/19 Prpd: DCK
HSLA Benzoic Acid (2015)

**Catalog No. :** 569731 **Lot No.:** A0130477

**Description :** 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** March 31, 2019 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Indene | 1,996.3 µg/mL | +/- 11.6064 µg/mL | Gravimetric |
| | **CAS #** 95-13-6 (Lot MKBT8433V) | | +/- 111.9283 µg/mL | Unstressed |
| | **Purity** 98% | | +/- 114.5473 µg/mL | Stressed |
| 2 | Benzoic acid | 2,000.8 µg/mL | +/- 11.6328 µg/mL | Gravimetric |
| | **CAS #** 65-85-0 (Lot MKBV5544V) | | +/- 112.1829 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 114.8078 µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569731_00101

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

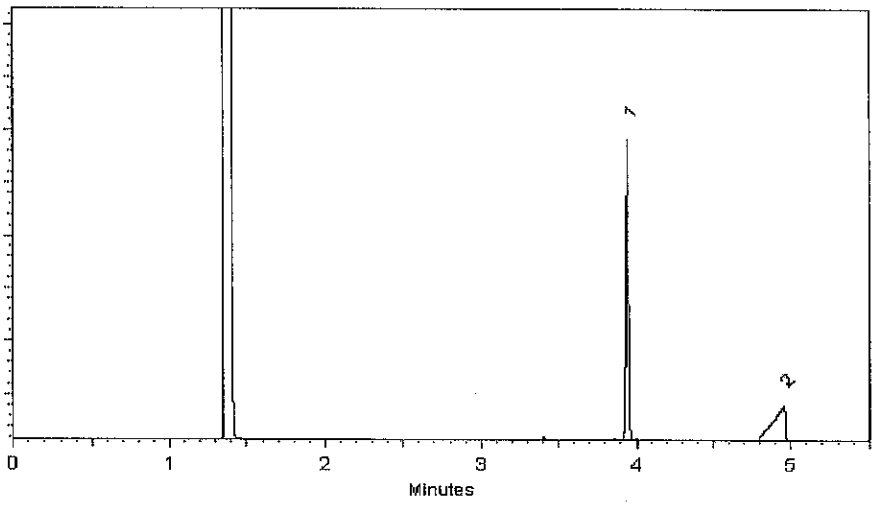
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Alice Brooks

Alice Brooks - Mix Technician

**Date Mixed:** 04-Apr-2018 **Balance:** B442140311

Jennifer Pollino

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 06-Apr-2018

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569731 **Lot No.:** A0136865

**Description :** 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** October 31, 2019 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Indene<br>**CAS #** 95-13-6 (Lot MKBV0236V)<br>**Purity** 97% | 2,004.3 µg/mL | +/- 11.6534 µg/mL<br>+/- 112.3815 µg/mL<br>+/- 115.0111 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | Benzoic acid<br>**CAS #** 65-85-0 (Lot MKCC9722)<br>**Purity** 99% | 2,013.3 µg/mL | +/- 11.7053 µg/mL<br>+/- 112.8819 µg/mL<br>+/- 115.5232 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569731_00103

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

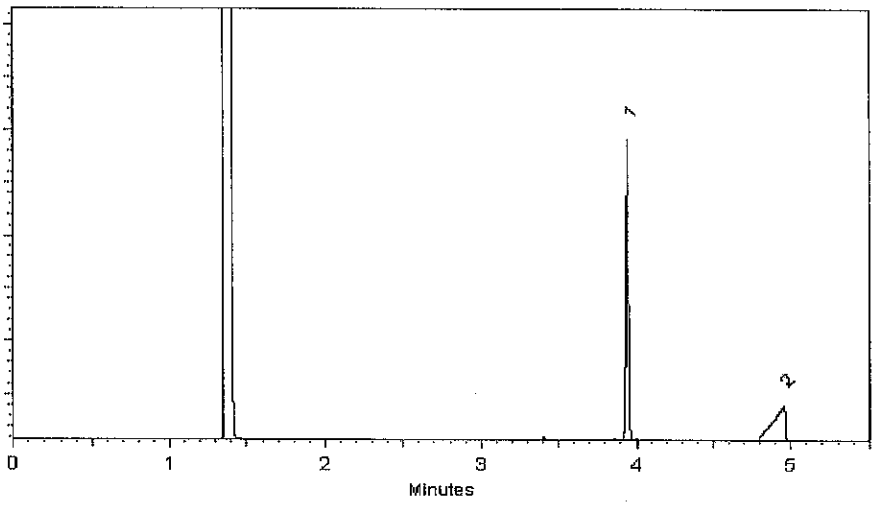
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Alice Brooks

Alice Brooks - Mix Technician

**Date Mixed:** 04-Apr-2018 **Balance:** B442140311

Jennifer Pollino

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 06-Apr-2018

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569731 **Lot No.:** A0136865

**Description :** 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** October 31, 2019 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Indene | 2,004.3 µg/mL | +/- 11.6534 | µg/mL | Gravimetric |
| | **CAS #** 95-13-6 (Lot MKBV0236V) | | +/- 112.3815 | µg/mL | Unstressed |
| | **Purity** 97% | | +/- 115.0111 | µg/mL | Stressed |
| 2 | Benzoic acid | 2,013.3 µg/mL | +/- 11.7053 | µg/mL | Gravimetric |
| | **CAS #** 65-85-0 (Lot MKCC9722) | | +/- 112.8819 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 115.5232 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569731_00104

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

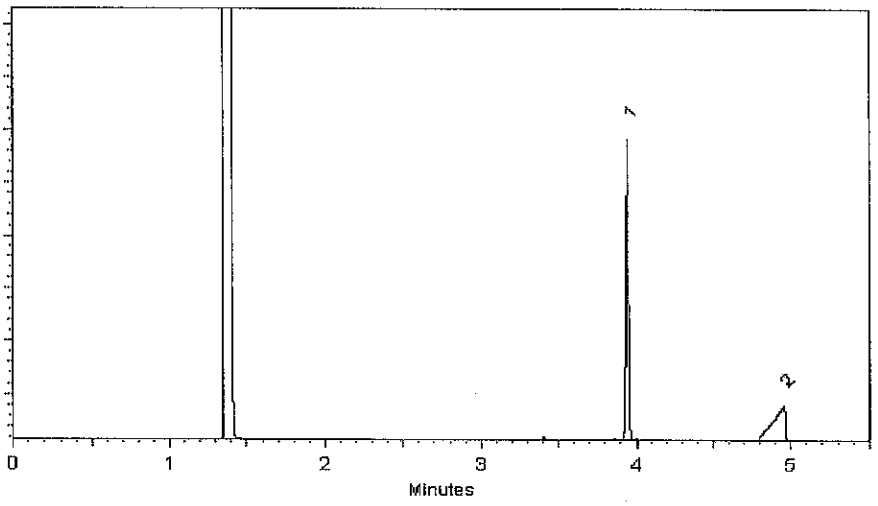
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Alice Brooks

Alice Brooks - Mix Technician

**Date Mixed:** 04-Apr-2018 **Balance:** B442140311

Jennifer Pollino

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 06-Apr-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569731 **Lot No.:** A0136865

**Description :** 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** October 31, 2019 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Indene | 2,004.3 µg/mL | +/- 11.6534 | µg/mL | Gravimetric |
| | **CAS #** 95-13-6 (Lot MKBV0236V) | | +/- 112.3815 | µg/mL | Unstressed |
| | **Purity** 97% | | +/- 115.0111 | µg/mL | Stressed |
| 2 | Benzoic acid | 2,013.3 µg/mL | +/- 11.7053 | µg/mL | Gravimetric |
| | **CAS #** 65-85-0 (Lot MKCC9722) | | +/- 112.8819 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 115.5232 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569731_00105

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

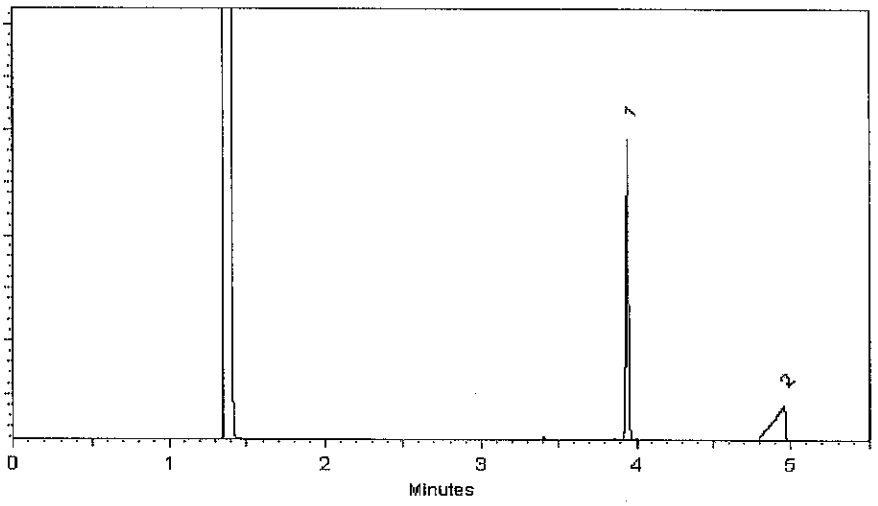
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Alice Brooks

Alice Brooks - Mix Technician

**Date Mixed:** 04-Apr-2018 **Balance:** B442140311

Jennifer J Pollino

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 06-Apr-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

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**Catalog No. :** 569731 **Lot No.:** A0136865

**Description :** 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** October 31, 2019 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Indene | 2,004.3 µg/mL | +/- 11.6534 | µg/mL | Gravimetric |
| | **CAS #** 95-13-6 (Lot MKBV0236V) | | +/- 112.3815 | µg/mL | Unstressed |
| | **Purity** 97% | | +/- 115.0111 | µg/mL | Stressed |
| 2 | Benzoic acid | 2,013.3 µg/mL | +/- 11.7053 | µg/mL | Gravimetric |
| | **CAS #** 65-85-0 (Lot MKCC9722) | | +/- 112.8819 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 115.5232 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569732 BZH_00008

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**Catalog No. :** 569732 **Lot No.:** A0137125

**Description :** 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

5335192
ID: MS-569732 HSL_00006
Exp: 10/31/19 Prpd: DCK
8270 List 1/ Std 11 (2015

5335191
ID: MS-569732 BZH_00008
Exp: 10/31/19 Prpd: DCK
8270 List 1/ Std 11 (2015

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** October 31, 2019 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Benzaldehyde<br>**CAS #** 100-52-7 (Lot SHBG8690V)<br>**Purity** 99% | 2,001.1 µg/mL | +/- 11.6345 µg/mL<br>+/- 64.1460 µg/mL<br>+/- 74.5673 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | epsilon-Caprolactam<br>**CAS #** 105-60-2 (Lot I16X016)<br>**Purity** 99% | 2,002.0 µg/mL | +/- 11.6398 µg/mL<br>+/- 64.1754 µg/mL<br>+/- 74.6014 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Atrazine<br>**CAS #** 1912-24-9 (Lot 77P7D)<br>**Purity** 99% | 2,002.6 µg/mL | +/- 11.6432 µg/mL<br>+/- 64.1941 µg/mL<br>+/- 74.6232 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569732 HSL_00006

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**Catalog No. :** 569732 **Lot No.:** A0137125

**Description :** 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** October 31, 2019 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

5335192
ID: MS-569732 HSL_00006
Exp: 10/31/19 Prpd: DCK
8270 List 1/ Std 11 (2015

5335191
ID: MS-569732 BZH_00008
Exp: 10/31/19 Prpd: DCK
8270 List 1/ Std 11 (2015

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | Benzaldehyde<br>CAS # 100-52-7<br>Purity 99% | (Lot SHBG8690V) | 2,001.1 µg/mL | +/- 11.6345 µg/mL<br>+/- 64.1460 µg/mL<br>+/- 74.5673 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 2 | epsilon-Caprolactam<br>CAS # 105-60-2<br>Purity 99% | (Lot I16X016) | 2,002.0 µg/mL | +/- 11.6398 µg/mL<br>+/- 64.1754 µg/mL<br>+/- 74.6014 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Atrazine<br>CAS # 1912-24-9<br>Purity 99% | (Lot 77P7D) | 2,002.6 µg/mL | +/- 11.6432 µg/mL<br>+/- 64.1941 µg/mL<br>+/- 74.6232 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569732HSEC_00003

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Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

5163318
ID: MS-569732HSEC_00003
Exp: 02/28/19 Prpd: DCK
RES 8270 List 1 / Std# 11

5163319
ID: MS-569732SEC_00005
Exp: 02/28/19 Prpd: DCK
RES 8270 List 1 / Std# 11

**Catalog No. :** 569732.SEC **Lot No.:** A0130332

**Description :** 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** February 28, 2019 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Benzaldehyde | 2,000.0 µg/mL | +/- 11.7371 | µg/mL | Gravimetric |
| | **CAS #** 100-52-7.SEC (Lot E7DWH) | | +/- 64.1312 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 74.5440 | µg/mL | Stressed |
| 2 | epsilon-Caprolactam | 2,002.4 µg/mL | +/- 11.7512 | µg/mL | Gravimetric |
| | **CAS #** 105-60-2.SEC (Lot BLJTB) | | +/- 64.2081 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 74.6334 | µg/mL | Stressed |
| 3 | Atrazine | 2,000.4 µg/mL | +/- 11.7395 | µg/mL | Gravimetric |
| | **CAS #** 1912-24-9.SEC (Lot 5671000) | | +/- 64.1440 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 74.5589 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-569732SEC_00005

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# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

5163318
ID: MS-569732HSEC_00003
Exp: 02/28/19 Prpd: DCK
RES 8270 List 1 / Std# 11

5163319
ID: MS-569732SEC_00005
Exp: 02/28/19 Prpd: DCK
RES 8270 List 1 / Std# 11

**Catalog No. :** 569732.SEC **Lot No.:** A0130332

**Description :** 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** February 28, 2019 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Benzaldehyde | 2,000.0 µg/mL | +/- 11.7371 | µg/mL | Gravimetric |
| | **CAS #** 100-52-7.SEC (Lot E7DWH) | | +/- 64.1312 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 74.5440 | µg/mL | Stressed |
| 2 | epsilon-Caprolactam | 2,002.4 µg/mL | +/- 11.7512 | µg/mL | Gravimetric |
| | **CAS #** 105-60-2.SEC (Lot BLJTB) | | +/- 64.2081 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 74.6334 | µg/mL | Stressed |
| 3 | Atrazine | 2,000.4 µg/mL | +/- 11.7395 | µg/mL | Gravimetric |
| | **CAS #** 1912-24-9.SEC (Lot 5671000) | | +/- 64.1440 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 74.5589 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# MS-571995.SEC_00002

RESTEK®
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# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

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Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

4994417
ID: MS-571995.SEC_00002
Exp:03/31/19 Prpd:DCK Opn:03/09/18
RES HSLB Mega Mix (2017)

**Catalog No. :** 571995.SEC **Lot No.:** A0131190

**Description :** 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** March 31, 2019 **Storage:** 0°C or colder

**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

### CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | 1,4-Dioxane<br>CAS # 123-91-1.SEC (Lot MUFZH)<br>Purity 99% | 1,000.0 µg/mL | +/- 5.8275 µg/mL<br>+/- 11.9606 µg/mL<br>+/- 19.0288 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | N-Nitrosodimethylamine<br>CAS # 62-75-9.SEC (Lot 61H72)<br>Purity 99% | 1,000.0 µg/mL | +/- 5.8275 µg/mL<br>+/- 11.9606 µg/mL<br>+/- 19.0288 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Pyridine<br>CAS # 110-86-1.SEC (Lot QN8DK)<br>Purity 99% | 2,000.0 µg/mL | +/- 11.6282 µg/mL<br>+/- 23.9081 µg/mL<br>+/- 38.0494 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Phenol<br>CAS # 108-95-2.SEC (Lot EDPYN)<br>Purity 99% | 1,000.6 µg/mL | +/- 5.8310 µg/mL<br>+/- 11.9678 µg/mL<br>+/- 19.0402 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Aniline<br>CAS # 62-53-3.SEC (Lot ZCD3N)<br>Purity 99% | 1,000.4 µg/mL | +/- 5.8299 µg/mL<br>+/- 11.9654 µg/mL<br>+/- 19.0364 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Bis(2-chloroethyl)ether<br>CAS # 111-44-4.SEC (Lot FA010143)<br>Purity 99% | 1,000.6 µg/mL | +/- 5.8310 µg/mL<br>+/- 11.9678 µg/mL<br>+/- 19.0402 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 7 | n-Decane (C10)<br>CAS # 124-18-5.SEC (Lot UCVNN)<br>Purity 99% | 1,000.0 µg/mL | +/- 5.8275 µg/mL<br>+/- 11.9606 µg/mL<br>+/- 19.0288 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | 2-Chlorophenol<br>CAS # 95-57-8.SEC<br>Purity 99% | (Lot GJ01) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 9 | 1,3-Dichlorobenzene<br>CAS # 541-73-1.SEC<br>Purity 99% | (Lot FMDFD) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 10 | 1,4-Dichlorobenzene<br>CAS # 106-46-7.SEC<br>Purity 99% | (Lot 4Y5DC) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 11 | Benzyl alcohol<br>CAS # 100-51-6.SEC<br>Purity 99% | (Lot QZBUO) | 1,000.6 | µg/mL | +/- 5.8310<br>+/- 11.9678<br>+/- 19.0402 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 12 | 1,2-Dichlorobenzene<br>CAS # 95-50-1.SEC<br>Purity 99% | (Lot R6QDM) | 1,000.4 | µg/mL | +/- 5.8299<br>+/- 11.9654<br>+/- 19.0364 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 13 | 2-Methylphenol (o-cresol)<br>CAS # 95-48-7.SEC<br>Purity 99% | (Lot NC7HL) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 14 | 2,2'-oxybis(1-chloropropane)<br>CAS # 108-60-1.SEC<br>Purity 99% | (Lot 2-KMW-57-8) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 15 | Acetophenone<br>CAS # 98-86-2.SEC<br>Purity 99% | (Lot NSGTI) | 1,000.6 | µg/mL | +/- 5.8310<br>+/- 11.9678<br>+/- 19.0402 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 16 | 3-Methylphenol (m-cresol)<br>CAS # 108-39-4.SEC<br>Purity 99% | (Lot 6LHTM) | 500.0 | µg/mL | +/- 2.9138<br>+/- 5.9803<br>+/- 9.5144 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 17 | 4-Methylphenol (p-cresol)<br>CAS # 106-44-5.SEC<br>Purity 99% | (Lot 65S2E) | 501.0 | µg/mL | +/- 2.9196<br>+/- 5.9923<br>+/- 9.5334 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 18 | N-Nitroso-di-n-propylamine<br>CAS # 621-64-7.SEC<br>Purity 99% | (Lot 4423200) | 1,001.4 | µg/mL | +/- 5.8357<br>+/- 11.9773<br>+/- 19.0555 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 19 | Hexachloroethane<br>CAS # 67-72-1.SEC<br>Purity 99% | (Lot 10173016) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 20 | Nitrobenzene<br>CAS # 98-95-3.SEC<br>Purity 99% | (Lot FLYIG) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 21 | Isophorone<br>CAS # 78-59-1.SEC<br>Purity 99% | (Lot XHGJI) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 22 | 2-Nitrophenol<br>CAS # 88-75-5.SEC<br>Purity 99% | (Lot GXJ7J) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 23 | 2,4-Dimethylphenol<br>CAS # 105-67-9.SEC<br>Purity 99% | (Lot MKBL3650V) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 24 | Bis(2-chloroethoxy)methane | | 1,000.4 | µg/mL | +/- | 5.8299 | µg/mL | Gravimetric |
| | **CAS #** 111-91-1 * | (Lot 5670100) | | | +/- | 11.9654 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0364 | µg/mL | Stressed |
| 25 | 2,4-Dichlorophenol | | 1,000.4 | µg/mL | +/- | 5.8299 | µg/mL | Gravimetric |
| | **CAS #** 120-83-2.SEC | (Lot FHM01) | | | +/- | 11.9654 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0364 | µg/mL | Stressed |
| 26 | 1,2,4-Trichlorobenzene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 120-82-1.SEC | (Lot OGO01) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 27 | Naphthalene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 91-20-3.SEC | (Lot SKZ5N) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 28 | 2,6-Dichlorophenol | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 87-65-0.SEC | (Lot SIDBB) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 29 | 4-Chloroaniline | | 1,000.2 | µg/mL | +/- | 5.8287 | µg/mL | Gravimetric |
| | **CAS #** 106-47-8.SEC | (Lot 10171860) | | | +/- | 11.9630 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0326 | µg/mL | Stressed |
| 30 | Hexachlorobutadiene | | 1,000.5 | µg/mL | +/- | 5.8302 | µg/mL | Gravimetric |
| | **CAS #** 87-68-3.SEC | (Lot 1068200) | | | +/- | 11.9661 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 19.0375 | µg/mL | Stressed |
| 31 | 4-Chloro-3-methylphenol | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 59-50-7.SEC | (Lot FDO02) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 32 | 2-Methylnaphthalene | | 1,000.8 | µg/mL | +/- | 5.8320 | µg/mL | Gravimetric |
| | **CAS #** 91-57-6.SEC | (Lot 76023-1) | | | +/- | 11.9699 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0436 | µg/mL | Stressed |
| 33 | 1-Methylnaphthalene | | 1,000.1 | µg/mL | +/- | 5.8279 | µg/mL | Gravimetric |
| | **CAS #** 90-12-0.SEC | (Lot UATSA) | | | +/- | 11.9614 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 19.0302 | µg/mL | Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 95-94-3.SEC | (Lot AF02) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 35 | Hexachlorocyclopentadiene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 77-47-4.SEC | (Lot 5608400) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 36 | 2,4,6-Trichlorophenol | | 1,000.6 | µg/mL | +/- | 5.8309 | µg/mL | Gravimetric |
| | **CAS #** 88-06-2.SEC | (Lot UUMYM) | | | +/- | 11.9675 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0399 | µg/mL | Stressed |
| 37 | 2,4,5-Trichlorophenol | | 1,000.1 | µg/mL | +/- | 5.8279 | µg/mL | Gravimetric |
| | **CAS #** 95-95-4.SEC | (Lot MKBQ9937V) | | | +/- | 11.9614 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 19.0302 | µg/mL | Stressed |
| 38 | 2-Chloronaphthalene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 91-58-7.SEC | (Lot LC07783V) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 39 | Biphenyl | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 92-52-4.SEC | (Lot 33OQE) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 40 | 2-Nitroaniline<br>CAS # 88-74-4.SEC<br>Purity 99% | (Lot T6E7B) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 41 | Acenaphthylene<br>CAS # 208-96-8.SEC<br>Purity 96% | (Lot 0012014) | 999.9 | µg/mL | +/- 5.8271<br>+/- 11.9598<br>+/- 19.0276 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 42 | 1,3-Dinitrobenzene<br>CAS # 99-65-0.SEC<br>Purity 99% | (Lot 3XXLB) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 43 | Dimethylphthalate<br>CAS # 131-11-3.SEC<br>Purity 99% | (Lot 483WC) | 1,002.0 | µg/mL | +/- 5.8392<br>+/- 11.9845<br>+/- 19.0669 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 44 | 2,6-Dinitrotoluene<br>CAS # 606-20-2.SEC<br>Purity 99% | (Lot GE01) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 45 | 3-Nitroaniline<br>CAS # 99-09-2.SEC<br>Purity 99% | (Lot FGN03) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 46 | Acenaphthene<br>CAS # 83-32-9.SEC<br>Purity 99% | (Lot BWZJE) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 47 | 2,4-Dinitrophenol<br>CAS # 51-28-5.SEC<br>Purity 99% | (Lot YTR6B) | 2,000.0 | µg/mL | +/- 11.6282<br>+/- 23.9081<br>+/- 38.0494 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 48 | Dibenzofuran<br>CAS # 132-64-9.SEC<br>Purity 99% | (Lot 27ZGC) | 1,000.8 | µg/mL | +/- 5.8322<br>+/- 11.9702<br>+/- 19.0440 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 49 | 4-Nitrophenol<br>CAS # 100-02-7.SEC<br>Purity 99% | (Lot 2J5LB) | 2,000.0 | µg/mL | +/- 11.6282<br>+/- 23.9081<br>+/- 38.0494 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 50 | 2,4-Dinitrotoluene<br>CAS # 121-14-2.SEC<br>Purity 99% | (Lot SHRSA) | 1,000.4 | µg/mL | +/- 5.8299<br>+/- 11.9654<br>+/- 19.0364 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol<br>CAS # 58-90-2.SEC<br>Purity 99% | (Lot LC19623V) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 52 | Fluorene<br>CAS # 86-73-7.SEC<br>Purity 99% | (Lot 5027400) | 1,000.6 | µg/mL | +/- 5.8310<br>+/- 11.9678<br>+/- 19.0402 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 53 | n-Hexadecane (C16)<br>CAS # 544-76-3.SEC<br>Purity 99% | (Lot A0328141) | 1,000.0 | µg/mL | +/- 5.8275<br>+/- 11.9606<br>+/- 19.0288 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 54 | Diethylphthalate<br>CAS # 84-66-2.SEC<br>Purity 99% | (Lot UMBJC) | 1,000.4 | µg/mL | +/- 5.8299<br>+/- 11.9654<br>+/- 19.0364 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 55 | 4-Chlorophenyl phenyl ether<br>CAS # 7005-72-3.SEC<br>Purity 99% | (Lot P31G) | 1,000.4 | µg/mL | +/- 5.8299<br>+/- 11.9654<br>+/- 19.0364 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 56 | 4-Nitroaniline | | 1,000.4 | µg/mL | +/- | 5.8299 | µg/mL | Gravimetric |
| | **CAS #** 100-01-6.SEC | (Lot 5ITRC) | | | +/- | 11.9654 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0364 | µg/mL | Stressed |
| 57 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) | | 2,000.0 | µg/mL | +/- | 11.6282 | µg/mL | Gravimetric |
| | **CAS #** 534-52-1.SEC | (Lot 6333400) | | | +/- | 23.9081 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.0494 | µg/mL | Stressed |
| 58 | Diphenylamine | | 850.0 | µg/mL | +/- | 4.9534 | µg/mL | Gravimetric |
| | **CAS #** 122-39-4.SEC | (Lot 10164691) | | | +/- | 10.1665 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 16.1745 | µg/mL | Stressed |
| 59 | Azobenzene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 103-33-3.SEC | (Lot JUWAG) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 60 | 4-Bromophenyl phenyl ether | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 101-55-3.SEC | (Lot 84C6D) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 61 | Hexachlorobenzene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 118-74-1.SEC | (Lot G120431) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 62 | Pentachlorophenol | | 2,000.4 | µg/mL | +/- | 11.6305 | µg/mL | Gravimetric |
| | **CAS #** 87-86-5.SEC | (Lot 5784900) | | | +/- | 23.9129 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.0570 | µg/mL | Stressed |
| 63 | n-Octadecane (C18) | | 1,001.0 | µg/mL | +/- | 5.8333 | µg/mL | Gravimetric |
| | **CAS #** 593-45-3.SEC | (Lot G14U045) | | | +/- | 11.9726 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0478 | µg/mL | Stressed |
| 64 | Phenanthrene | | 1,002.0 | µg/mL | +/- | 5.8389 | µg/mL | Gravimetric |
| | **CAS #** 85-01-8.SEC | (Lot 4708400) | | | +/- | 11.9839 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0660 | µg/mL | Stressed |
| 65 | Anthracene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 120-12-7.SEC | (Lot WDFNJ) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 66 | Carbazole | | 1,000.4 | µg/mL | +/- | 5.8299 | µg/mL | Gravimetric |
| | **CAS #** 86-74-8.SEC | (Lot LMIZB) | | | +/- | 11.9654 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0364 | µg/mL | Stressed |
| 67 | Di-n-butylphthalate | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 84-74-2.SEC | (Lot 42FSG) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 68 | Fluoranthene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 206-44-0.SEC | (Lot FREGF) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 69 | Pyrene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 129-00-0.SEC | (Lot ROVJC) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 70 | Benzyl butyl phthalate | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 85-68-7.SEC | (Lot GX3GL) | | | +/- | 11.9605 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0287 | µg/mL | Stressed |
| 71 | Benz(a)anthracene | | 1,000.4 | µg/mL | +/- | 5.8299 | µg/mL | Gravimetric |
| | **CAS #** 56-55-3.SEC | (Lot MTENF) | | | +/- | 11.9654 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0364 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 72 | chrysene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 218-01-9.SEC | (Lot NICZC) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 73 | Bis(2-ethylhexyl)phthalate | | 1,000.4 | µg/mL | +/- | 5.8299 | µg/mL | Gravimetric |
| | **CAS #** 117-81-7.SEC | (Lot MT8AG) | | | +/- | 11.9654 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0364 | µg/mL | Stressed |
| 74 | Di-n-octyl phthalate | | 1,000.8 | µg/mL | +/- | 5.8322 | µg/mL | Gravimetric |
| | **CAS #** 117-84-0.SEC | (Lot O8DLD) | | | +/- | 11.9702 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0440 | µg/mL | Stressed |
| 75 | Benzo(b)fluoranthene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 205-99-2.SEC | (Lot 022011) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 76 | Benzo(k)fluoranthene | | 1,000.6 | µg/mL | +/- | 5.8310 | µg/mL | Gravimetric |
| | **CAS #** 207-08-9.SEC | (Lot ER041513-01) | | | +/- | 11.9678 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0402 | µg/mL | Stressed |
| 77 | Benzo(a)pyrene | | 1,000.5 | µg/mL | +/- | 5.8302 | µg/mL | Gravimetric |
| | **CAS #** 50-32-8.SEC | (Lot M8DFD) | | | +/- | 11.9661 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 19.0375 | µg/mL | Stressed |
| 78 | Indeno(1,2,3-cd)pyrene | | 1,000.4 | µg/mL | +/- | 5.8299 | µg/mL | Gravimetric |
| | **CAS #** 193-39-5.SEC | (Lot 0012014) | | | +/- | 11.9654 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0364 | µg/mL | Stressed |
| 79 | Dibenz(a,h)anthracene | | 1,000.0 | µg/mL | +/- | 5.8275 | µg/mL | Gravimetric |
| | **CAS #** 53-70-3.SEC | (Lot 0012011) | | | +/- | 11.9606 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0288 | µg/mL | Stressed |
| 80 | Benzo(g,h,i)perylene | | 1,000.1 | µg/mL | +/- | 5.8279 | µg/mL | Gravimetric |
| | **CAS #** 191-24-2.SEC | (Lot 0022012) | | | +/- | 11.9614 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 19.0302 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

**Specific Reference Material Notes:**

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

# Reagent

# MS-571995_00002

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 571995 **Lot No.:** A0136052

**Description :** 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

5163450
ID: MS-571995_00002
Exp: 09/30/19 Prpd: DCK
RES HSLB Mega Mix (2017)

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2019 **Storage:** 0°C or colder

**Handling:** Carcinogen/reproductive toxin. Photosensitive. Sonicate.

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | 1,4-Dioxane<br>**CAS #** 123-91-1 (Lot SHBH5677)<br>**Purity** 99% | 1,002.0 µg/mL | +/- 5.8257 µg/mL<br>+/- 11.9780 µg/mL<br>+/- 19.0628 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | N-Nitrosodimethylamine<br>**CAS #** 62-75-9 (Lot 161108JLM)<br>**Purity** 99% | 1,002.0 µg/mL | +/- 5.8257 µg/mL<br>+/- 11.9780 µg/mL<br>+/- 19.0628 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Pyridine<br>**CAS #** 110-86-1 (Lot SHBC7174V)<br>**Purity** 99% | 2,011.2 µg/mL | +/- 11.6933 µg/mL<br>+/- 24.0420 µg/mL<br>+/- 38.2625 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Phenol<br>**CAS #** 108-95-2 (Lot SHBF1351V)<br>**Purity** 99% | 1,005.1 µg/mL | +/- 5.8439 µg/mL<br>+/- 12.0154 µg/mL<br>+/- 19.1224 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Aniline<br>**CAS #** 62-53-3 (Lot K22Z462)<br>**Purity** 99% | 1,002.6 µg/mL | +/- 5.8292 µg/mL<br>+/- 11.9851 µg/mL<br>+/- 19.0742 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Bis(2-chloroethyl)ether<br>**CAS #** 111-44-4 (Lot SHBD4430V)<br>**Purity** 99% | 1,001.4 µg/mL | +/- 5.8222 µg/mL<br>+/- 11.9708 µg/mL<br>+/- 19.0513 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 7 | n-Decane (C10)<br>**CAS #** 124-18-5 (Lot SHBH3926V)<br>**Purity** 99% | 1,000.7 µg/mL | +/- 5.8180 µg/mL<br>+/- 11.9620 µg/mL<br>+/- 19.0374 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | 2-Chlorophenol<br>CAS # 95-57-8<br>Purity 99% | (Lot STBF2690V) | 1,007.1 | µg/mL | +/- 5.8552<br>+/- 12.0385<br>+/- 19.1592 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 9 | 1,3-Dichlorobenzene<br>CAS # 541-73-1<br>Purity 99% | (Lot BCBM5751V) | 1,001.0 | µg/mL | +/- 5.8199<br>+/- 11.9660<br>+/- 19.0437 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 10 | 1,4-Dichlorobenzene<br>CAS # 106-46-7<br>Purity 99% | (Lot MKBS4401V) | 1,004.4 | µg/mL | +/- 5.8397<br>+/- 12.0067<br>+/- 19.1084 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 11 | Benzyl alcohol<br>CAS # 100-51-6<br>Purity 99% | (Lot SHBC1850V) | 1,005.2 | µg/mL | +/- 5.8443<br>+/- 12.0162<br>+/- 19.1236 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 12 | 1,2-Dichlorobenzene<br>CAS # 95-50-1<br>Purity 99% | (Lot 68996CMV) | 1,001.2 | µg/mL | +/- 5.8211<br>+/- 11.9684<br>+/- 19.0475 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 13 | 2-Methylphenol (o-cresol)<br>CAS # 95-48-7<br>Purity 99% | (Lot SHBH6379) | 1,001.6 | µg/mL | +/- 5.8234<br>+/- 11.9732<br>+/- 19.0551 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 14 | 2,2'-oxybis(1-chloropropane)<br>CAS # 108-60-1<br>Purity 98% | (Lot 5510800) | 1,006.7 | µg/mL | +/- 5.8528<br>+/- 12.0336<br>+/- 19.1513 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 15 | Acetophenone<br>CAS # 98-86-2<br>Purity 99% | (Lot STBG7113) | 1,005.5 | µg/mL | +/- 5.8459<br>+/- 12.0194<br>+/- 19.1287 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 16 | 3-Methylphenol (m-cresol)<br>CAS # 108-39-4<br>Purity 99% | (Lot SHBD0627V) | 501.0 | µg/mL | +/- 2.9196<br>+/- 5.9923<br>+/- 9.5334 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 17 | 4-Methylphenol (p-cresol)<br>CAS # 106-44-5<br>Purity 99% | (Lot 49396APV) | 501.7 | µg/mL | +/- 2.9235<br>+/- 6.0002<br>+/- 9.5461 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 18 | N-Nitroso-di-n-propylamine<br>CAS # 621-64-7<br>Purity 99% | (Lot NOPCF) | 1,003.1 | µg/mL | +/- 5.8323<br>+/- 11.9915<br>+/- 19.0843 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 19 | Hexachloroethane<br>CAS # 67-72-1<br>Purity 99% | (Lot 4H3SF) | 1,003.4 | µg/mL | +/- 5.8339<br>+/- 11.9947<br>+/- 19.0894 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 20 | Nitrobenzene<br>CAS # 98-95-3<br>Purity 99% | (Lot SHBG5577V) | 1,002.3 | µg/mL | +/- 5.8273<br>+/- 11.9812<br>+/- 19.0678 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 21 | Isophorone<br>CAS # 78-59-1<br>Purity 98% | (Lot MKBG2442V) | 1,003.3 | µg/mL | +/- 5.8334<br>+/- 11.9938<br>+/- 19.0879 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 22 | 2-Nitrophenol<br>CAS # 88-75-5<br>Purity 99% | (Lot BCBH7602V) | 1,007.7 | µg/mL | +/- 5.8587<br>+/- 12.0457<br>+/- 19.1706 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 23 | 2,4-Dimethylphenol<br>CAS # 105-67-9<br>Purity 99% | (Lot 10165155) | 1,000.9 | µg/mL | +/- 5.8191<br>+/- 11.9644<br>+/- 19.0412 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24 | Bis(2-chloroethoxy)methane | | 1,001.3 µg/mL | +/- | 5.8215 | µg/mL | Gravimetric |
| | **CAS #** 111-91-1 | (Lot 4621000) | | +/- | 11.9692 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.0488 | µg/mL | Stressed |
| 25 | 2,4-Dichlorophenol | | 1,003.1 µg/mL | +/- | 5.8323 | µg/mL | Gravimetric |
| | **CAS #** 120-83-2 | (Lot BCBH1617V) | | +/- | 11.9915 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.0843 | µg/mL | Stressed |
| 26 | 1,2,4-Trichlorobenzene | | 1,005.0 µg/mL | +/- | 5.8432 | µg/mL | Gravimetric |
| | **CAS #** 120-82-1 | (Lot SHBJ0905) | | +/- | 12.0138 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.1198 | µg/mL | Stressed |
| 27 | Naphthalene | | 1,000.5 µg/mL | +/- | 5.8168 | µg/mL | Gravimetric |
| | **CAS #** 91-20-3 | (Lot MKBW2603V) | | +/- | 11.9596 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.0336 | µg/mL | Stressed |
| 28 | 2,6-Dichlorophenol | | 1,001.3 µg/mL | +/- | 5.8215 | µg/mL | Gravimetric |
| | **CAS #** 87-65-0 | (Lot MKBP8620V) | | +/- | 11.9692 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.0488 | µg/mL | Stressed |
| 29 | 4-Chloroaniline | | 1,001.3 µg/mL | +/- | 5.8215 | µg/mL | Gravimetric |
| | **CAS #** 106-47-8 | (Lot BCBJ1580V) | | +/- | 11.9692 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.0488 | µg/mL | Stressed |
| 30 | Hexachlorobutadiene | | 1,002.5 µg/mL | +/- | 5.8284 | µg/mL | Gravimetric |
| | **CAS #** 87-68-3 | (Lot J31X013) | | +/- | 11.9835 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.0716 | µg/mL | Stressed |
| 31 | 4-Chloro-3-methylphenol | | 1,006.2 µg/mL | +/- | 5.8501 | µg/mL | Gravimetric |
| | **CAS #** 59-50-7 | (Lot STBC7309V) | | +/- | 12.0282 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.1427 | µg/mL | Stressed |
| 32 | 2-Methylnaphthalene | | 1,007.7 µg/mL | +/- | 5.8587 | µg/mL | Gravimetric |
| | **CAS #** 91-57-6 | (Lot STBG8884) | | +/- | 12.0459 | µg/mL | Unstressed |
| | **Purity** 96% | | | +/- | 19.1708 | µg/mL | Stressed |
| 33 | 1-Methylnaphthalene | | 1,005.5 µg/mL | +/- | 5.8463 | µg/mL | Gravimetric |
| | **CAS #** 90-12-0 | (Lot 525000-9) | | +/- | 12.0202 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.1300 | µg/mL | Stressed |
| 34 | 1,2,4,5-Tetrachlorobenzene | | 1,004.3 µg/mL | +/- | 5.8389 | µg/mL | Gravimetric |
| | **CAS #** 95-94-3 | (Lot MKBW7717V) | | +/- | 12.0051 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.1059 | µg/mL | Stressed |
| 35 | Hexachlorocyclopentadiene | | 1,007.1 µg/mL | +/- | 5.8552 | µg/mL | Gravimetric |
| | **CAS #** 77-47-4 | (Lot 0012017H) | | +/- | 12.0385 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.1592 | µg/mL | Stressed |
| 36 | 2,4,6-Trichlorophenol | | 1,003.5 µg/mL | +/- | 5.8342 | µg/mL | Gravimetric |
| | **CAS #** 88-06-2 | (Lot STBF3742V) | | +/- | 11.9955 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.0907 | µg/mL | Stressed |
| 37 | 2,4,5-Trichlorophenol | | 1,006.4 µg/mL | +/- | 5.8513 | µg/mL | Gravimetric |
| | **CAS #** 95-95-4 | (Lot FHN01) | | +/- | 12.0306 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.1465 | µg/mL | Stressed |
| 38 | 2-Chloronaphthalene | | 1,002.9 µg/mL | +/- | 5.8308 | µg/mL | Gravimetric |
| | **CAS #** 91-58-7 | (Lot AJ2UI) | | +/- | 11.9883 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.0792 | µg/mL | Stressed |
| 39 | Biphenyl | | 1,001.2 µg/mL | +/- | 5.8211 | µg/mL | Gravimetric |
| | **CAS #** 92-52-4 | (Lot MKBV9808V) | | +/- | 11.9684 | µg/mL | Unstressed |
| | **Purity** 99% | | | +/- | 19.0475 | µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 40 | 2-Nitroaniline<br>**CAS #** 88-74-4<br>**Purity** 99% | (Lot MKBK7597V) | 1,004.5 | µg/mL | +/- 5.8401<br>+/- 12.0075<br>+/- 19.1097 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 41 | Acenaphthylene<br>**CAS #** 208-96-8<br>**Purity** 97% | (Lot O03R) | 1,006.0 | µg/mL | +/- 5.8491<br>+/- 12.0260<br>+/- 19.1392 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 42 | 1,3-Dinitrobenzene<br>**CAS #** 99-65-0<br>**Purity** 99% | (Lot BCBN4329V) | 1,001.8 | µg/mL | +/- 5.8246<br>+/- 11.9756<br>+/- 19.0590 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 43 | Dimethylphthalate<br>**CAS #** 131-11-3<br>**Purity** 99% | (Lot 10117699) | 1,003.7 | µg/mL | +/- 5.8358<br>+/- 11.9987<br>+/- 19.0957 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 44 | 2,6-Dinitrotoluene<br>**CAS #** 606-20-2<br>**Purity** 99% | (Lot BCBB8606V) | 1,000.7 | µg/mL | +/- 5.8183<br>+/- 11.9628<br>+/- 19.0387 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 45 | 3-Nitroaniline<br>**CAS #** 99-09-2<br>**Purity** 99% | (Lot MKBX1283V) | 1,005.2 | µg/mL | +/- 5.8443<br>+/- 12.0162<br>+/- 19.1236 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 46 | Acenaphthene<br>**CAS #** 83-32-9<br>**Purity** 99% | (Lot MKCC8329) | 1,005.9 | µg/mL | +/- 5.8482<br>+/- 12.0242<br>+/- 19.1363 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 47 | 2,4-Dinitrophenol<br>**CAS #** 51-28-5<br>**Purity** 99% | (Lot STBF9439V) | 2,008.3 | µg/mL | +/- 11.6766<br>+/- 24.0077<br>+/- 38.2080 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 48 | Dibenzofuran<br>**CAS #** 132-64-9<br>**Purity** 99% | (Lot MKBW2691V) | 1,005.5 | µg/mL | +/- 5.8463<br>+/- 12.0202<br>+/- 19.1300 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 49 | 4-Nitrophenol<br>**CAS #** 100-02-7<br>**Purity** 99% | (Lot MKBV0501V) | 2,009.3 | µg/mL | +/- 11.6824<br>+/- 24.0197<br>+/- 38.2270 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 50 | 2,4-Dinitrotoluene<br>**CAS #** 121-14-2<br>**Purity** 99% | (Lot MKAA0690V) | 1,003.9 | µg/mL | +/- 5.8366<br>+/- 12.0003<br>+/- 19.0983 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 51 | 2,3,4,6-Tetrachlorophenol<br>**CAS #** 58-90-2<br>**Purity** 99% | (Lot B180305L) | 1,001.9 | µg/mL | +/- 5.8253<br>+/- 11.9772<br>+/- 19.0615 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 52 | Fluorene<br>**CAS #** 86-73-7<br>**Purity** 99% | (Lot 10193329) | 1,002.0 | µg/mL | +/- 5.8257<br>+/- 11.9780<br>+/- 19.0628 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 53 | n-Hexadecane (C16)<br>**CAS #** 544-76-3<br>**Purity** 99% | (Lot SHBG2582V) | 1,001.6 | µg/mL | +/- 5.8234<br>+/- 11.9732<br>+/- 19.0551 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 54 | Diethylphthalate<br>**CAS #** 84-66-2<br>**Purity** 99% | (Lot MKBV9622V) | 1,003.3 | µg/mL | +/- 5.8335<br>+/- 11.9939<br>+/- 19.0881 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 55 | 4-Chlorophenyl phenyl ether<br>**CAS #** 7005-72-3<br>**Purity** 99% | (Lot MKBX5225V) | 1,001.1 | µg/mL | +/- 5.8203<br>+/- 11.9668<br>+/- 19.0450 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 56 | 4-Nitroaniline | | 1,003.1 | µg/mL | +/- | 5.8319 | µg/mL | Gravimetric |
| | **CAS #** 100-01-6 | (Lot BCBG4702V) | | | +/- | 11.9907 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0830 | µg/mL | Stressed |
| 57 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) | | 2,003.7 | µg/mL | +/- | 11.6495 | µg/mL | Gravimetric |
| | **CAS #** 534-52-1 | (Lot LC25844V) | | | +/- | 23.9520 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.1192 | µg/mL | Stressed |
| 58 | Diphenylamine | | 852.3 | µg/mL | +/- | 4.9555 | µg/mL | Gravimetric |
| | **CAS #** 122-39-4 | (Lot MKBN8295V) | | | +/- | 10.1888 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 16.2154 | µg/mL | Stressed |
| 59 | Azobenzene | | 1,005.5 | µg/mL | +/- | 5.8463 | µg/mL | Gravimetric |
| | **CAS #** 103-33-3 | (Lot BCBQ0927V) | | | +/- | 12.0202 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1300 | µg/mL | Stressed |
| 60 | 4-Bromophenyl phenyl ether | | 1,022.3 | µg/mL | +/- | 5.9439 | µg/mL | Gravimetric |
| | **CAS #** 101-55-3 | (Lot STBB9729V) | | | +/- | 12.2210 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.4496 | µg/mL | Stressed |
| 61 | Hexachlorobenzene | | 1,002.5 | µg/mL | +/- | 5.8288 | µg/mL | Gravimetric |
| | **CAS #** 118-74-1 | (Lot 7013600) | | | +/- | 11.9843 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0729 | µg/mL | Stressed |
| 62 | Pentachlorophenol | | 2,002.1 | µg/mL | +/- | 11.6406 | µg/mL | Gravimetric |
| | **CAS #** 87-86-5 | (Lot 170306KJA) | | | +/- | 23.9336 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 38.0900 | µg/mL | Stressed |
| 63 | n-Octadecane (C18) | | 1,002.9 | µg/mL | +/- | 5.8308 | µg/mL | Gravimetric |
| | **CAS #** 593-45-3 | (Lot OGCDK) | | | +/- | 11.9883 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0792 | µg/mL | Stressed |
| 64 | Phenanthrene | | 1,001.1 | µg/mL | +/- | 5.8203 | µg/mL | Gravimetric |
| | **CAS #** 85-01-8 | (Lot MKCB1762V) | | | +/- | 11.9668 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0450 | µg/mL | Stressed |
| 65 | Anthracene | | 1,000.3 | µg/mL | +/- | 5.8156 | µg/mL | Gravimetric |
| | **CAS #** 120-12-7 | (Lot MKBV7759V) | | | +/- | 11.9573 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0298 | µg/mL | Stressed |
| 66 | Carbazole | | 1,000.5 | µg/mL | +/- | 5.8168 | µg/mL | Gravimetric |
| | **CAS #** 86-74-8 | (Lot 6489700) | | | +/- | 11.9596 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.0336 | µg/mL | Stressed |
| 67 | Di-n-butylphthalate | | 1,005.7 | µg/mL | +/- | 5.8470 | µg/mL | Gravimetric |
| | **CAS #** 84-74-2 | (Lot MKBT0244V) | | | +/- | 12.0218 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1325 | µg/mL | Stressed |
| 68 | Fluoranthene | | 1,005.5 | µg/mL | +/- | 5.8463 | µg/mL | Gravimetric |
| | **CAS #** 206-44-0 | (Lot MKBQ6360V) | | | +/- | 12.0204 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.1302 | µg/mL | Stressed |
| 69 | Pyrene | | 1,005.8 | µg/mL | +/- | 5.8478 | µg/mL | Gravimetric |
| | **CAS #** 129-00-0 | (Lot BCBT5695) | | | +/- | 12.0234 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 19.1351 | µg/mL | Stressed |
| 70 | Benzyl butyl phthalate | | 1,000.3 | µg/mL | +/- | 5.8156 | µg/mL | Gravimetric |
| | **CAS #** 85-68-7 | (Lot MKBZ4553V) | | | +/- | 11.9571 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0295 | µg/mL | Stressed |
| 71 | Benz(a)anthracene | | 1,003.1 | µg/mL | +/- | 5.8323 | µg/mL | Gravimetric |
| | **CAS #** 56-55-3 | (Lot 0012012) | | | +/- | 11.9915 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 19.0842 | µg/mL | Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 72 | Chrysene<br>**CAS #** 218-01-9<br>**Purity** 99% | (Lot 012015) | 1,004.6 | µg/mL | +/- 5.8408<br>+/- 12.0091<br>+/- 19.1122 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 73 | Bis(2-ethylhexyl)phthalate<br>**CAS #** 117-81-7<br>**Purity** 99% | (Lot MKBZ3868V) | 1,002.7 | µg/mL | +/- 5.8296<br>+/- 11.9859<br>+/- 19.0754 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 74 | Di-n-octyl phthalate<br>**CAS #** 117-84-0<br>**Purity** 99% | (Lot 6016000) | 1,007.9 | µg/mL | +/- 5.8602<br>+/- 12.0489<br>+/- 19.1756 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 75 | Benzo(b)fluoranthene<br>**CAS #** 205-99-2<br>**Purity** 99% | (Lot 012012B) | 1,003.6 | µg/mL | +/- 5.8350<br>+/- 11.9971<br>+/- 19.0932 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 76 | Benzo(k)fluoranthene<br>**CAS #** 207-08-9<br>**Purity** 99% | (Lot 012017K) | 1,006.2 | µg/mL | +/- 5.8501<br>+/- 12.0282<br>+/- 19.1427 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 77 | Benzo(a)pyrene<br>**CAS #** 50-32-8<br>**Purity** 99% | (Lot ER071309-02) | 1,002.1 | µg/mL | +/- 5.8261<br>+/- 11.9788<br>+/- 19.0640 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 78 | Indeno(1,2,3-cd)pyrene<br>**CAS #** 193-39-5<br>**Purity** 99% | (Lot ER082107-02) | 1,004.0 | µg/mL | +/- 5.8373<br>+/- 12.0019<br>+/- 19.1008 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 79 | Dibenz(a,h)anthracene<br>**CAS #** 53-70-3<br>**Purity** 99% | (Lot ER032211-01) | 1,001.9 | µg/mL | +/- 5.8249<br>+/- 11.9764<br>+/- 19.0602 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 80 | Benzo(g,h,i)perylene<br>**CAS #** 191-24-2<br>**Purity** 99% | (Lot ER05121401) | 1,000.9 | µg/mL | +/- 5.8195<br>+/- 11.9652<br>+/- 19.0425 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Specific Reference Material Notes:**
N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

# Reagent

# MV-568718-D_00014

RESTEK
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Tel: (800)356-1688
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# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

rec'd 3/1/18

**Catalog No. :** 568718 **Lot No.:** A0127975

**Description :** 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** May 31, 2022 **Storage:** 0°C or colder

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | tert-Butyl-d9-alcohol<br>**CAS #** 25725-11-5 (Lot I-201)<br>**Purity** 99% | 5,022.1 µg/mL | +/- 29.1976 µg/mL<br>+/- 107.5241 µg/mL<br>+/- 110.6500 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | 2-Butanone-d5<br>**CAS #** 24313-50-6 (Lot M-276)<br>**Purity** 99% | 1,257.5 µg/mL | +/- 7.3114 µg/mL<br>+/- 26.9239 µg/mL<br>+/- 27.7067 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Fluorobenzene<br>**CAS #** 462-06-6 (Lot BCBK8171V)<br>**Purity** 99% | 250.8 µg/mL | +/- 1.4613 µg/mL<br>+/- 5.3699 µg/mL<br>+/- 5.5259 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | 1,4-Dioxane-d8<br>**CAS #** 17647-74-4 (Lot I-19942)<br>**Purity** 99% | 5,009.4 µg/mL | +/- 29.1236 µg/mL<br>+/- 107.2514 µg/mL<br>+/- 110.3694 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Chlorobenzene-d5<br>**CAS #** 3114-55-4 (Lot PR-21944)<br>**Purity** 99% | 251.7 µg/mL | +/- 1.4666 µg/mL<br>+/- 5.3891 µg/mL<br>+/- 5.5458 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | 1,4-Dichlorobenzene-d4<br>**CAS #** 3855-82-1 (Lot PR-18488)<br>**Purity** 99% | 251.3 µg/mL | +/- 1.4645 µg/mL<br>+/- 5.3813 µg/mL<br>+/- 5.5377 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** P&T Methanol/Water (90:10)
**CAS #** 67-56-1/7732-18-5
**Purity** 99%

**Column:**
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

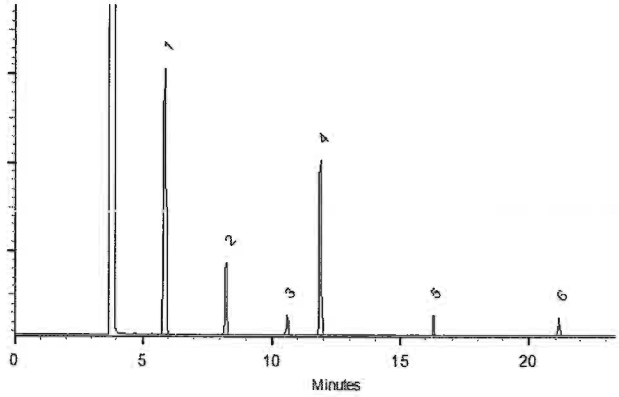
**Carrier Gas:**
hydrogen-constant pressure 11.0 psi.

**Temp. Program:**
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
250°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

**Date Mixed:** 30-May-2017 **Balance:** 1128342314

Justine Albertson - Operations Tech-ARM QC

**Date Passed:** 06-Jun-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

## General Certified Reference Material Notes

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

$k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# MV-568720.sec_00021

# Reagent

# MV-569721.sec_00005

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# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ISO Guide 34 Accredited
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Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

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**Catalog No. :** 569721.sec **Lot No.:** A0123880

**Description :** 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** January 31, 2020 **Storage:** 0°C or colder

## C E R T I F I E D V A L U E S

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Acetone | 12,501.6 µg/mL | +/- 73.1996 µg/mL | Gravimetric |
| | **CAS #** 67-64-1.SEC (Lot P14A572) | | +/- 754.3267 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 756.1173 µg/mL | Stressed |
| 2 | 2-Butanone (MEK) | 12,503.6 µg/mL | +/- 73.2113 µg/mL | Gravimetric |
| | **CAS #** 78-93-3.SEC (Lot RA58J) | | +/- 754.4473 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 756.2383 µg/mL | Stressed |
| 3 | 4-Methyl-2-pentanone (MIBK) | 12,506.0 µg/mL | +/- 73.2254 µg/mL | Gravimetric |
| | **CAS #** 108-10-1.SEC (Lot E29T040) | | +/- 754.5921 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 756.3834 µg/mL | Stressed |
| 4 | 2-Hexanone | 12,504.0 µg/mL | +/- 73.2137 µg/mL | Gravimetric |
| | **CAS #** 591-78-6.SEC (Lot V3NRA) | | +/- 754.4715 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 756.2625 µg/mL | Stressed |

**Solvent:** P&T Methanol/Water (90:10)
**CAS #** 67-56-1/7732-18-5
**Purity** 99%

**Column:**
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

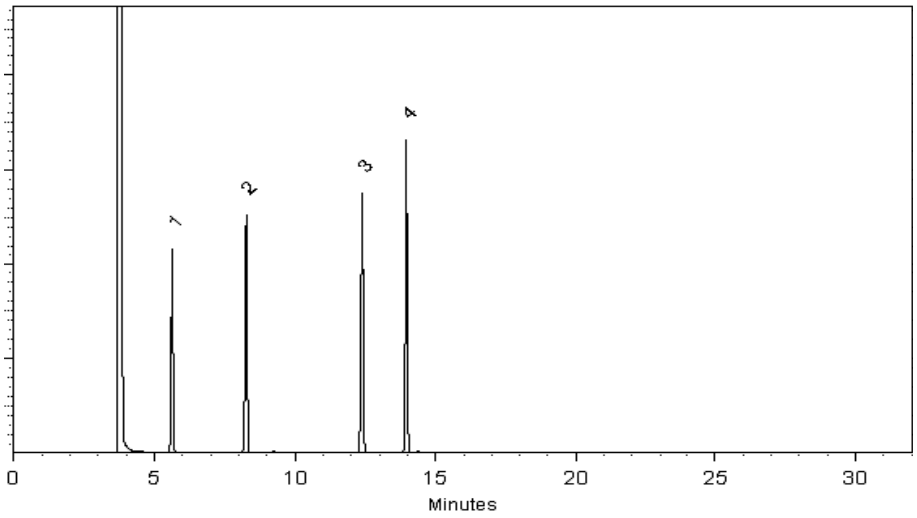
**Carrier Gas:**
hydrogen-constant pressure 11.0 psi.

**Temp. Program:**
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
250°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

**Date Mixed:** 03-Jan-2017 **Balance:** 1127510105

Jennifer L Pollino

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 05-Jan-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# MV-569721_00006

# Reagent

# MV-569722.sec_00005

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# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569722.SEC **Lot No.:** A0128832

**Description :** 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** June 30, 2020 **Storage:** 0°C or colder

**C E R T I F I E D V A L U E S**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Dichlorodifluoromethane (CFC-12) | 2,505.9 µg/mL | +/- 22.3986 µg/mL | Gravimetric |
| | **CAS #** 75-71-8.SEC (Lot 23586) | | +/- 141.5312 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 144.7955 µg/mL | Stressed |
| 2 | Chloromethane (methyl chloride) | 2,503.7 µg/mL | +/- 24.8413 µg/mL | Gravimetric |
| | **CAS #** 74-87-3.SEC (Lot 18343) | | +/- 141.8153 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 145.0675 µg/mL | Stressed |
| 3 | Vinyl chloride | 2,503.2 µg/mL | +/- 25.9197 µg/mL | Gravimetric |
| | **CAS #** 75-01-4.SEC (Lot MKBK6872V) | | +/- 141.9813 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 145.2285 µg/mL | Stressed |
| 4 | 1,3-Butadiene | 2,508.9 µg/mL | +/- 20.6969 µg/mL | Gravimetric |
| | **CAS #** 106-99-0.SEC (Lot 24033) | | +/- 141.4379 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 144.7121 µg/mL | Stressed |
| 5 | Bromomethane (methyl bromide) | 2,502.6 µg/mL | +/- 26.2540 µg/mL | Gravimetric |
| | **CAS #** 74-83-9.SEC (Lot Q119-46) | | +/- 142.0076 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 145.2526 µg/mL | Stressed |
| 6 | Chloroethane (ethyl chloride) | 2,510.6 µg/mL | +/- 24.9094 µg/mL | Gravimetric |
| | **CAS #** 75-00-3.SEC (Lot 00004202) | | +/- 142.2038 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 145.4650 µg/mL | Stressed |
| 7 | Dichlorofluoromethane (CFC-21) | 2,510.9 µg/mL | +/- 25.6719 µg/mL | Gravimetric |
| | **CAS #** 75-43-4.SEC (Lot SHBC0858V) | | +/- 142.3575 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 145.6160 µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | Trichlorofluoromethane (CFC-11) | | 2,504.9 | µg/mL | +/- | 18.9312 | µg/mL | Gravimetric |
| | **CAS #** 75-69-4.SEC | (Lot 253600) | | | +/- | 140.9660 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 144.2404 | µg/mL | Stressed |

**Solvent:** P&T Methanol
**CAS #** 67-56-1
**Purity** 99%

**Column:**
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

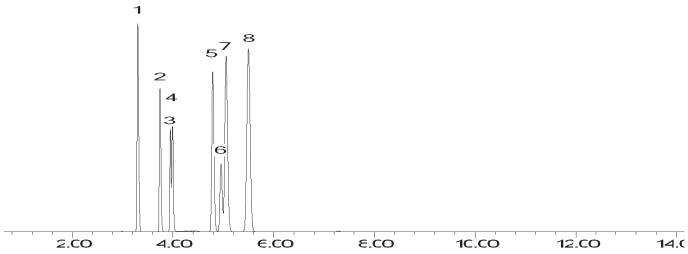
**Carrier Gas:**
helium-constant flow 2.0 mL/min.

**Temp. Program:**
40°C (hold 6 min.) to 100°C
@ 6°C/min.

**Inj. Temp:**
200°C

**Det. Temp:**
250°C

**Det. Type:**
MSD




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

**Date Mixed:** 29-Jun-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 24-Jul-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569723.SEC **Lot No.:** A0123884

**Description :** 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** January 31, 2020 **Storage:** 0°C or colder

**C E R T I F I E D V A L U E S**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | 2-Chloroethyl vinyl ether | 2,504.4 µg/mL | +/- 14.6972 µg/mL | Gravimetric |
| | **CAS #** 110-75-8.SEC (Lot BQZ2K-QD) | | +/- 53.6567 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 55.2145 µg/mL | Stressed |

**Solvent:** P&T Methanol
**CAS #** 67-56-1
**Purity** 99%

**Tech Tips:**

Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

**Column:**
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

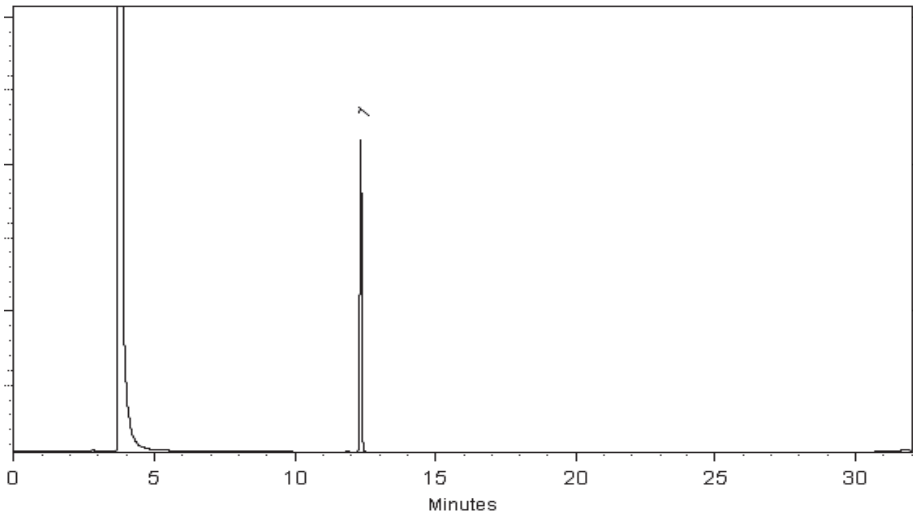
**Carrier Gas:**
hydrogen-constant pressure 11.0 psi.

**Temp. Program:**
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
250°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

**Date Mixed:** 03-Jan-2017 **Balance:** 1128342314

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 06-Jan-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

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# Reagent

# MV-569727.sec_00005

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Certificate #3222.02

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569727.SEC **Lot No.:** A0131573

**Description :** 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000µg/mL, Water, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** October 31, 2020 **Storage:** 10°C or colder

**C E R T I F I E D V A L U E S**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Cyclohexanone | 24,978.0 µg/mL | +/- 146.2517 µg/mL | Gravimetric |
| | **CAS #** 108-94-1.SEC (Lot ZEHPG) | | +/- 1,507.1328 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 1,510.7105 µg/mL | Stressed |

**Solvent:** Water
**CAS #** 7732-18-5
**Purity** 99%

**Column:**
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

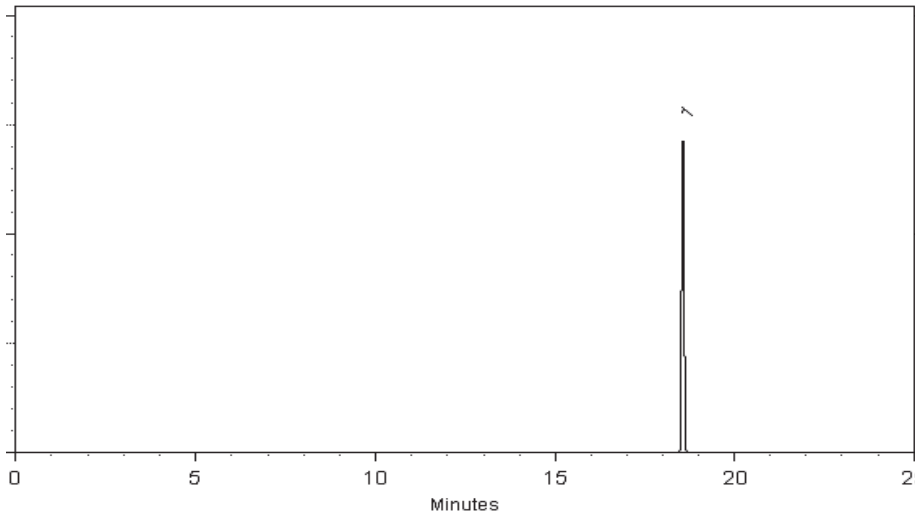
**Carrier Gas:**
hydrogen-constant pressure 11.0 psi.

**Temp. Program:**
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
250°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Larry J. Moore - Mix Technician

**Date Mixed:** 11-Oct-2017 **Balance:** 1128353505

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 13-Oct-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

*k* is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# MV-569727_00007

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569727 **Lot No.:** A0124672

**Description :** 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** February 29, 2020 **Storage:** 10°C or colder

**C E R T I F I E D V A L U E S**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Cyclohexanone | 25,006.0 µg/mL | +/- 146.4156 µg/mL | Gravimetric |
| | **CAS #** 108-94-1 (Lot MKBN5282V) | | +/- 1,508.8223 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 1,512.4040 µg/mL | Stressed |

**Solvent:** Water
**CAS #** 7732-18-5
**Purity** 99%

**Column:**
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

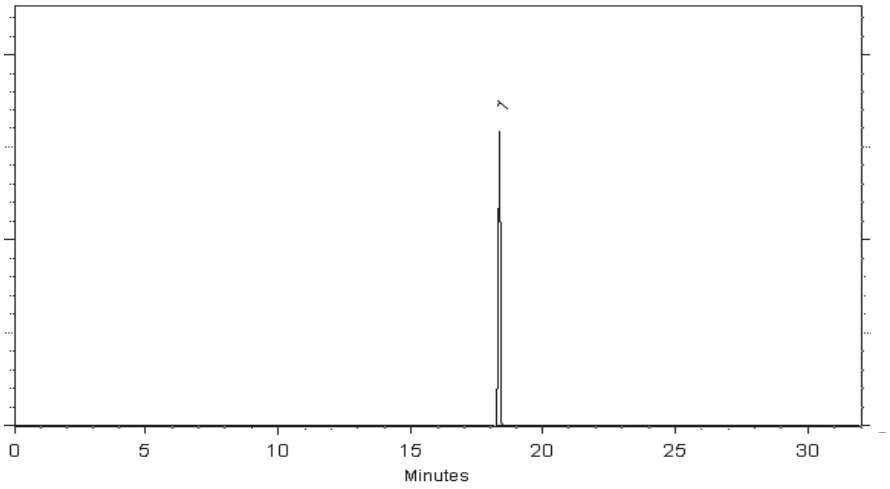
**Carrier Gas:**
hydrogen-constant pressure 11.0 psi.

**Temp. Program:**
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
250°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

**Date Mixed:** 03-Feb-2017 **Balance:** 1125113331

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 07-Feb-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

---

# mv-570808.sec_00002

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**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 570808.SEC **Lot No.:** A0126195

**Description :** 8260 List 2 / Std #6

8260 List 2 / Std #6 2500-62500 µg/ml, P&T Methanol, 1 ml/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** September 30, 2018 **Storage:** 0°C or colder

**C E R T I F I E D V A L U E S**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | 2-Propanol (isopropanol) | 25,010.4 µg/mL | +/- 146.4413 µg/mL | Gravimetric |
| | **CAS #** 67-63-0.SEC (Lot NWVYK) | | +/- 1,237.3312 µg/mL | Unstressed |
| | **Purity** 98% | | +/- 1,268.0926 µg/mL | Stressed |
| 2 | Chloroprene (2-chloro-1,3-butadiene) | 2,519.6 µg/mL | +/- 14.7864 µg/mL | Gravimetric |
| | **CAS #** 126-99-8 * (Lot 170113JLM) | | +/- 124.6554 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 127.7543 µg/mL | Stressed |
| 3 | Methacrylonitrile | 25,013.6 µg/mL | +/- 146.4601 µg/mL | Gravimetric |
| | **CAS #** 126-98-7 * (Lot 1012014) | | +/- 1,237.4903 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 1,268.2556 µg/mL | Stressed |
| 4 | 2,2,4-Trimethylpentane ( Isooctane ) | 2,502.4 µg/mL | +/- 14.6855 µg/mL | Gravimetric |
| | **CAS #** 540-84-1.SEC (Lot 4597900) | | +/- 123.8044 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 126.8822 µg/mL | Stressed |
| 5 | 1-Butanol | 62,532.0 µg/mL | +/- 366.1197 µg/mL | Gravimetric |
| | **CAS #** 71-36-3.SEC (Lot QBO2D) | | +/- 3,093.6246 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 3,170.5355 µg/mL | Stressed |
| 6 | 2-Nitropropane | 5,012.9 µg/mL | +/- 29.3516 µg/mL | Gravimetric |
| | **CAS #** 79-46-9.SEC (Lot 6M3NJ) | | +/- 248.0015 µg/mL | Unstressed |
| | **Purity** 98% | | +/- 254.1671 µg/mL | Stressed |
| 7 | 1-Chlorohexane | 2,507.6 µg/mL | +/- 14.7161 µg/mL | Gravimetric |
| | **CAS #** 544-10-5.SEC (Lot 3890000) | | +/- 124.0629 µg/mL | Unstressed |
| | **Purity** 98% | | +/- 127.1470 µg/mL | Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | 1,2,3-Trimethylbenzene | | 2,505.6 | µg/mL | +/- | 14.7043 | µg/mL | Gravimetric |
| | **CAS #** 526-73-8.SEC | (Lot 5602500) | | | +/- | 123.9628 | µg/mL | Unstressed |
| | **Purity** 96% | | | | +/- | 127.0444 | µg/mL | Stressed |
| 9 | Benzyl chloride | | 2,506.4 | µg/mL | +/- | 14.7090 | µg/mL | Gravimetric |
| | **CAS #** 100-44-7.SEC | (Lot H29N03) | | | +/- | 124.0023 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 127.0850 | µg/mL | Stressed |
| 10 | 1,3,5-Trichlorobenzene | | 2,504.0 | µg/mL | +/- | 14.6949 | µg/mL | Gravimetric |
| | **CAS #** 108-70-3.SEC | (Lot I28U021) | | | +/- | 123.8836 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 126.9633 | µg/mL | Stressed |

**Solvent:** P&T Methanol
**CAS #** 67-56-1
**Purity** 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

**Column:**
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

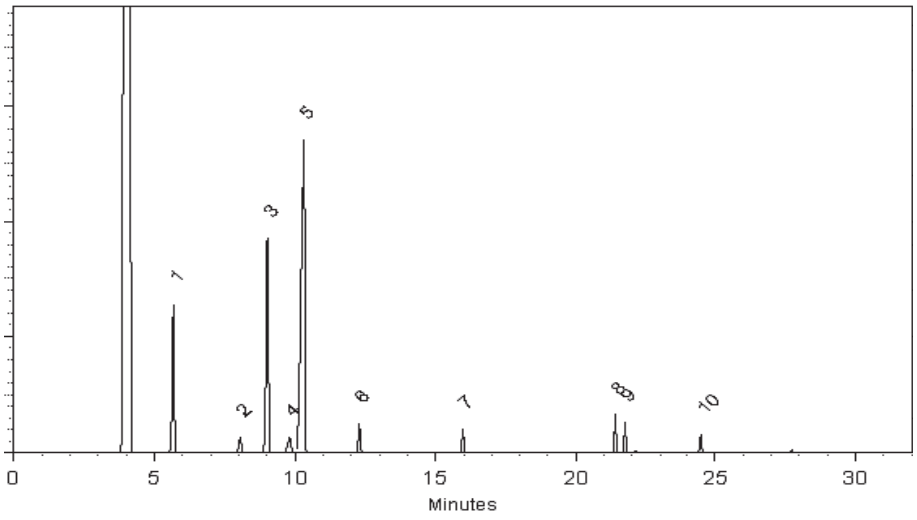
**Carrier Gas:**
hydrogen-constant pressure 11.0 psi.

**Temp. Program:**
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
250°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

**Date Mixed:** 27-Mar-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 29-Mar-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# mv-570809.sec_00002

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# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 570809.sec **Lot No.:** A0126533

**Description :** 8260 List 2 / Std #7

8260 List 2 / Std #7 2500-5000 µg/ml, P&T Methanol, 1 ml/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** October 31, 2018 **Storage:** 0°C or colder

**C E R T I F I E D V A L U E S**

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Ethyl acetate | 5,005.0 µg/mL | +/- 29.3054 µg/mL | Gravimetric |
| | **CAS #** 141-78-6.SEC (Lot C386A-GG) | | +/- 301.9937 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 302.7106 µg/mL | Stressed |
| 2 | Ethyl acrylate | 2,502.0 µg/mL | +/- 14.6831 µg/mL | Gravimetric |
| | **CAS #** 140-88-5.SEC (Lot YIFAM-TG) | | +/- 150.9699 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 151.3283 µg/mL | Stressed |
| 3 | Methyl methacrylate | 5,003.5 µg/mL | +/- 29.2966 µg/mL | Gravimetric |
| | **CAS #** 80-62-6.SEC (Lot G01X021) | | +/- 301.9032 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 302.6199 µg/mL | Stressed |
| 4 | Butyl acetate | 2,505.0 µg/mL | +/- 14.7007 µg/mL | Gravimetric |
| | **CAS #** 123-86-4.SEC (Lot V2L2G-GT) | | +/- 151.1510 µg/mL | Unstressed |
| | **Purity** 99% | | +/- 151.5098 µg/mL | Stressed |

**Solvent:** P&T Methanol
**CAS #** 67-56-1
**Purity** 99%

**Column:**
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

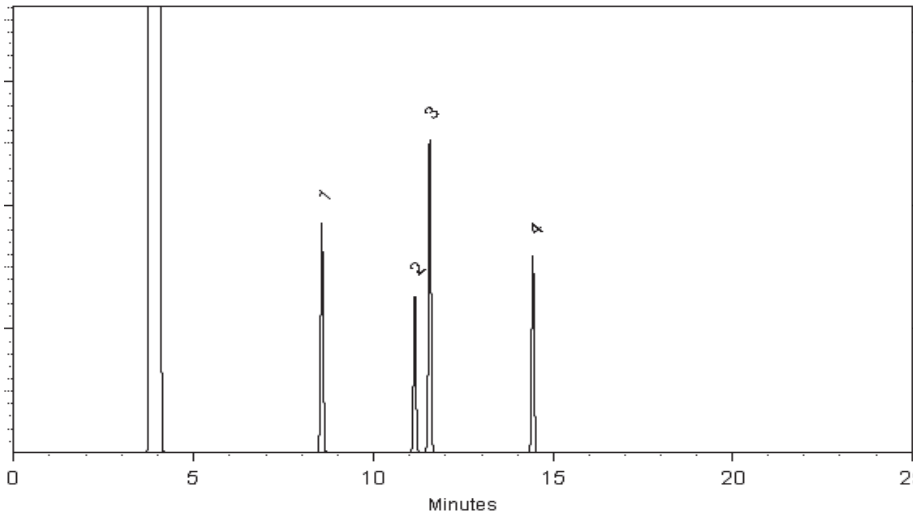
**Carrier Gas:**
hydrogen-constant pressure 11.0 psi.

**Temp. Program:**
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
250°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

**Date Mixed:** 05-Apr-2017 **Balance:** 1127510105

Jennifer L Pollino

Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 10-Apr-2017

**Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397**

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# mv-571993.sec_00002

# Reagent

# mv-571994.sec_00002

# Reagent

# mv-571994_00002

# Reagent

# MV-STS110N1_00066

# Certificate of Analysis

## 4-Bromofluorobenzene Solution

**Product Number:** STS-110N **Page:** 1 of 1

**Lot Number:** CH-3248Z **Lot Issue Date:** 31-Aug-2016 **Expiration Date:** 31-Oct-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

| Analyte | CAS# | Analyte Lot | True Value |
|---|---|---|---|
| 4-bromofluorobenzene | 000460-00-4 | RM03365 | 2005 ± 10 µg/mL |

**Matrix:** methanol (methyl alcohol)

**Storage:** Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Vincent Wang, Ph.D.
Director of QA/RA

ISO 9001
Registered
TUV USA, Inc.



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# Reagent

# OP-569730_00006

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# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569730 **Lot No.:** A0137351

**Description :** 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** October 31, 2019 **Storage:** 10°C or colder

**Handling:** Contains carcinogen/reproductive toxin.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | Benzidine<br>**CAS #** 92-87-5<br>**Purity** 99% | (Lot 171228KJA) | 2,000.3 µg/mL | +/- 11.6301<br>+/- 23.9121<br>+/- 38.0558 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | 3,3'-Dichlorobenzidine<br>**CAS #** 91-94-1<br>**Purity** 99% | (Lot 180328JNA) | 2,005.7 µg/mL | +/- 11.6611<br>+/- 23.9759<br>+/- 38.1572 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

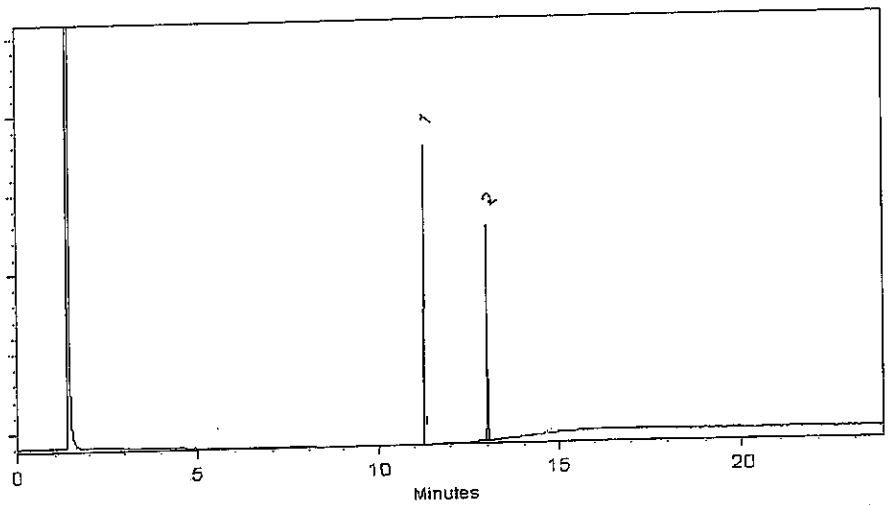
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dawn Brownson - Mix Technician

**Date Mixed:** 20-Apr-2018 **Balance:** 1128360905

Jennifer Pellino - Operations Tech-ARM QC

**Date Passed:** 24-Apr-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# OP-569730_00009

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# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

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Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569730 **Lot No.:** A0137351

**Description :** 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 10 mL **Pkg Amt:** > 5 mL

**Expiration Date :** October 31, 2019 **Storage:** 10°C or colder

**Handling:** Contains carcinogen/reproductive toxin.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | Benzidine<br>**CAS #** 92-87-5<br>**Purity** 99% | (Lot 171228KJA) | 2,000.3 µg/mL | +/- 11.6301<br>+/- 23.9121<br>+/- 38.0558 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | 3,3'-Dichlorobenzidine<br>**CAS #** 91-94-1<br>**Purity** 99% | (Lot 180328JNA) | 2,005.7 µg/mL | +/- 11.6611<br>+/- 23.9759<br>+/- 38.1572 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

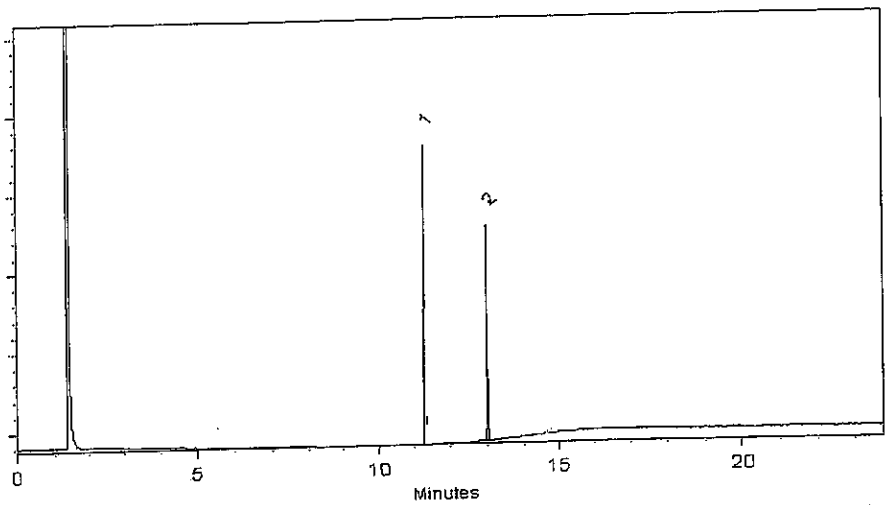
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dawn Brownson - Mix Technician

**Date Mixed:** 20-Apr-2018 **Balance:** 1128360905

Jennifer Pellino - Operations Tech-ARM QC

**Date Passed:** 24-Apr-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

**General Certified Reference Material Notes**

**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

**Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

**Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer) | < 25°C | ≥ 25°C up to 7 days |

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

**Handling Notes:**

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

# Reagent

# OP-569732_00009

**Column:**
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

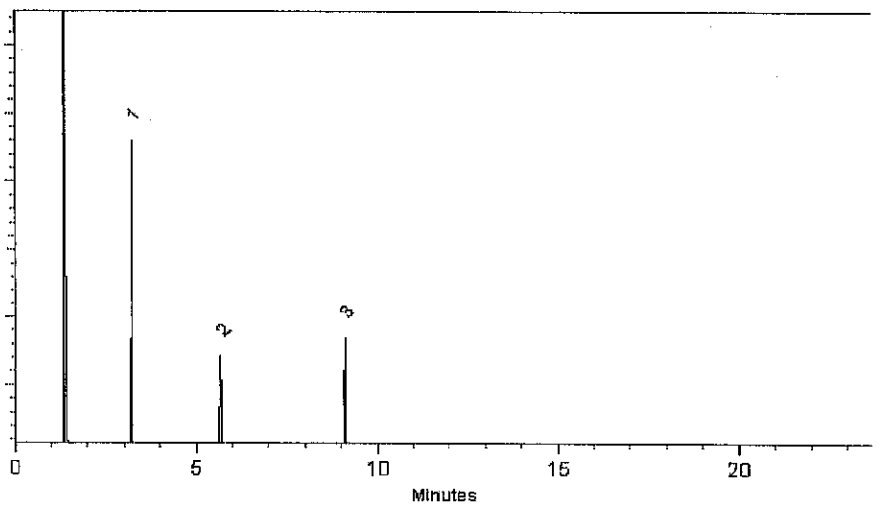
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician **Date Mixed:** 12-Apr-2018 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 16-Apr-2018

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 569732 **Lot No.:** A0137125

**Description :** 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** October 31, 2019 **Storage:** 10°C or colder

**Handling:** This product is photosensitive.

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | Benzaldehyde<br>**CAS #** 100-52-7<br>**Purity** 99% | (Lot SHBG8690V) | 2,001.1 µg/mL | +/- 11.6345<br>+/- 64.1460<br>+/- 74.5673 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | epsilon-Caprolactam<br>**CAS #** 105-60-2<br>**Purity** 99% | (Lot I16X016) | 2,002.0 µg/mL | +/- 11.6398<br>+/- 64.1754<br>+/- 74.6014 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Atrazine<br>**CAS #** 1912-24-9<br>**Purity** 99% | (Lot 77P7D) | 2,002.6 µg/mL | +/- 11.6432<br>+/- 64.1941<br>+/- 74.6232 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Reagent

# OP-572556_00020

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# CERTIFIED REFERENCE MATERIAL

## Gravimetric Certificate

ACCREDITED
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Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 572556 **Lot No.:** A0143533

**Description :** Custom Hexachlorocyclopentadiene Standard

Custom Hexachlorocyclopentadiene Standard 4,000µg/mL, Methylene Chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** November 30, 2022 **Storage:** 10°C or colder

**CERTIFIED VALUES**

| Component # | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Hexachlorocyclopentadiene<br>**CAS #** 77-47-4<br>**Purity** 99% (Lot 0012015) | 4,015.0 µg/mL | +/- 23.562270 µg/mL<br>+/- 225.139850 µg/mL<br>+/- 230.406784 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

Brandon Reish - Mix Technician **Date Mixed:** 27-Nov-2018 **Balance:** B442140311

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

# Reagent

# OP-572556_00027

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# CERTIFIED REFERENCE MATERIAL

## Gravimetric Certificate

ACCREDITED
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Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 572556 **Lot No.:** A0143533

**Description :** Custom Hexachlorocyclopentadiene Standard

Custom Hexachlorocyclopentadiene Standard 4,000µg/mL, Methylene Chloride, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** November 30, 2022 **Storage:** 10°C or colder

**CERTIFIED VALUES**

| Component # | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | Hexachlorocyclopentadiene<br>**CAS #** 77-47-4<br>**Purity** 99% (Lot 0012015) | 4,015.0 µg/mL | +/- 23.562270 µg/mL<br>+/- 225.139850 µg/mL<br>+/- 230.406784 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

Brandon Reish - Mix Technician **Date Mixed:** 27-Nov-2018 **Balance:** B442140311

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

# Reagent

# 10INC13OCDFP_00001

Cerilliant
Analytical Reference Standards
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Recd 9/15/16
HRO 12-6
10INC130CDFP00001

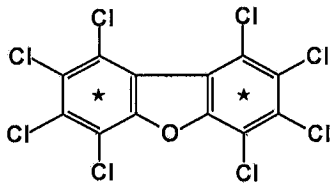
CIL



Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 9001
GMP/GLP

# *Certificate of Analysis*

## Octachlorodibenzofuran-$^{13}C_{12}$



**Catalog Number:** EF-983
**Solution Lot:** ER080812-01
**Expiration Date:** August 2022
**Solvent:** n-Nonane
**Volume per Ampule:** Not less than 1.2 mL
**Storage:** Store at room temperature. Do not store cold.
**Intended Use:** For R&D/analytical purposes only. Not suitable for human or animal consumption.
**Safety:** **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume fill. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

| Component | Solution Purity | Certified Concentration |
|---|---|---|
| Octachlorodibenzofuran-$^{13}C_{12}$ | > 99.9% | 50.00 ± 0.31 µg/mL |

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

### *Solution Standard Verification and Homogeneity*

| Standard Solution | Lot Number | Verified Concentration (µg/mL) Actual Results | Acceptance Crtieria | %RSD - Homogeneity Actual Results | Acceptance Crtieria |
|---|---|---|---|---|---|
| New Lot | ER080812-01 | 51.3 | ± 5% | 0.2 | ≤ 3% |
| Previous Lot | ER062011-01 | 47.2 | ------ | 0.7 | ≤ 3% |

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

### *Traceability*

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

*January 28, 2016*
Date


Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

# Reagent

# 10INDFCL37P_00001

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Recd 9/15/16
HR0125

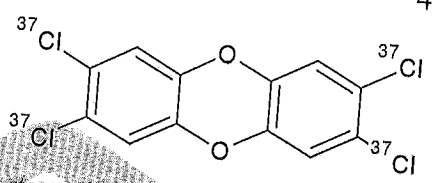
CIL



# Certificate of Analysis

## 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{37}Cl_4$

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP




| | |
|---|---|
| **Catalog Number:** | ED-907 |
| **Solution Lot:** | ER05211501 |
| **Expiration Date:** | July 2025 |
| **Solvent:** | n-Nonane |
| **Volume per Ampule:** | Not less than 1.2 mL |
| **Storage:** | Store at room temperature. Do not store cold. |
| **Shipping:** | Ambient. |
| **Intended Use:** | For R&D/analytical purposes only. Not suitable for human or animal consumption. |
| **Instructions for Use:** | Sonicate before use. |
| **Safety:** | **Danger. See Safety Data Sheet.** |

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.
- For MS Applications, we advise laboratories not to mix lots during a single sequence.

| Component | Solution Purity | Certified Concentration |
|---|---|---|
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{37}Cl_4$ | 98.5% | 50.00 ± 0.23 µg/mL |

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

### *Solution Standard Verification and Homogeneity*

| Standard Solution | Lot Number | Verified Concentration (µg/mL) Actual Results | Acceptance Criteria | %RSD - Homogeneity Actual Results | Acceptance Criteria |
|---|---|---|---|---|---|
| New Lot | ER05211501 | 50.60 | ± 10% | 0.2 | ≤ 5% |
| Previous Lot | ER052010-02 | 49.73 | ± 10% | 0.5 | ≤ 5% |

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

### *Traceability*

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

*August 03, 2015*
Date

# Reagent

# 10INDFHXCDRSP_00001

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Rec'd 12-5-16

HR0133

CIL

10INDFHXCDRSP00001



ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

# Certificate of Analysis

## 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

**Catalog Number:** ED-996
**Solution Lot:** ER08221601
**Expiration Date:** September 2026
**Solvent:** n-Nonane
**Volume per Ampule:** Not less than 1.2 mL
**Storage:** Store at room temperature. Do not store cold.
**Intended Use:** For R&D/analytical purposes only. Not suitable for human or animal consumption.
**Safety:** **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

| Component | Solution Purity | Certified Concentration |
|---|---|---|
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$ | 99.5% | 50.00 ± 0.23 µg/mL |

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

### *Solution Standard Verification and Homogeneity*

| Standard Solution | Lot Number | Verified Concentration (µg/mL) Actual Results | Verified Concentration (µg/mL) Acceptance Criteria | %RSD - Homogeneity Actual Results | %RSD - Homogeneity Acceptance Criteria |
|---|---|---|---|---|---|
| New Lot | ER08221601 | 49.20 | ± 5% | 0.3 | ≤ 3% |
| Previous Lot | ER021313-01 | 49.56 | ± 5% | 0.2 | ≤ 3% |

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

### *Traceability*

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darren Ellsworth, Quality Assurance Manager

*September 28, 2016*
Date

# Reagent

# 10INDFTCDDRSP_00001

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Recd 12-5-16

ID INDFTCDDRSP00001

HR0132

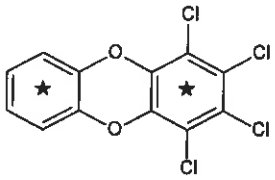
CIL



ISO GUIDE 34
ISO/IEC 17025
ISO 9001:2008

# Certificate of Analysis

## 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$



| | |
|---|---|
| **Catalog Number:** | ED-911 |
| **Solution Lot:** | ER060710-01 |
| **Expiration Date:** | June 2020 |
| **Solvent:** | n-Nonane |
| **Volume per Ampule:** | Not less than 1.2 mL |
| **Storage:** | Room temperature. Do not store cold. |
| **Intended Use:** | For laboratory use only. Not suitable for human or animal consumption. |
| **Safety:** | **Danger. See Safety Data Sheet.** |

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume fill. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

| Component | Chromatographic Purity | Certified Concentration |
|---|---|---|
| 1,2,3,4-TCDD-$^{13}C_{12}$ | 99.5% | 50.00 ± 0.32 µg/mL |

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

### *Solution Standard Verification and Homogeneity*

| Standard Solution | Lot Number | Verified Concentration (µg/mL) Actual Results | Verified Concentration (µg/mL) Acceptance Crtieria | %RSD - Homogeneity Actual Results | %RSD - Homogeneity Acceptance Crtieria |
|---|---|---|---|---|---|
| New Lot | ER060710-01 | 49.1 | ± 3% | 0.6 | ≤ 3% |
| Previous Lot | ER122203-01 | 49.8 | ± 3% | 1.0 | ≤ 3% |

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

### *Traceability*

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS

Darron Ellsworth, Quality Assurance Manager

*July 18, 2015*
Date

# Reagent

# 10MXDFC13ISP_00020

Rec'd (10) HRO 168
DT/11-28-18
10MXDFC13ISP00020

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CIL

Revision 00


# Certificate of Analysis

## Labeled Compound Stock Solution

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 9001
GMP/GLP

**Catalog Number:** EDF-8999
**Solution Lot:** ER05281501
**Expiration Date:** September 2025
**Solvent:** n-Nonane
**Volume per Ampule:** Not less than 500 µL
**Storage:** Store at room temperature. Do not store cold.
**Intended Use:** **Sonicate before use.** For R&D/ analytical purposes only. Not suitable for human or animal consumption.
**Safety:** **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 500 µL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

| Component | Lot Number | CAS Number | Chemical Formula | Molecular Weight | Chromatographic Purity | Concentration |
|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD-$^{13}C_{12}$ | ER01031401 | 76523-40-5 | $^{13}C_{12}H_4O_2Cl_4$ | 333.88 | 98.9% | 100.0 ± 1.0 ng/mL |
| 2,3,7,8-TCDF-$^{13}C_{12}$ | ER12101304 | 89059-46-1 | $^{13}C_{12}H_4OCl_4$ | 317.88 | 99.2% | 100.0 ± 1.0 ng/mL |
| 1,2,3,7,8-PCDD-$^{13}C_{12}$ | ER08041401 | 109719-79-1 | $^{13}C_{12}H_3O_2Cl_5$ | 368.33 | 98.9% | 100.0 ± 1.0 ng/mL |
| 1,2,3,7,8-PCDF-$^{13}C_{12}$ | ER012111-01 | 109719-77-9 | $^{13}C_{12}H_3OCl_5$ | 352.33 | 99.2% | 100.0 ± 1.0 ng/mL |
| 2,3,4,7,8-PCDF-$^{13}C_{12}$ | ER102607-01 | 116843-02-8 | $^{13}C_{12}H_3OCl_5$ | 352.33 | 99.0% | 100.0 ± 1.0 ng/mL |
| 1,2,3,4,7,8-HxCDD-$^{13}C_{12}$ | ER102711-01 | 109719-80-4 | $^{13}C_{12}H_2O_2Cl_6$ | 402.77 | 99.2% | 100.0 ± 1.0 ng/mL |
| 1,2,3,6,7,8-HxCDD-$^{13}C_{12}$ | ER010209-01 | 109719-81-5 | $^{13}C_{12}H_2O_2Cl_6$ | 402.77 | 99.5% | 100.0 ± 1.0 ng/mL |
| 1,2,3,4,7,8-HxCDF-$^{13}C_{12}$ | ER072810-02 | 114423-98-2 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99.6% | 100.0 ± 1.0 ng/mL |
| 1,2,3,6,7,8-HxCDF-$^{13}C_{12}$ | ER053107-03 | 116843-03-9 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 98.1% | 100.0 ± 1.0 ng/mL |
| 1,2,3,7,8,9-HxCDF-$^{13}C_{12}$ | ER100610-01 | 116843-04-0 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99.5% | 100.0 ± 1.0 ng/mL |
| 2,3,4,6,7,8-HxCDF-$^{13}C_{12}$ | ER100610-02 | 116843-05-1 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99.4% | 100.0 ± 1.0 ng/mL |
| 1,2,3,4,6,7,8-HpCDD-$^{13}C_{12}$ | ER111010-01 | 109719-83-7 | $^{13}C_{12}HO_2Cl_7$ | 437.22 | 98.9% | 100.0 ± 1.0 ng/mL |
| 1,2,3,4,6,7,8-HpCDF-$^{13}C_{12}$ | ER08101404 | 109719-84-8 | $^{13}C_{12}HOCl_7$ | 421.22 | 98.7% | 100.0 ± 1.0 ng/mL |
| 1,2,3,4,7,8,9-HpCDF-$^{13}C_{12}$ | ER053107-02 | 109719-94-0 | $^{13}C_{12}HOCl_7$ | 421.22 | 98.3% | 100.0 ± 1.0 ng/mL |
| OCDD-$^{13}C_{12}$ | ER071610-01 | 114423-97-1 | $^{13}C_{12}O_2Cl_8$ | 471.66 | 98.9% | 200.0 ± 2.0 ng/mL |

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

*November 11, 2015*
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

# Reagent

# 10MXDFNATP_00002

Recd 9/12/18 HR0164
10MXDFNATP00002

Cerilliant
Analytical Reference Standards
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CIL



# Certificate of Analysis

## Method 1613 PAR Stock Solution

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

**Catalog Number:** EDF-7999-10X
**Solution Lot:** ER02241602
**Expiration Date:** April 2026
**Solvent:** n-Nonane
**Volume per Ampule:** Not less than 1.2 mL
**Storage:** Store at room temperature. Do not store cold.
**Intended Use:** For R&D/ analytical purposes only. Not suitable for human or animal consumption.
**Safety:** **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

| Component | Lot Number | CAS Number | Chemical Formula | Molecular Weight | Chromatographic Purity | Concentration |
|---|---|---|---|---|---|---|
| 2,3,7,8-TeCDD | ER04271502 | 1746-01-6 | $C_{12}H_4Cl_4O_2$ | 321.97 | 99.2% | 399.9 ± 4.0 ng/mL |
| 2,3,7,8-TeCDF | ER101211-02 | 51207-31-9 | $C_{12}H_4Cl_4O$ | 305.97 | 99.4% | 399.9 ± 4.0 ng/mL |
| 1,2,3,7,8-PeCDD | ER110909-02 | 40321-76-4 | $C_{12}H_3Cl_5O_2$ | 356.42 | 99.2% | 2000 ± 20 ng/mL |
| 1,2,3,7,8-PeCDF | ER03121401 | 57117-41-6 | $C_{12}H_3Cl_5O$ | 340.42 | 99.5% | 1999 ± 20 ng/mL |
| 2,3,4,7,8-PeCDF | ER070710-01 | 57117-31-4 | $C_{12}H_3Cl_5O$ | 340.42 | 99.4% | 1999 ± 20 ng/mL |
| 1,2,3,4,7,8-HxCDD | ER080108-02 | 39227-28-6 | $C_{12}H_2Cl_6O_2$ | 390.86 | 98.6% | 2000 ± 20 ng/mL |
| 1,2,3,6,7,8-HxCDD | ER03231501 | 57653-85-7 | $C_{12}H_2Cl_6O_2$ | 390.86 | 99.6% | 2000 ± 20 ng/mL |
| 1,2,3,7,8,9-HxCDD | ER02041601 | 19408-74-3 | $C_{12}H_2Cl_6O_2$ | 390.86 | 99.2% | 2000 ± 20 ng/mL |
| 1,2,3,4,7,8-HxCDF | ER021110-01 | 70648-26-9 | $C_{12}H_2Cl_6O$ | 374.86 | 99.0% | 2000 ± 20 ng/mL |
| 1,2,3,6,7,8-HxCDF | ER04161501 | 57117-44-9 | $C_{12}H_2Cl_6O$ | 374.86 | 99.8% | 2000 ± 20 ng/mL |
| 1,2,3,7,8,9-HxCDF | ER060107-01 | 72918-21-9 | $C_{12}H_2Cl_6O$ | 374.86 | 97.5% | 1999 ± 20 ng/mL |
| 2,3,4,6,7,8-HxCDF | ER02041602 | 60851-34-5 | $C_{12}H_2Cl_6O$ | 374.86 | 99.1% | 2001 ± 20 ng/mL |
| 1,2,3,4,6,7,8-HpCDD | ER01201504 | 35822-46-9 | $C_{12}HCl_7O_2$ | 425.31 | 98.5% | 1999 ± 20 ng/mL |
| 1,2,3,4,6,7,8-HpCDF | ER02281403 | 67562-39-4 | $C_{12}HCl_7O$ | 409.31 | 98.9% | 1999 ± 20 ng/mL |
| 1,2,3,4,7,8,9-HpCDF | ER01121503 | 55673-89-7 | $C_{12}HCl_7O$ | 409.31 | 99.1% | 1999 ± 20 ng/mL |
| OCDD | ER05221301 | 3268-87-9 | $C_{12}Cl_8O_2$ | 459.75 | 99.9% | 3999 ± 40 ng/mL |
| OCDF | ER040811-01 | 39001-02-0 | $C_{12}Cl_8O$ | 443.75 | 98.9% | 4000 ± 40 ng/mL |

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darren Ellsworth, Quality Assurance Manager

*April 28, 2016*
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

# Reagent

# 61CV1613S_00001

**Table A:** **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

| Compound | Concentration (ng/ml) | | | | | | |
|---|---|---|---|---|---|---|---|
| **Native PCDDs and PCDFs:** | **CS1** | **CS2** | **CS3** | **CS4** | **CS5** | **CSL** | **CS0.5** |
| 2,3,7,8-TCDD | 0.5 | 2 | 10 | 40 | 200 | 0.1 | 0.25 |
| 2,3,7,8-TCDF | 0.5 | 2 | 10 | 40 | 200 | 0.1 | 0.25 |
| 1,2,3,7,8-PeCDD | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 1,2,3,7,8-PeCDF | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 2,3,4,7,8-PeCDF | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 1,2,3,4,7,8-HxCDD | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 1,2,3,6,7,8-HxCDD | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 1,2,3,7,8,9-HxCDD | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 1,2,3,4,7,8-HxCDF | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 1,2,3,6,7,8-HxCDF | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 1,2,3,7,8,9-HxCDF | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 2,3,4,6,7,8-HxCDF | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 1,2,3,4,6,7,8-HpCDD | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 1,2,3,4,6,7,8-HpCDF | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| 1,2,3,4,7,8,9-HpCDF | 2.5 | 10 | 50 | 200 | 1000 | 0.5 | 1.25 |
| OCDD | 5.0 | 20 | 100 | 400 | 2000 | 1.0 | 2.5 |
| OCDF | 5.0 | 20 | 100 | 400 | 2000 | 1.0 | 2.5 |
| **Labelled PCDDs and PCDFs:** | | | | | | | |
| $^{13}C_{12}$-2,3,7,8-TCDD | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-2,3,7,8-TCDF | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-1,2,3,7,8-PeCDD | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-1,2,3,7,8-PeCDF | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-2,3,4,7,8-PeCDF | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-1,2,3,4,7,8-HxCDD | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-1,2,3,6,7,8-HxCDD | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-1,2,3,4,7,8-HxCDF | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-1,2,3,6,7,8-HxCDF | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-1,2,3,7,8,9-HxCDF | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-2,3,4,6,7,8-HxCDF | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-OCDD | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| **Cleanup Standard:** | | | | | | | |
| $^{37}Cl_4$-2,3,7,8-TCDD | 0.5 | 2 | 10 | 40 | 200 | 0.1 | 0.25 |
| **Internal Standards:** | | | | | | | |
| $^{13}C_{12}$-1,2,3,4-TCDD | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $^{13}C_{12}$-1,2,3,7,8,9-HxCDD | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| | | | | | | | |
| Percent toluene (v/v) | 3.6% | 3.7% | 4.2% | 6.1% | 16.2% | 3.6% | 3.6% |

**Certified By:** B.G. Chittim **Date:** 02/03/2014 (mm/dd/yyyy)

WELLINGTON LABORATORIES

Recd 5-27-09

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# CERTIFICATE OF ANALYSIS/DOCUMENTATION

**EPA-1613CVS**
**U.S. EPA Method 1613**
**Calibration and Verification Solutions**
**plus**
**Supplemental Calibration Solutions**
**EPA-1613CSL & EPA-1613CS0.5**

## DESCRIPTION:

EPA-1613CVS is a series of 5 HRGC/HRMS calibration solutions containing native and mass-labelled chlorinated dibenzo-p-dioxin (PCDD) and dibenzofuran (PCDF) congeners in nonane.

| PRODUCT CODES | LOT NUMBERS |
|---|---|
| EPA-1613CVS | see below |
| EPA-1613CS1 | 13CS11107 |
| EPA-1613CS2 | 13CS21107 |
| EPA-1613CS3 | 13CS31107 |
| EPA-1613CS4 | 13CS41107 |
| EPA-1613CS5 | 13CS51107 |

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set and are ordered separately.

| | |
|---|---|
| EPA-1613CS0.5 | 13CS0.51107 |
| EPA-1613CSL | 13CSL1107 |
| DATE PREPARED: (mm/dd/yyyy) | 12/07/2007 |
| LAST TESTED: (mm/dd/yyyy) | 12/07/2007 (HRGC/HRMS) |
| EXPIRY DATE: | 12/07/2014 |

## DETAILS:

These solutions contain native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) PCDDs and PCDFs in the concentrations given in Table A in nonane. They are designed to be used as received.

According to U.S. EPA Method 1613, these solutions (CS1-CS5) are used to calibrate the HRGC/HRMS system prior to performing analyses on cleaned-up sample extracts. In addition, solution CS3 is used to verify the original calibration and CS1 is used to establish the required sensitivity of the HRGC/HRMS.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method but either or both can be used to extend the calibration to lower levels.

EPA-1613CVS with EPA-1613CSL and EPA-1613CS0.5 were tested by HRGC/HRMS and found to give a linear calibration. The 5-point calibration summary for EPA-1613CVS is given in Table B and the 7-point calibration summary including both EPA-1613CSL and EPA-1613CS0.5 is shown in Table C. HRGC/HRMS data acquired for EPA-1613CS3, is shown in Figure 1.

## ADDITIONAL INFORMATION:

For additional information including potential hazards, handling/storage, accuracy, and shelf life please request a copy of our Reference and Handling Guide. For your convenience this can be downloaded from our website at www.well-labs.com.

# Reagent

# 61INC13OCDFP_00001

Rec'd 61INC13OCDFP HR0078

DH/10-17-13

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

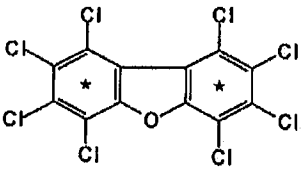
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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 9001
GMP/GLP

# *Certificate of Analysis*

## Octachlorodibenzofuran-$^{13}C_{12}$



| | |
|---|---|
| **Catalog Number:** | EF-983 |
| **Solution Lot:** | ER062011-01 |
| **Expiration Date:** | June 2021 |
| **Solvent:** | n-Nonane |
| **Volume per Ampule:** | Not less than 1.2 mL |
| **Storage:** | Store at room temperature. Do not store cold. |
| **Intended Use:** | For R&D/analytical purposes only. Not suitable for human or animal consumption. |
| **Safety:** | Flammable |

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume fill. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

| Component | Solution Purity | Certified Concentration |
|---|---|---|
| Octachlorodibenzofuran-$^{13}C_{12}$ | 99.4% | 49.88 ± 0.31 µg/mL |

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

### *Solution Standard Verification and Homogeneity*

| Standard Solution | Lot Number | Verified Concentration (µg/mL) Actual Results | Verified Concentration (µg/mL) Acceptance Crtieria | %RSD - Homogeneity Actual Results | %RSD - Homogeneity Acceptance Crtieria |
|---|---|---|---|---|---|
| New Lot | ER062011-01 | 47.3 | ± 5% | 0.7 | ≤ 3% |
| Previous Lot | ER121410-01 | 50.5 | ± 5% | 0.8 | ≤ 3% |

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

### *Traceability*

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Lara Sparks

Lara Sparks, Quality Assurance Director

*October 26, 2011*

Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

# Reagent

# 61L11613P_00001

Rec'd
DM/10-17-13

HR0076

Cerilliant
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# Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 9001:2008

## Method 1613 Calibration Solutions (CS1 - CS5)

**Catalog Number:** EDF-9999
**Kit Lot:** ER031611-01

| Solution | C1 | C2 | C3 | C4 | C5 |
|---|---|---|---|---|---|
| Product Number | EDF-9999-1 | EDF-9999-2 | EDF-9999-3 | EDF-9999-4 | EDF-9999-5 |
| Lot Number | ER031611-01A | ER031611-01B | ER031611-01C | ER031611-01D | ER031611-01E |

**Expiration Date:** March 2021
**Solvent:** n-Nonane
**Volume per Ampule:** Not less than 0.2 mL
**Storage:** Store at room temperature. Do not store cold.
**Intended Use:** For R&D/analytical purposes only. Not suitable for human or animal consumption.
**Safety:** Flammable

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 0.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

Lara Sparks

Lara Sparks, Quality Assurance Director

*April 25, 2011*
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

| Compound | Prepared Concentration (ng/mL) | | | | |
|---|---|---|---|---|---|
| | CS1 | CS2 | CS3 | CS4 | CS5 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 0.50 | 2.00 | 10.0 | 40.0 | 200.0 |
| 2,3,7,8-Tetrachlorodibenzofuran | 0.50 | 2.00 | 10.0 | 40.0 | 200.0 |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 1,2,3,7,8-Pentachlorodibenzofuran | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 2,3,4,7,8-Pentachlorodibenzofuran | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | 2.50 | 10.0 | 50.0 | 200.0 | 1000 |
| Octachlorodibenzo-p-dioxin | 5.00 | 20.0 | 100.0 | 400.0 | 2000 |
| Octachlorodibenzofuran | 5.00 | 20.0 | 100.0 | 400.0 | 2000 |
| | | | | | |
| 1,2,3,4-Tetrachlorodibenzo-p-dioxin- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin- $^{37}Cl_4$ | 0.50 | 2.00 | 10.0 | 40.0 | 200.0 |
| 2,3,7,8-Tetrachlorodibenzofuran- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3,7,8-Pentachlorodibenzofuran- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 2,3,4,7,8-Pentachlorodibenzofuran- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3,4,7,8-Hexachlorodibenzofuran- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3,6,7,8-Hexachlorodibenzofuran- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3,7,8,9-Hexachlorodibenzofuran- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 2,3,4,6,7,8-Hexachlorodibenzofuran- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran- $^{13}C_{12}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Octachlorodibenzo-p-dioxin- $^{13}C_{12}$ | 200.0 | 200.0 | 200.0 | 200.0 | 200.0 |

# Reagent

# 61L31613P_00001

# Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34 CERTIFICATE AR1393
ISO/IEC 17025 CERTIFICATE AT1352
ISO 9001:2008 CERTIFICATE 3854

## Method 1613 Daily Calibration with Window Definer and Isomer Specificity

A-E (5 vials)

| | |
|---|---|
| **Catalog Number:** | EDF-4141 |
| **Solution Lot:** | ER011711-01 |
| **Expiration Date:** | January 2021 |
| **Solvent:** | n-Nonane |
| **Volume per Ampule:** | Not less than 200 µL |
| **Storage:** | Store at room temperature. Do not store cold. |
| **Intended Use:** | For laboratory use only. Not suitable for human or animal consumption. |
| **Safety:** | **Danger. See Safety Data Sheet.** |

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 200 µL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Rec'd 8/12/16 MS Dat

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

Darron Ellsworth, Quality Assurance Manager

*February 25, 2016*
Date

## *Native Dioxins/Furans*

| Compound | Lot Number | CAS Number | Chemical Formula | Molecular Weight | Chromatographic Purity | Concentration [1] |
|---|---|---|---|---|---|---|
| 1,2,3,4-TCDD | ER080408-01 | 30746-58-8 | $C_{12}H_4O_2Cl_4$ | 321.97 | 97% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7/1,2,3,8-TCDD | ER021510-01 | 67326-52-7 | $C_{12}H_4O_2Cl_4$ | 321.97 | 100% | 10.0 ± 1.0 ng/mL |
| 1,2,3,9-TCDD | ER122804-01 | 712669-26-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 98% | 10.0 ± 1.0 ng/mL |
| 1,2,8,9-TCDD | 35166-60 | 62740-54-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 98% | 10.0 ± 1.0 ng/mL |
| 1,3,6,8-TCDD | 34706-74 | 33423-92-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 100% | 10.0 ± 1.0 ng/mL |
| 2,3,7,8-TCDD | ER030907-02 | 1746-01-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 99% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7,8-PeCDD | ER010209-01 | 40321-76-4 | $C_{12}H_3O_2Cl_5$ | 356.42 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,8,9-PeCDD | ER122704-02 | 71925-18-3 | $C_{12}H_3O_2Cl_5$ | 356.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,4,6,8/1,2,4,7,9-PeCDD | 35124-73 | NA | $C_{12}H_3O_2Cl_5$ | 356.42 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,7,8-HxCDD | ER092005-03 | 39227-28-6 | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,6,7,8-HxCDD | ER092507-01 | 57653-85-7 | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,7,8,9-HxCDD | 35166-61 | 19408-74-3 | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,4,6,7,9/1,2,4,6,8,9-HxCDD | ER010705-01 | NA | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,7,8-HpCDD | ER031507-03 | 35822-46-9 | $C_{12}HO_2Cl_7$ | 425.31 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,7,9-HpCDD | ER021105-05 | 58200-70-7 | $C_{12}HO_2Cl_7$ | 425.31 | 99% | 50.0 ± 5.0 ng/mL |
| OCDD | ER082306-02 | 3268-87-9 | $C_{12}O_2Cl_8$ | 459.75 | 99% | 100 ± 10 ng/mL |
| 1,2,8,9-TCDF | ER041508-03 | 70648-22-5 | $C_{12}H_4OCl_4$ | 305.97 | 99% | 10.0 ± 1.0 ng/mL |
| 1,3,6,8-TCDF | ER021808-01 | 71998-72-6 | $C_{12}H_4OCl_4$ | 305.97 | 99% | 10.0 ± 1.0 ng/mL |
| 2,3,7,8-TCDF | ER02208-01 | 51207-31-9 | $C_{12}H_4OCl_4$ | 305.98 | 99% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7,8-PeCDF | ER082508-01 | 57117-41-6 | $C_{12}H_3OCl_5$ | 340.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,8,9-PeCDF | ER061604-05 | 83704-54-5 | $C_{12}H_3OCl_5$ | 340.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,3,4,6,8-PeCDF | ER102904-01 | 83704-55-6 | $C_{12}H_3OCl_5$ | 340.42 | 99% | 50.0 ± 5.0 ng/mL |
| 2,3,4,7,8-PeCDF | ER011807-01 | 57117-31-4 | $C_{12}H_3OCl_5$ | 340.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,8-HxCDF | ER111704-01 | 69698-60-8 | $C_{12}H_2OCl_6$ | 374.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,7,8-HxCDF | ER102607-01 | 70648-26-9 | $C_{12}H_2OCl_6$ | 374.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,8,9-HxCDF | ER031105-01 | 93241-07-6 | $C_{12}H_2OCl_6$ | 374.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,6,7,8-HxCDF | ER011907-01 | 57117-44-9 | $C_{12}H_2OCl_6$ | 374.86 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,7,8,9-HxCDF | ER053107-03 | 72918-21-9 | $C_{12}H_2OCl_6$ | 374.86 | 98% | 50.0 ± 5.0 ng/mL |
| 2,3,4,6,7,8-HxCDF | ER020705-01 | 60851-34-5 | $C_{12}H_2OCl_6$ | 374.86 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,7,8-HpCDF | ER020907-02 | 67562-39-4 | $C_{12}HOCl_7$ | 409.31 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,7,8,9-HpCDF | ER053107-02 | 55673-89-7 | $C_{12}HOCl_7$ | 409.31 | 99% | 50.0 ± 5.0 ng/mL |
| OCDF | ER072004-03 | 39001-02-0 | $C_{12}OCl_8$ | 443.75 | 99% | 100 ± 10 ng/mL |

[1] The estimated uncertainty for this standard is ± 10% at 95% confidence interval (k=2). This value incorporates uncertainty estimate from manufacturing process and analytical verification of concentration and homogeneity.

## *Labeled Dioxins/Furans*

| Compound | Lot Number | CAS Number | Chemical Formula | Molecular Weight | Chromatographic Purity | Concentration [1] |
|---|---|---|---|---|---|---|
| 1,2,3,4-TCDD- $^{13}C_{12}$ | ER122203-01 | 114423-99-3 | $^{13}C_{12}H_4O_2Cl_4$ | 333.88 | 99% | 100 ± 10 ng/mL |
| 2,3,7,8-TCDD- $^{13}C_{12}$ | ER060407-02 | 76523-40-5 | $^{13}C_{12}H_4O_2Cl_4$ | 333.88 | 99% | 100 ± 10 ng/mL |
| 2,3,7,8-TCDD- $^{37}Cl_4$ | ER060407-02 | 85508-50-5 | $C_{12}H_4O_2{}^{37}Cl_4$ | 333.88 | 97% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7,8-PeCDD- $^{13}C_{12}$ | ER030907-01 | 109719-79-1 | $^{13}C_{12}H_3O_2Cl_5$ | 368.33 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,7,8-HxCDD- $^{13}C_{12}$ | ER012208-01 | 109719-80-4 | $^{13}C_{12}H_2O_2Cl_6$ | 402.77 | 98% | 100 ± 10 ng/mL |
| 1,2,3,6,7,8-HxCDD- $^{13}C_{12}$ | ER010209-01 | 109719-81-5 | $^{13}C_{12}H_2O_2Cl_6$ | 402.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,7,8,9-HxCDD- $^{13}C_{12}$ | ER082508-01 | 109719-82-6 | $^{13}C_{12}H_2O_2Cl_6$ | 402.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,6,7,8-HpCDD- $^{13}C_{12}$ | ER011807-01 | 109719-83-7 | $^{13}C_{12}HO_2Cl_7$ | 437.22 | 98% | 100 ± 10 ng/mL |
| OCDD- $^{13}C_{12}$ | ER092005-03 | 114423-97-1 | $^{13}C_{12}O_2Cl_8$ | 471.66 | 99% | 200 ± 20 ng/mL |
| 2,3,7,8-TCDF- $^{13}C_{12}$ | ER092507-01 | 89059-46-1 | $^{13}C_{12}H_4OCl_4$ | 317.88 | 99% | 100 ± 10 ng/mL |
| 1,2,3,7,8-PeCDF- $^{13}C_{12}$ | 35166-61 | 109719-77-9 | $^{13}C_{12}H_3OCl_5$ | 352.33 | 99% | 100 ± 10 ng/mL |
| 2,3,4,7,8-PeCDF- $^{13}C_{12}$ | ER102607-01 | 116843-02-8 | $^{13}C_{12}H_3OCl_5$ | 352.33 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,7,8-HxCDF- $^{13}C_{12}$ | ER011907-01 | 114423-98-2 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,6,7,8-HxCDF- $^{13}C_{12}$ | ER053107-03 | 116843-03-9 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 98% | 100 ± 10 ng/mL |
| 1,2,3,7,8,9-HxCDF- $^{13}C_{12}$ | ER100107-01 | 116843-04-0 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99% | 100 ± 10 ng/mL |
| 2,3,4,6,7,8-HxCDF- $^{13}C_{12}$ | ER031507-03 | 116843-05-1 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,6,7,8-HpCDF- $^{13}C_{12}$ | ER020907-02 | 109719-84-8 | $^{13}C_{12}HOCl_7$ | 421.22 | 98% | 100 ± 10 ng/mL |
| 1,2,3,4,7,8,9-HpCDF- $^{13}C_{12}$ | ER053107-02 | 109719-94-0 | $^{13}C_{12}HOCl_7$ | 421.22 | 98% | 100 ± 10 ng/mL |

[1] The estimated uncertainty for this standard is ± 10% at 95% confidence interval (k=2). This value incorporates uncertainty estimate from manufacturing process and analytical verification of concentration and homogeneity.

# Reagent

# 61WDML3P_00001

# Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
CERTIFICATE AR1383
ISO/IEC 17025
CERTIFICATE AT1352
ISO 9001:2008
CERTIFICATE 3854

## Method 1613 Daily Calibration with Window Definer and Isomer Specificity

A-E (5 vials)

| | |
|---|---|
| **Catalog Number:** | EDF-4141 |
| **Solution Lot:** | ER011711-01 |
| **Expiration Date:** | January 2021 |
| **Solvent:** | n-Nonane |
| **Volume per Ampule:** | Not less than 200 µL |
| **Storage:** | Store at room temperature. Do not store cold. |
| **Intended Use:** | For laboratory use only. Not suitable for human or animal consumption. |
| **Safety:** | **Danger. See Safety Data Sheet.** |

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 200 µL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Rec'd 8/12/16 MS Lab

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

Darron Ellsworth, Quality Assurance Manager

*February 25, 2016*
Date

## *Native Dioxins/Furans*

| Compound | Lot Number | CAS Number | Chemical Formula | Molecular Weight | Chromatographic Purity | Concentration [1] |
|---|---|---|---|---|---|---|
| 1,2,3,4-TCDD | ER080408-01 | 30746-58-8 | $C_{12}H_4O_2Cl_4$ | 321.97 | 97% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7/1,2,3,8-TCDD | ER021510-01 | 67326-52-7 | $C_{12}H_4O_2Cl_4$ | 321.97 | 100% | 10.0 ± 1.0 ng/mL |
| 1,2,3,9-TCDD | ER122804-01 | 712669-26-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 98% | 10.0 ± 1.0 ng/mL |
| 1,2,8,9-TCDD | 35166-60 | 62740-54-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 98% | 10.0 ± 1.0 ng/mL |
| 1,3,6,8-TCDD | 34706-74 | 33423-92-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 100% | 10.0 ± 1.0 ng/mL |
| 2,3,7,8-TCDD | ER030907-02 | 1746-01-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 99% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7,8-PeCDD | ER010209-01 | 40321-76-4 | $C_{12}H_3O_2Cl_5$ | 356.42 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,8,9-PeCDD | ER122704-02 | 71925-18-3 | $C_{12}H_3O_2Cl_5$ | 356.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,4,6,8/1,2,4,7,9-PeCDD | 35124-73 | NA | $C_{12}H_3O_2Cl_5$ | 356.42 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,7,8-HxCDD | ER092005-03 | 39227-28-6 | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,6,7,8-HxCDD | ER092507-01 | 57653-85-7 | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,7,8,9-HxCDD | 35166-61 | 19408-74-3 | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,4,6,7,9/1,2,4,6,8,9-HxCDD | ER010705-01 | NA | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,7,8-HpCDD | ER031507-03 | 35822-46-9 | $C_{12}HO_2Cl_7$ | 425.31 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,7,9-HpCDD | ER021105-05 | 58200-70-7 | $C_{12}HO_2Cl_7$ | 425.31 | 99% | 50.0 ± 5.0 ng/mL |
| OCDD | ER082306-02 | 3268-87-9 | $C_{12}O_2Cl_8$ | 459.75 | 99% | 100 ± 10 ng/mL |
| 1,2,8,9-TCDF | ER041508-03 | 70648-22-5 | $C_{12}H_4OCl_4$ | 305.97 | 99% | 10.0 ± 1.0 ng/mL |
| 1,3,6,8-TCDF | ER021808-01 | 71998-72-6 | $C_{12}H_4OCl_4$ | 305.97 | 99% | 10.0 ± 1.0 ng/mL |
| 2,3,7,8-TCDF | ER02208-01 | 51207-31-9 | $C_{12}H_4OCl_4$ | 305.98 | 99% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7,8-PeCDF | ER082508-01 | 57117-41-6 | $C_{12}H_3OCl_5$ | 340.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,8,9-PeCDF | ER061604-05 | 83704-54-5 | $C_{12}H_3OCl_5$ | 340.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,3,4,6,8-PeCDF | ER102904-01 | 83704-55-6 | $C_{12}H_3OCl_5$ | 340.42 | 99% | 50.0 ± 5.0 ng/mL |
| 2,3,4,7,8-PeCDF | ER011807-01 | 57117-31-4 | $C_{12}H_3OCl_5$ | 340.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,8-HxCDF | ER111704-01 | 69698-60-8 | $C_{12}H_2OCl_6$ | 374.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,7,8-HxCDF | ER102607-01 | 70648-26-9 | $C_{12}H_2OCl_6$ | 374.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,8,9-HxCDF | ER031105-01 | 93241-07-6 | $C_{12}H_2OCl_6$ | 374.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,6,7,8-HxCDF | ER011907-01 | 57117-44-9 | $C_{12}H_2OCl_6$ | 374.86 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,7,8,9-HxCDF | ER053107-03 | 72918-21-9 | $C_{12}H_2OCl_6$ | 374.86 | 98% | 50.0 ± 5.0 ng/mL |
| 2,3,4,6,7,8-HxCDF | ER020705-01 | 60851-34-5 | $C_{12}H_2OCl_6$ | 374.86 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,7,8-HpCDF | ER020907-02 | 67562-39-4 | $C_{12}HOCl_7$ | 409.31 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,7,8,9-HpCDF | ER053107-02 | 55673-89-7 | $C_{12}HOCl_7$ | 409.31 | 99% | 50.0 ± 5.0 ng/mL |
| OCDF | ER072004-03 | 39001-02-0 | $C_{12}OCl_8$ | 443.75 | 99% | 100 ± 10 ng/mL |

[1] The estimated uncertainty for this standard is ± 10% at 95% confidence interval (k=2). This value incorporates uncertainty estimate from manufacturing process and analytical verification of concentration and homogeneity.

## *Labeled Dioxins/Furans*

| Compound | Lot Number | CAS Number | Chemical Formula | Molecular Weight | Chromatographic Purity | Concentration [1] |
|---|---|---|---|---|---|---|
| 1,2,3,4-TCDD- $^{13}C_{12}$ | ER122203-01 | 114423-99-3 | $^{13}C_{12}H_4O_2Cl_4$ | 333.88 | 99% | 100 ± 10 ng/mL |
| 2,3,7,8-TCDD- $^{13}C_{12}$ | ER060407-02 | 76523-40-5 | $^{13}C_{12}H_4O_2Cl_4$ | 333.88 | 99% | 100 ± 10 ng/mL |
| 2,3,7,8-TCDD- $^{37}Cl_4$ | ER060407-02 | 85508-50-5 | $C_{12}H_4O_2{}^{37}Cl_4$ | 333.88 | 97% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7,8-PeCDD- $^{13}C_{12}$ | ER030907-01 | 109719-79-1 | $^{13}C_{12}H_3O_2Cl_5$ | 368.33 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,7,8-HxCDD- $^{13}C_{12}$ | ER012208-01 | 109719-80-4 | $^{13}C_{12}H_2O_2Cl_6$ | 402.77 | 98% | 100 ± 10 ng/mL |
| 1,2,3,6,7,8-HxCDD- $^{13}C_{12}$ | ER010209-01 | 109719-81-5 | $^{13}C_{12}H_2O_2Cl_6$ | 402.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,7,8,9-HxCDD- $^{13}C_{12}$ | ER082508-01 | 109719-82-6 | $^{13}C_{12}H_2O_2Cl_6$ | 402.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,6,7,8-HpCDD- $^{13}C_{12}$ | ER011807-01 | 109719-83-7 | $^{13}C_{12}HO_2Cl_7$ | 437.22 | 98% | 100 ± 10 ng/mL |
| OCDD- $^{13}C_{12}$ | ER092005-03 | 114423-97-1 | $^{13}C_{12}O_2Cl_8$ | 471.66 | 99% | 200 ± 20 ng/mL |
| 2,3,7,8-TCDF- $^{13}C_{12}$ | ER092507-01 | 89059-46-1 | $^{13}C_{12}H_4OCl_4$ | 317.88 | 99% | 100 ± 10 ng/mL |
| 1,2,3,7,8-PeCDF- $^{13}C_{12}$ | 35166-61 | 109719-77-9 | $^{13}C_{12}H_3OCl_5$ | 352.33 | 99% | 100 ± 10 ng/mL |
| 2,3,4,7,8-PeCDF- $^{13}C_{12}$ | ER102607-01 | 116843-02-8 | $^{13}C_{12}H_3OCl_5$ | 352.33 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,7,8-HxCDF- $^{13}C_{12}$ | ER011907-01 | 114423-98-2 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,6,7,8-HxCDF- $^{13}C_{12}$ | ER053107-03 | 116843-03-9 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 98% | 100 ± 10 ng/mL |
| 1,2,3,7,8,9-HxCDF- $^{13}C_{12}$ | ER100107-01 | 116843-04-0 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99% | 100 ± 10 ng/mL |
| 2,3,4,6,7,8-HxCDF- $^{13}C_{12}$ | ER031507-03 | 116843-05-1 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,6,7,8-HpCDF- $^{13}C_{12}$ | ER020907-02 | 109719-84-8 | $^{13}C_{12}HOCl_7$ | 421.22 | 98% | 100 ± 10 ng/mL |
| 1,2,3,4,7,8,9-HpCDF- $^{13}C_{12}$ | ER053107-02 | 109719-94-0 | $^{13}C_{12}HOCl_7$ | 421.22 | 98% | 100 ± 10 ng/mL |

[1] The estimated uncertainty for this standard is ± 10% at 95% confidence interval (k=2). This value incorporates uncertainty estimate from manufacturing process and analytical verification of concentration and homogeneity.

# Reagent

# 61WDML3P_F/L_00010

Rec'd: 11/7/19 HR0169

Cerilliant
Analytical Reference Standards

CIL

Revision 02


Source name: 6IWDML3P-F/L-00010

# Certificate of Analysis

ISO GUIDE 34
CERTIFICATE AR1353
ISO/IEC 17025
CERTIFICATE AT1352
ISO 9001:2008
CERTIFICATE 3854

## Method 1613 Daily Calibration with Window Definer and Isomer Specificity

| | |
|---|---|
| **Catalog Number:** | EDF-4141 |
| **Solution Lot:** | ER011711-01 |
| **Expiration Date:** | January 2021 |
| **Solvent:** | n-Nonane |
| **Volume per Ampule:** | Not less than 200 µL |
| **Storage:** | Store at room temperature. Do not store cold. |
| **Intended Use:** | For laboratory use only. Not suitable for human or animal consumption. |
| **Safety:** | **Danger. See Safety Data Sheet.** |

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 200 µL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Vial A
B
C
D
E

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

Darron Ellsworth, Quality Assurance Manager

*February 25, 2016*
Date

## *Native Dioxins/Furans*

| Compound | Lot Number | CAS Number | Chemical Formula | Molecular Weight | Chromatographic Purity | Concentration [1] |
|---|---|---|---|---|---|---|
| 1,2,3,4-TCDD | ER080408-01 | 30746-58-8 | $C_{12}H_4O_2Cl_4$ | 321.97 | 97% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7/1,2,3,8-TCDD | ER021510-01 | 67326-52-7 | $C_{12}H_4O_2Cl_4$ | 321.97 | 100% | 10.0 ± 1.0 ng/mL |
| 1,2,3,9-TCDD | ER122804-01 | 712669-26-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 98% | 10.0 ± 1.0 ng/mL |
| 1,2,8,9-TCDD | 35166-60 | 62740-54-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 98% | 10.0 ± 1.0 ng/mL |
| 1,3,6,8-TCDD | 34706-74 | 33423-92-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 100% | 10.0 ± 1.0 ng/mL |
| 2,3,7,8-TCDD | ER030907-02 | 1746-01-6 | $C_{12}H_4O_2Cl_4$ | 321.97 | 99% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7,8-PeCDD | ER010209-01 | 40321-76-4 | $C_{12}H_3O_2Cl_5$ | 356.42 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,8,9-PeCDD | ER122704-02 | 71925-18-3 | $C_{12}H_3O_2Cl_5$ | 356.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,4,6,8/1,2,4,7,9-PeCDD | 35124-73 | NA | $C_{12}H_3O_2Cl_5$ | 356.42 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,7,8-HxCDD | ER092005-03 | 39227-28-6 | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,6,7,8-HxCDD | ER092507-01 | 57653-85-7 | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,7,8,9-HxCDD | 35166-61 | 19408-74-3 | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,4,6,7,9/1,2,4,6,8,9-HxCDD | ER010705-01 | NA | $C_{12}H_2O_2Cl_6$ | 390.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,7,8-HpCDD | ER031507-03 | 35822-46-9 | $C_{12}HO_2Cl_7$ | 425.31 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,7,9-HpCDD | ER021105-05 | 58200-70-7 | $C_{12}HO_2Cl_7$ | 425.31 | 99% | 50.0 ± 5.0 ng/mL |
| OCDD | ER082306-02 | 3268-87-9 | $C_{12}O_2Cl_8$ | 459.75 | 99% | 100 ± 10 ng/mL |
| 1,2,8,9-TCDF | ER041508-03 | 70648-22-5 | $C_{12}H_4OCl_4$ | 305.97 | 99% | 10.0 ± 1.0 ng/mL |
| 1,3,6,8-TCDF | ER021808-01 | 71998-72-6 | $C_{12}H_4OCl_4$ | 305.97 | 99% | 10.0 ± 1.0 ng/mL |
| 2,3,7,8-TCDF | ER02208-01 | 51207-31-9 | $C_{12}H_4OCl_4$ | 305.98 | 99% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7,8-PeCDF | ER082508-01 | 57117-41-6 | $C_{12}H_3OCl_5$ | 340.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,8,9-PeCDF | ER061604-05 | 83704-54-5 | $C_{12}H_3OCl_5$ | 340.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,3,4,6,8-PeCDF | ER102904-01 | 83704-55-6 | $C_{12}H_3OCl_5$ | 340.42 | 99% | 50.0 ± 5.0 ng/mL |
| 2,3,4,7,8-PeCDF | ER011807-01 | 57117-31-4 | $C_{12}H_3OCl_5$ | 340.42 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,8-HxCDF | ER111704-01 | 69698-60-8 | $C_{12}H_2OCl_6$ | 374.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,7,8-HxCDF | ER102607-01 | 70648-26-9 | $C_{12}H_2OCl_6$ | 374.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,8,9-HxCDF | ER031105-01 | 93241-07-6 | $C_{12}H_2OCl_6$ | 374.86 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,6,7,8-HxCDF | ER011907-01 | 57117-44-9 | $C_{12}H_2OCl_6$ | 374.86 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,7,8,9-HxCDF | ER053107-03 | 72918-21-9 | $C_{12}H_2OCl_6$ | 374.86 | 98% | 50.0 ± 5.0 ng/mL |
| 2,3,4,6,7,8-HxCDF | ER020705-01 | 60851-34-5 | $C_{12}H_2OCl_6$ | 374.86 | 98% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,6,7,8-HpCDF | ER020907-02 | 67562-39-4 | $C_{12}HOCl_7$ | 409.31 | 99% | 50.0 ± 5.0 ng/mL |
| 1,2,3,4,7,8,9-HpCDF | ER053107-02 | 55673-89-7 | $C_{12}HOCl_7$ | 409.31 | 99% | 50.0 ± 5.0 ng/mL |
| OCDF | ER072004-03 | 39001-02-0 | $C_{12}OCl_8$ | 443.75 | 99% | 100 ± 10 ng/mL |

[1] The estimated uncertainty for this standard is ± 10% at 95% confidence interval (k=2). This value incorporates uncertainty estimate from manufacturing process and analytical verification of concentration and homogeneity.

## *Labeled Dioxins/Furans*

| Compound | Lot Number | CAS Number | Chemical Formula | Molecular Weight | Chromatographic Purity | Concentration [1] |
|---|---|---|---|---|---|---|
| 1,2,3,4-TCDD- $^{13}C_{12}$ | ER122203-01 | 114423-99-3 | $^{13}C_{12}H_4O_2Cl_4$ | 333.88 | 99% | 100 ± 10 ng/mL |
| 2,3,7,8-TCDD- $^{13}C_{12}$ | ER060407-02 | 76523-40-5 | $^{13}C_{12}H_4O_2Cl_4$ | 333.88 | 99% | 100 ± 10 ng/mL |
| 2,3,7,8-TCDD-$^{37}Cl_4$ | ER060407-02 | 85508-50-5 | $C_{12}H_4O_2{}^{37}Cl_4$ | 333.88 | 97% | 10.0 ± 1.0 ng/mL |
| 1,2,3,7,8-PeCDD- $^{13}C_{12}$ | ER030907-01 | 109719-79-1 | $^{13}C_{12}H_3O_2Cl_5$ | 368.33 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,7,8-HxCDD- $^{13}C_{12}$ | ER012208-01 | 109719-80-4 | $^{13}C_{12}H_2O_2Cl_6$ | 402.77 | 98% | 100 ± 10 ng/mL |
| 1,2,3,6,7,8-HxCDD- $^{13}C_{12}$ | ER010209-01 | 109719-81-5 | $^{13}C_{12}H_2O_2Cl_6$ | 402.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,7,8,9-HxCDD- $^{13}C_{12}$ | ER082508-01 | 109719-82-6 | $^{13}C_{12}H_2O_2Cl_6$ | 402.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,6,7,8-HpCDD- $^{13}C_{12}$ | ER011807-01 | 109719-83-7 | $^{13}C_{12}HO_2Cl_7$ | 437.22 | 98% | 100 ± 10 ng/mL |
| OCDD- $^{13}C_{12}$ | ER092005-03 | 114423-97-1 | $^{13}C_{12}O_2Cl_8$ | 471.66 | 99% | 200 ± 20 ng/mL |
| 2,3,7,8-TCDF- $^{13}C_{12}$ | ER092507-01 | 89059-46-1 | $^{13}C_{12}H_4OCl_4$ | 317.88 | 99% | 100 ± 10 ng/mL |
| 1,2,3,7,8-PeCDF- $^{13}C_{12}$ | 35166-61 | 109719-77-9 | $^{13}C_{12}H_3OCl_5$ | 352.33 | 99% | 100 ± 10 ng/mL |
| 2,3,4,7,8-PeCDF- $^{13}C_{12}$ | ER102607-01 | 116843-02-8 | $^{13}C_{12}H_3OCl_5$ | 352.33 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,7,8-HxCDF- $^{13}C_{12}$ | ER011907-01 | 114423-98-2 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,6,7,8-HxCDF- $^{13}C_{12}$ | ER053107-03 | 116843-03-9 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 98% | 100 ± 10 ng/mL |
| 1,2,3,7,8,9-HxCDF- $^{13}C_{12}$ | ER100107-01 | 116843-04-0 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99% | 100 ± 10 ng/mL |
| 2,3,4,6,7,8-HxCDF- $^{13}C_{12}$ | ER031507-03 | 116843-05-1 | $^{13}C_{12}H_2OCl_6$ | 386.77 | 99% | 100 ± 10 ng/mL |
| 1,2,3,4,6,7,8-HpCDF- $^{13}C_{12}$ | ER020907-02 | 109719-84-8 | $^{13}C_{12}HOCl_7$ | 421.22 | 98% | 100 ± 10 ng/mL |
| 1,2,3,4,7,8,9-HpCDF- $^{13}C_{12}$ | ER053107-02 | 109719-94-0 | $^{13}C_{12}HOCl_7$ | 421.22 | 98% | 100 ± 10 ng/mL |

[1] The estimated uncertainty for this standard is ± 10% at 95% confidence interval (k=2). This value incorporates uncertainty estimate from manufacturing process and analytical verification of concentration and homogeneity.

## *COA Revision History*

| Revision No. | Date | Reason for Revision |
|---|---|---|
| 00 | February 28, 2011 | Initial version |
| 01 | November 04, 2015 | Updated Safety information. |
| 02 | February 25, 2016 | Updated Volume from 0.2 mL to 200 µL. |
| | | Added uncertainty to all concentrations. Added statement regarding uncertainty. |

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

# SAFETY DATA SHEET

Version 5.0
Revision Date 09/29/2015
Print Date 09/29/2015

## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifiers

Product name : Method 1613 Calibration with Window Definer and Isomer Specificity Solution in n-Nonane

Product Number : EDF-4141
Brand : Cerilliant

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

### 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

### 1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**
Flammable liquids (Category 3), H226
Skin irritation (Category 2), H315
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
Aspiration hazard (Category 1), H304
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.

| | | |
|---|---|---|
| | Muta. 2; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; H301, H319, H335, H341, H410 | |
| **1,2,3,7,8,9-Hexachlorodibenzofuran** | | |
| | Acute Tox. 3; Eye Irrit. 2A; Muta. 2; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; H301, H319, H335, H341, H410 | < 0.1 % |
| **1,2,3,7,8-Pentachloro-dibenzofuran** | | |
| | Acute Tox. 3; Eye Irrit. 2A; Muta. 2; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; H301, H319, H335, H341, H410 | < 0.1 % |
| **2,3,4,7,8-Pentachloro-dibenzofuran** | | |
| | Acute Tox. 1; Eye Irrit. 2A; Carc. 1A; STOT SE 3; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H300, H319, H335, H350, H373, H410 | < 0.1 % |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**
Flush eyes with water as a precaution.

**If swallowed**
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed
No data available

| Component | CAS-No | Value | Control parameters | Basis |
|---|---|---|---|---|
| Nonane | 111-84-2 | TWA | 200.000000 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | Remarks | Central Nervous System impairment | | |
| | | TWA | 200.000000 ppm 1,050.000000 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | TWA | 200 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | Central Nervous System impairment | | |
| | | TWA | 200 ppm 1,050 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | TWA | 200 ppm 1,050 mg/m3 | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000 |
| | | Potential Occupational Carcinogen Formed during past production of 2,4,5-trichlorophenol, 2,4,5-T & 2(2,4,5-trichlorophenoxy)propionic acid. See Appendix A | | |

Hazardous components without workplace control parameters

**8.2 Exposure controls**

**Appropriate engineering controls**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection**
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection**
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**10.4 Conditions to avoid**
Heat, flames and sparks.

**10.5 Incompatible materials**
Strong oxidizing agents

**10.6 Hazardous decomposition products**
Other decomposition products - No data available
In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects**

**Acute toxicity**
No data available

Inhalation: No data available

Dermal: No data available

No data available

**Skin corrosion/irritation**
No data available

**Serious eye damage/eye irritation**
No data available

**Respiratory or skin sensitisation**
No data available

**Germ cell mutagenicity**
No data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**
No data available
No data available

**Specific target organ toxicity - single exposure**
No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

**Additional Information**
RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**SARA 311/312 Hazards**
Fire Hazard, Acute Health Hazard

**Massachusetts Right To Know Components**

| | CAS-No. | Revision Date |
|---|---|---|
| Nonane | 111-84-2 | 1994-04-01 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 1746-01-6 | 1993-04-24 |

**Pennsylvania Right To Know Components**

| | CAS-No. | Revision Date |
|---|---|---|
| Nonane | 111-84-2 | 1994-04-01 |

**New Jersey Right To Know Components**

| | CAS-No. | Revision Date |
|---|---|---|
| Nonane | 111-84-2 | 1994-04-01 |

**California Prop. 65 Components**

| WARNING! This product contains a chemical known to the State of California to cause cancer. | CAS-No. | Revision Date |
|---|---|---|
| 1,3,6,8-TCDD | 33423-92-6 | 2007-09-28 |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-`1C12 | 109719-79-1 | 2007-09-28 |
| 1,2,3,7,8,9-Hexachlorodibenzodioxin-13C12 | 109719-82-6 | 2007-09-28 |
| 1,2,3,4-Tetrachlorodibenzodioxin-13C12 | 114423-99-3 | 2007-09-28 |
| 1,2,3,4-tetrachlorodibenzo-p-dioxin | 30746-58-8 | 2007-09-28 |
| 2,3,4,7,8-Pentachloro-dibenzofuran | 57117-31-4 | 2007-09-28 |
| 1,2,3,7,8-Pentachloro-dibenzofuran | 57117-41-6 | 2007-09-28 |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | 72918-21-9 | 2007-09-28 |
| Hexachloro-dibenzo-p-dioxin | 39227-28-6 | 2007-09-28 |
| 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 2007-09-28 |
| 2,3,4,6,7,8-Hexachloro-dibenzofuran | 60851-34-5 | 2007-09-28 |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | 57117-44-9 | 2007-09-28 |
| 1,2,3,4,6,7,8-Heptachloro-dibenzo-p-dioxin | 35822-46-9 | 2007-09-28 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | 55673-89-7 | 2007-09-28 |
| 1,2,3,4,6,7,8,9-octachlorodibenzofuran | 39001-02-0 | 2007-09-28 |
| 1,2,3,7,8,9-Hexachloro-dibenzo-p-dioxin | 19408-74-3 | 2007-09-28 |
| 1,2,3,4,6,7,8,9-Octachloro-dibenzo-p-dioxin | 3268-87-9 | 2007-09-28 |
| 1,2,3,7,8-Pentachloro-dibenzo-p-dioxin | 40321-76-4 | 2007-09-28 |
| 1,2,3,6,7,8-Hexachloro-dibenzo-p-dioxin | 57653-85-7 | 2007-09-28 |
| 1,2,3,4,7,8-Hexachloro-dibenzofuran | 70648-26-9 | 2007-09-28 |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | 67562-39-4 | 2007-09-28 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 1746-01-6 | 2007-09-28 |

| WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. | CAS-No. | Revision Date |
|---|---|---|
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 1746-01-6 | 2007-09-28 |

## 16. OTHER INFORMATION

**Full text of H-Statements referred to under sections 2 and 3.**

| | |
|---|---|
| Acute Tox. | Acute toxicity |
| Aquatic Acute | Acute aquatic toxicity |
| Aquatic Chronic | Chronic aquatic toxicity |
| Asp. Tox. | Aspiration hazard |

# Method 8260B

## Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): DB-624 (60.  ID: 0.25(mm)

| Client Sample ID | Lab Sample ID | DBFM # | DCA # | TOL # | BFB # |
|---|---|---|---|---|---|
| CRC-MW-1-011519 | 160-32649-1 | 107 | 110 | 106 | 100 |
| | MB 280-445753/8 | 109 | 113 | 110 | 102 |
| | LCS 280-445753/4 | 109 | 114 | 111 | 105 |
| | LCS 280-445753/6 | 110 | 114 | 111 | 106 |
| | LCSD 280-445753/5 | 107 | 112 | 106 | 102 |
| | LCSD 280-445753/7 | 109 | 114 | 108 | 103 |
| | 280-119359-C-1 MS | 108 | 112 | 105 | 102 |
| | 280-119359-C-1 MS | 102 | 103 | 101 | 95 |
| | 280-119359-A-1 MSD | 103 | 108 | 102 | 99 |
| | 280-119359-A-1 MSD | 105 | 106 | 103 | 97 |

| | QC LIMITS |
|---|---|
| DBFM = Dibromofluoromethane (Surr) | 77-120 |
| DCA = 1,2-Dichloroethane-d4 (Surr) | 70-127 |
| TOL = Toluene-d8 (Surr) | 80-125 |
| BFB = 4-Bromofluorobenzene (Surr) | 78-120 |

# Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_1908.D

Lab ID: LCS 280-445753/4 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 5.00 | 5.71 | 114 | 65-135 | |
| 1,1,2,2-Tetrachloroethane | 5.00 | 5.12 | 102 | 58-135 | |
| 1,1,2-Trichloroethane | 5.00 | 5.20 | 104 | 64-135 | |
| 1,1,2-Trichlorotrifluoroethane | 5.00 | 5.61 | 112 | 65-140 | |
| 1,1-Dichloroethane | 5.00 | 5.75 | 115 | 65-135 | |
| 1,1-Dichloroethene | 5.00 | 5.39 | 108 | 65-136 | |
| 1,2,3-Trichlorobenzene | 5.00 | 5.20 | 104 | 60-135 | |
| 1,2,4-Trichlorobenzene | 5.00 | 5.09 | 102 | 58-135 | |
| 1,2-Dibromo-3-Chloropropane | 5.00 | 4.16 J | 83 | 57-135 | |
| 1,2-Dibromoethane | 5.00 | 4.71 | 94 | 65-135 | |
| 1,2-Dichlorobenzene | 5.00 | 5.04 | 101 | 65-135 | |
| 1,2-Dichloroethane | 5.00 | 5.58 | 112 | 65-135 | |
| 1,2-Dichloropropane | 5.00 | 5.58 | 112 | 64-135 | |
| 1,3,5-Trimethylbenzene | 5.00 | 5.32 | 106 | 65-135 | |
| 1,3-Dichlorobenzene | 5.00 | 5.10 | 102 | 65-135 | |
| 1,4-Dichlorobenzene | 5.00 | 5.12 | 102 | 65-135 | |
| 1,4-Dioxane | 100 | 106 J | 106 | 31-147 | |
| 2-Butanone (MEK) | 20.0 | 20.6 | 103 | 44-177 | |
| 2-Chloroethyl vinyl ether | 10.0 | 11.3 | 113 | 10-159 | |
| 2-Hexanone | 20.0 | 20.4 | 102 | 57-139 | |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 21.9 | 109 | 60-150 | |
| Acetone | 20.0 | 22.6 | 113 | 39-156 | |
| Benzene | 5.00 | 5.57 | 111 | 65-135 | |
| Bromoform | 5.00 | 4.20 | 84 | 62-135 | |
| Bromomethane | 5.00 | 6.61 | 132 | 45-135 | |
| Carbon disulfide | 5.00 | 5.33 | 107 | 55-143 | |
| Carbon tetrachloride | 5.00 | 5.62 | 112 | 65-135 | |
| Chlorobenzene | 5.00 | 5.27 | 105 | 65-135 | |
| Chlorobromomethane | 5.00 | 5.01 | 100 | 65-135 | |
| Chlorodibromomethane | 5.00 | 4.62 | 92 | 65-135 | |
| Chloroethane | 5.00 | 7.01 | 140 | 46-136 | * |
| Chloroform | 5.00 | 5.54 | 111 | 65-135 | |
| Chloromethane | 5.00 | 6.53 | 131 | 34-145 | |
| cis-1,2-Dichloroethene | 5.00 | 5.23 | 105 | 65-135 | |
| cis-1,3-Dichloropropene | 5.00 | 5.01 | 100 | 65-135 | |
| Cyclohexane | 5.00 | 5.93 | 119 | 62-135 | |
| Dichlorobromomethane | 5.00 | 5.17 | 103 | 65-135 | |
| Dichlorodifluoromethane | 5.00 | 7.28 | 146 | 43-142 | * |
| Ethylbenzene | 5.00 | 5.23 | 105 | 65-135 | |
| Isopropylbenzene | 5.00 | 4.84 | 97 | 65-135 | |
| Methyl acetate | 10.0 | 10.2 | 102 | 52-135 | |
| Methyl tert-butyl ether | 5.00 | 4.89 J | 98 | 54-135 | |

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_1908.D

Lab ID: LCS 280-445753/4 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| Methylcyclohexane | 5.00 | 5.98 | 120 | 63-135 | |
| Methylene Chloride | 5.00 | 4.94 | 99 | 54-141 | |
| m-Xylene & p-Xylene | 5.00 | 5.21 | 104 | 65-135 | |
| o-Xylene | 5.00 | 5.26 | 105 | 65-135 | |
| Styrene | 5.00 | 4.79 | 96 | 65-135 | |
| Tetrachloroethene | 5.00 | 5.44 | 109 | 65-135 | |
| Toluene | 5.00 | 5.59 | 112 | 65-135 | |
| trans-1,2-Dichloroethene | 5.00 | 5.60 | 112 | 65-135 | |
| trans-1,3-Dichloropropene | 5.00 | 5.00 | 100 | 65-135 | |
| Trichloroethene | 5.00 | 5.33 | 107 | 65-135 | |
| Trichlorofluoromethane | 5.00 | 6.81 | 136 | 53-137 | |
| Vinyl chloride | 5.00 | 6.50 | 130 | 40-137 | |

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_1909.D

Lab ID: LCSD 280-445753/5 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 5.00 | 5.42 | 108 | 5 | 20 | 65-135 | |
| 1,1,2,2-Tetrachloroethane | 5.00 | 4.94 | 99 | 3 | 20 | 58-135 | |
| 1,1,2-Trichloroethane | 5.00 | 5.10 | 102 | 2 | 27 | 64-135 | |
| 1,1,2-Trichlorotrifluoroethane | 5.00 | 5.24 | 105 | 7 | 20 | 65-140 | |
| 1,1-Dichloroethane | 5.00 | 5.53 | 111 | 4 | 21 | 65-135 | |
| 1,1-Dichloroethene | 5.00 | 5.18 | 104 | 4 | 20 | 65-136 | |
| 1,2,3-Trichlorobenzene | 5.00 | 5.15 | 103 | 1 | 36 | 60-135 | |
| 1,2,4-Trichlorobenzene | 5.00 | 4.92 | 98 | 4 | 25 | 58-135 | |
| 1,2-Dibromo-3-Chloropropane | 5.00 | 4.08 J | 82 | 2 | 22 | 57-135 | |
| 1,2-Dibromoethane | 5.00 | 4.60 | 92 | 2 | 27 | 65-135 | |
| 1,2-Dichlorobenzene | 5.00 | 4.86 | 97 | 4 | 20 | 65-135 | |
| 1,2-Dichloroethane | 5.00 | 5.42 | 108 | 3 | 20 | 65-135 | |
| 1,2-Dichloropropane | 5.00 | 5.41 | 108 | 3 | 20 | 64-135 | |
| 1,3,5-Trimethylbenzene | 5.00 | 5.07 | 101 | 5 | 20 | 65-135 | |
| 1,3-Dichlorobenzene | 5.00 | 4.86 | 97 | 5 | 20 | 65-135 | |
| 1,4-Dichlorobenzene | 5.00 | 4.85 | 97 | 6 | 23 | 65-135 | |
| 1,4-Dioxane | 100 | 104 J | 104 | 2 | 30 | 31-147 | |
| 2-Butanone (MEK) | 20.0 | 20.7 | 103 | 0 | 32 | 44-177 | |
| 2-Chloroethyl vinyl ether | 10.0 | 11.2 | 112 | 1 | 23 | 10-159 | |
| 2-Hexanone | 20.0 | 20.1 | 101 | 2 | 25 | 57-139 | |
| 4-Methyl-2-pentanone (MIBK) | 20.0 | 21.7 | 108 | 1 | 22 | 60-150 | |
| Acetone | 20.0 | 22.0 | 110 | 3 | 23 | 39-156 | |
| Benzene | 5.00 | 5.33 | 107 | 4 | 20 | 65-135 | |
| Bromoform | 5.00 | 4.07 | 81 | 3 | 27 | 62-135 | |
| Bromomethane | 5.00 | 6.28 | 126 | 5 | 33 | 45-135 | |
| Carbon disulfide | 5.00 | 5.00 | 100 | 6 | 20 | 55-143 | |
| Carbon tetrachloride | 5.00 | 5.31 | 106 | 6 | 21 | 65-135 | |
| Chlorobenzene | 5.00 | 5.01 | 100 | 5 | 20 | 65-135 | |
| Chlorobromomethane | 5.00 | 4.88 | 98 | 3 | 29 | 65-135 | |
| Chlorodibromomethane | 5.00 | 4.48 | 90 | 3 | 20 | 65-135 | |
| Chloroethane | 5.00 | 6.65 | 133 | 5 | 25 | 46-136 | |
| Chloroform | 5.00 | 5.35 | 107 | 4 | 20 | 65-135 | |
| Chloromethane | 5.00 | 6.11 | 122 | 7 | 24 | 34-145 | |
| cis-1,2-Dichloroethene | 5.00 | 5.06 | 101 | 3 | 20 | 65-135 | |
| cis-1,3-Dichloropropene | 5.00 | 4.79 | 96 | 5 | 26 | 65-135 | |
| Cyclohexane | 5.00 | 5.67 | 113 | 4 | 20 | 62-135 | |
| Dichlorobromomethane | 5.00 | 4.98 | 100 | 4 | 20 | 65-135 | |
| Dichlorodifluoromethane | 5.00 | 6.92 | 138 | 5 | 30 | 43-142 | |
| Ethylbenzene | 5.00 | 5.02 | 100 | 4 | 20 | 65-135 | |
| Isopropylbenzene | 5.00 | 4.60 | 92 | 5 | 20 | 65-135 | |
| Methyl acetate | 10.0 | 10.2 | 102 | 0 | 27 | 52-135 | |
| Methyl tert-butyl ether | 5.00 | 4.82 J | 96 | 1 | 21 | 54-135 | |

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_1909.D

Lab ID: LCSD 280-445753/5 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Methylcyclohexane | 5.00 | 5.58 | 112 | 7 | 20 | 63-135 | |
| Methylene Chloride | 5.00 | 4.70 | 94 | 5 | 26 | 54-141 | |
| m-Xylene & p-Xylene | 5.00 | 5.00 | 100 | 4 | 20 | 65-135 | |
| o-Xylene | 5.00 | 5.03 | 101 | 5 | 20 | 65-135 | |
| Styrene | 5.00 | 4.61 | 92 | 4 | 26 | 65-135 | |
| Tetrachloroethene | 5.00 | 5.10 | 102 | 6 | 20 | 65-135 | |
| Toluene | 5.00 | 5.40 | 108 | 3 | 20 | 65-135 | |
| trans-1,2-Dichloroethene | 5.00 | 5.38 | 108 | 4 | 24 | 65-135 | |
| trans-1,3-Dichloropropene | 5.00 | 4.88 | 98 | 2 | 26 | 65-135 | |
| Trichloroethene | 5.00 | 5.17 | 103 | 3 | 20 | 65-135 | |
| Trichlorofluoromethane | 5.00 | 6.54 | 131 | 4 | 27 | 53-137 | |
| Vinyl chloride | 5.00 | 6.15 | 123 | 6 | 24 | 40-137 | |

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_1913.D

Lab ID: 280-119359-C-1 MS Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20000 | 640 U | 21700 | 109 | 65-135 | |
| 1,1,2,2-Tetrachloroethane | 20000 | 840 U | 21000 | 105 | 58-135 | |
| 1,1,2-Trichloroethane | 20000 | 1100 U | 21700 | 109 | 64-135 | |
| 1,1,2-Trichlorotrifluoroethane | 20000 | 1700 U | 20500 | 102 | 65-140 | |
| 1,1-Dichloroethane | 20000 | 880 U | 22500 | 113 | 65-135 | |
| 1,1-Dichloroethene | 20000 | 920 U | 20300 | 102 | 65-136 | |
| 1,2,3-Trichlorobenzene | 20000 | 840 U | 20700 | 104 | 60-135 | |
| 1,2,4-Trichlorobenzene | 20000 | 840 U | 20100 | 101 | 58-135 | |
| 1,2-Dibromo-3-Chloropropane | 20000 | 1900 U | 17500 J | 87 | 57-135 | |
| 1,2-Dibromoethane | 20000 | 720 U | 19200 | 96 | 65-135 | |
| 1,2-Dichlorobenzene | 20000 | 5100 | 25400 | 101 | 65-135 | |
| 1,2-Dichloroethane | 20000 | 520 U | 22500 | 113 | 65-135 | |
| 1,2-Dichloropropane | 20000 | 720 U | 22300 | 111 | 64-135 | |
| 1,3,5-Trimethylbenzene | 20000 | 640 U | 20400 | 102 | 65-135 | |
| 1,3-Dichlorobenzene | 20000 | 520 U | 19900 | 99 | 65-135 | |
| 1,4-Dichlorobenzene | 20000 | 640 U | 20100 | 100 | 65-135 | |
| 1,4-Dioxane | 400000 | 230000 U | 422000 J | 106 | 31-147 | |
| 2-Butanone (MEK) | 80000 | 8000 U | 84000 | 105 | 44-177 | |
| 2-Chloroethyl vinyl ether | 40000 | 2800 U | 47000 | 118 | 10-159 | |
| 2-Hexanone | 80000 | 6800 U | 85000 | 106 | 57-139 | |
| 4-Methyl-2-pentanone (MIBK) | 80000 | 3900 U | 89700 | 112 | 60-150 | |
| Acetone | 80000 | 7600 U | 82800 | 103 | 39-156 | |
| Benzene | 20000 | 640 U | 21800 | 109 | 65-135 | |
| Bromoform | 20000 | 760 U | 18100 | 91 | 62-135 | |
| Bromomethane | 20000 | 840 U | 24600 | 123 | 45-135 | |
| Carbon disulfide | 20000 | 1800 U | 19700 | 99 | 55-143 | |
| Carbon tetrachloride | 20000 | 760 U | 21400 | 107 | 65-135 | |
| Chlorobenzene | 20000 | 680 U | 20500 | 103 | 65-135 | |
| Chlorobromomethane | 20000 | 400 U | 20500 | 102 | 65-135 | |
| Chlorodibromomethane | 20000 | 680 U | 19700 | 99 | 65-135 | |
| Chloroethane | 20000 | 1600 U | 26200 | 131 | 46-136 | |
| Chloroform | 20000 | 16000 | 37600 | 110 | 65-135 | |
| Chloromethane | 20000 | 1200 U | 24800 | 124 | 34-145 | |
| cis-1,2-Dichloroethene | 20000 | 600 U | 21100 | 105 | 65-135 | |
| cis-1,3-Dichloropropene | 20000 | 640 U | 20300 | 101 | 65-135 | |
| Cyclohexane | 20000 | 1100 U | 22600 | 113 | 62-135 | |
| Dichlorobromomethane | 20000 | 680 U | 21400 | 107 | 65-135 | |
| Dichlorodifluoromethane | 20000 | 1200 U | 27500 | 137 | 43-142 | |
| Ethylbenzene | 20000 | 640 U | 20100 | 101 | 65-135 | |
| Isopropylbenzene | 20000 | 760 U | 18400 | 92 | 65-135 | |
| Methyl acetate | 40000 | 6600 U | 42400 | 106 | 52-135 | |
| Methyl tert-butyl ether | 20000 | 1000 U | 20100 | 101 | 54-135 | |

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_1913.D

Lab ID: 280-119359-C-1 MS Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|---|
| Methylcyclohexane | 20000 | 1400 U | 22400 | 112 | 63-135 | |
| Methylene Chloride | 20000 | 1700000 | 1750000 | 60 | 54-141 | E 4 |
| m-Xylene & p-Xylene | 20000 | 1400 U | 20200 | 101 | 65-135 | |
| o-Xylene | 20000 | 760 U | 20500 | 103 | 65-135 | |
| Styrene | 20000 | 680 U | 18800 | 94 | 65-135 | |
| Tetrachloroethene | 20000 | 800 U | 20400 | 102 | 65-135 | |
| Toluene | 20000 | 680 U | 22300 | 111 | 65-135 | |
| trans-1,2-Dichloroethene | 20000 | 600 U | 21900 | 110 | 65-135 | |
| trans-1,3-Dichloropropene | 20000 | 760 U | 21300 | 106 | 65-135 | |
| Trichloroethene | 20000 | 640 U | 20700 | 103 | 65-135 | |
| Trichlorofluoromethane | 20000 | 1200 U | 25900 | 129 | 53-137 | |
| Vinyl chloride | 20000 | 400 U | 24800 | 124 | 40-137 | |

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_1914.D

Lab ID: 280-119359-A-1 MSD Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20000 | 20600 | 103 | 5 | 20 | 65-135 | |
| 1,1,2,2-Tetrachloroethane | 20000 | 19800 | 99 | 6 | 20 | 58-135 | |
| 1,1,2-Trichloroethane | 20000 | 20000 | 100 | 8 | 27 | 64-135 | |
| 1,1,2-Trichlorotrifluoroethane | 20000 | 19700 | 99 | 4 | 20 | 65-140 | |
| 1,1-Dichloroethane | 20000 | 20900 | 105 | 7 | 21 | 65-135 | |
| 1,1-Dichloroethene | 20000 | 19600 | 98 | 4 | 20 | 65-136 | |
| 1,2,3-Trichlorobenzene | 20000 | 19700 | 99 | 5 | 36 | 60-135 | |
| 1,2,4-Trichlorobenzene | 20000 | 19600 | 98 | 3 | 25 | 58-135 | |
| 1,2-Dibromo-3-Chloropropane | 20000 | 17600 J | 88 | 1 | 22 | 57-135 | |
| 1,2-Dibromoethane | 20000 | 18100 | 91 | 6 | 27 | 65-135 | |
| 1,2-Dichlorobenzene | 20000 | 24900 | 99 | 2 | 20 | 65-135 | |
| 1,2-Dichloroethane | 20000 | 21000 | 105 | 7 | 20 | 65-135 | |
| 1,2-Dichloropropane | 20000 | 21000 | 105 | 6 | 20 | 64-135 | |
| 1,3,5-Trimethylbenzene | 20000 | 19700 | 98 | 4 | 20 | 65-135 | |
| 1,3-Dichlorobenzene | 20000 | 18900 | 95 | 5 | 20 | 65-135 | |
| 1,4-Dichlorobenzene | 20000 | 19100 | 96 | 5 | 23 | 65-135 | |
| 1,4-Dioxane | 400000 | 376000 J | 94 | 11 | 30 | 31-147 | |
| 2-Butanone (MEK) | 80000 | 77900 | 97 | 8 | 32 | 44-177 | |
| 2-Chloroethyl vinyl ether | 40000 | 40900 | 102 | 14 | 23 | 10-159 | |
| 2-Hexanone | 80000 | 78500 | 98 | 8 | 25 | 57-139 | |
| 4-Methyl-2-pentanone (MIBK) | 80000 | 83000 | 104 | 8 | 22 | 60-150 | |
| Acetone | 80000 | 82000 | 102 | 1 | 23 | 39-156 | |
| Benzene | 20000 | 20600 | 103 | 6 | 20 | 65-135 | |
| Bromoform | 20000 | 17400 | 87 | 4 | 27 | 62-135 | |
| Bromomethane | 20000 | 21200 | 106 | 15 | 33 | 45-135 | |
| Carbon disulfide | 20000 | 18700 | 93 | 6 | 20 | 55-143 | |
| Carbon tetrachloride | 20000 | 20700 | 104 | 3 | 21 | 65-135 | |
| Chlorobenzene | 20000 | 19200 | 96 | 7 | 20 | 65-135 | |
| Chlorobromomethane | 20000 | 19100 | 96 | 7 | 29 | 65-135 | |
| Chlorodibromomethane | 20000 | 18300 | 92 | 7 | 20 | 65-135 | |
| Chloroethane | 20000 | 23000 | 115 | 13 | 25 | 46-136 | |
| Chloroform | 20000 | 37400 | 109 | 0 | 20 | 65-135 | |
| Chloromethane | 20000 | 21400 | 107 | 15 | 24 | 34-145 | |
| cis-1,2-Dichloroethene | 20000 | 19800 | 99 | 6 | 20 | 65-135 | |
| cis-1,3-Dichloropropene | 20000 | 19100 | 95 | 6 | 26 | 65-135 | |
| Cyclohexane | 20000 | 21300 | 106 | 6 | 20 | 62-135 | |
| Dichlorobromomethane | 20000 | 19500 | 98 | 9 | 20 | 65-135 | |
| Dichlorodifluoromethane | 20000 | 23800 | 119 | 14 | 30 | 43-142 | |
| Ethylbenzene | 20000 | 19100 | 96 | 5 | 20 | 65-135 | |
| Isopropylbenzene | 20000 | 17900 | 90 | 2 | 20 | 65-135 | |
| Methyl acetate | 40000 | 38600 | 96 | 9 | 27 | 52-135 | |
| Methyl tert-butyl ether | 20000 | 18800 J | 94 | 7 | 21 | 54-135 | |

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: MS1_1914.D

Lab ID: 280-119359-A-1 MSD Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Methylcyclohexane | 20000 | 21100 | 106 | 6 | 20 | 63-135 | |
| Methylene Chloride | 20000 | 1700000 | -198 | 3 | 26 | 54-141 | E 4 |
| m-Xylene & p-Xylene | 20000 | 19200 | 96 | 5 | 20 | 65-135 | |
| o-Xylene | 20000 | 19500 | 97 | 5 | 20 | 65-135 | |
| Styrene | 20000 | 17600 | 88 | 6 | 26 | 65-135 | |
| Tetrachloroethene | 20000 | 19300 | 96 | 6 | 20 | 65-135 | |
| Toluene | 20000 | 20900 | 104 | 6 | 20 | 65-135 | |
| trans-1,2-Dichloroethene | 20000 | 20900 | 104 | 5 | 24 | 65-135 | |
| trans-1,3-Dichloropropene | 20000 | 19500 | 98 | 9 | 26 | 65-135 | |
| Trichloroethene | 20000 | 19700 | 98 | 5 | 20 | 65-135 | |
| Trichlorofluoromethane | 20000 | 22100 | 111 | 15 | 27 | 53-137 | |
| Vinyl chloride | 20000 | 21900 | 110 | 12 | 24 | 40-137 | |

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab File ID: MS1_1907.D  Lab Sample ID: MB 280-445753/8

Matrix: Water  Heated Purge:(Y/N) N

Instrument ID: VMS_MS1  Date Analyzed: 01/28/2019 19:09

GC Column: DB-624 (60.25)  ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| | LCS 280-445753/4 | MS1_1908.D | 01/28/2019 19:36 |
| | LCSD 280-445753/5 | MS1_1909.D | 01/28/2019 19:56 |
| | LCS 280-445753/6 | MS1_1910.D | 01/28/2019 20:16 |
| | LCSD 280-445753/7 | MS1_1911.D | 01/28/2019 20:37 |
| | 280-119359-C-1 MS | MS1_1913.D | 01/28/2019 21:18 |
| | 280-119359-A-1 MSD | MS1_1914.D | 01/28/2019 21:38 |
| | 280-119359-C-1 MS | MS1_1915.D | 01/28/2019 21:59 |
| | 280-119359-A-1 MSD | MS1_1916.D | 01/28/2019 22:19 |
| CRC-MW-1-011519 | 160-32649-1 | MS1_1919.D | 01/28/2019 23:21 |

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab File ID: MS1_1065.D  BFB Injection Date: 01/08/2019

Instrument ID: VMS_MS1  BFB Injection Time: 08:17

Analysis Batch No.: 443512

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 50 | 15.0 - 40.0 % of mass 95 | 17.4 | |
| 75 | 30.0 - 60.0 % of mass 95 | 48.9 | |
| 95 | Base Peak, 100% relative abundance | 100.0 | |
| 96 | 5.0 - 9.0 % of mass 95 | 7.3 | |
| 173 | Less than 2.0 % of mass 174 | 0.0 | (0.0) 1 |
| 174 | 50.0 - 120.00 % of mass 95 | 68.6 | |
| 175 | 5.0 - 9.0 % of mass 174 | 4.7 | (6.9) 1 |
| 176 | 95.0 - 101.0 % of mass 174 | 66.2 | (96.4) 1 |
| 177 | 5.0 - 9.0 % of mass 176 | 3.9 | (5.9) 2 |

1-Value is % mass 174  2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | STD 280-443512/20 | MS1_1077.D | 01/08/2019 | 12:31 |
| | STD 280-443512/21 | MS1_1078.D | 01/08/2019 | 12:52 |
| | STD 280-443512/22 | MS1_1079.D | 01/08/2019 | 13:13 |
| | STD 280-443512/23 | MS1_1080.D | 01/08/2019 | 13:33 |
| | STD 280-443512/24 | MS1_1081.D | 01/08/2019 | 13:54 |
| | STD 280-443512/25 | MS1_1082.D | 01/08/2019 | 14:14 |
| | ICV 280-443512/26 | MS1_1084.D | 01/08/2019 | 14:55 |

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab File ID: MS1_1418.D  BFB Injection Date: 01/18/2019

Instrument ID: VMS_MS1  BFB Injection Time: 09:52

Analysis Batch No.: 444687

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 50 | 15.0 - 40.0 % of mass 95 | 15.7 | |
| 75 | 30.0 - 60.0 % of mass 95 | 45.1 | |
| 95 | Base Peak, 100% relative abundance | 100.0 | |
| 96 | 5.0 - 9.0 % of mass 95 | 8.0 | |
| 173 | Less than 2.0 % of mass 174 | 0.0 | (0.0) 1 |
| 174 | 50.0 - 120.00 % of mass 95 | 79.4 | |
| 175 | 5.0 - 9.0 % of mass 174 | 5.8 | (7.4) 1 |
| 176 | 95.0 - 101.0 % of mass 174 | 78.8 | (99.3) 1 |
| 177 | 5.0 - 9.0 % of mass 176 | 5.9 | (7.5) 2 |

1-Value is % mass 174  2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | STD 280-444687/12 | MS1_1421.D | 01/18/2019 | 11:48 |
| | STD 280-444687/13 | MS1_1422.D | 01/18/2019 | 12:09 |
| | STD 280-444687/14 | MS1_1423.D | 01/18/2019 | 12:29 |
| | STD 280-444687/15 | MS1_1424.D | 01/18/2019 | 12:50 |
| | ICIS 280-444687/16 | MS1_1425.D | 01/18/2019 | 13:10 |
| | STD 280-444687/17 | MS1_1426.D | 01/18/2019 | 13:31 |
| | STD 280-444687/18 | MS1_1427.D | 01/18/2019 | 13:52 |
| | ICV 280-444687/19 | MS1_1429.D | 01/18/2019 | 14:33 |

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab File ID: MS1_1904.D  BFB Injection Date: 01/28/2019

Instrument ID: VMS_MS1  BFB Injection Time: 17:51

Analysis Batch No.: 445753

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 50 | 15.0 - 40.0 % of mass 95 | 16.6 | |
| 75 | 30.0 - 60.0 % of mass 95 | 47.6 | |
| 95 | Base Peak, 100% relative abundance | 100.0 | |
| 96 | 5.0 - 9.0 % of mass 95 | 7.2 | |
| 173 | Less than 2.0 % of mass 174 | 0.2 | (0.2) 1 |
| 174 | 50.0 - 120.00 % of mass 95 | 83.2 | |
| 175 | 5.0 - 9.0 % of mass 174 | 5.8 | (6.9) 1 |
| 176 | 95.0 - 101.0 % of mass 174 | 81.4 | (97.7) 1 |
| 177 | 5.0 - 9.0 % of mass 176 | 5.2 | (6.4) 2 |

1-Value is % mass 174  2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | CCV 280-445753/2 | MS1_1905.D | 01/28/2019 | 18:23 |
| | CCV 280-445753/3 | MS1_1906.D | 01/28/2019 | 18:48 |
| | MB 280-445753/8 | MS1_1907.D | 01/28/2019 | 19:09 |
| | LCS 280-445753/4 | MS1_1908.D | 01/28/2019 | 19:36 |
| | LCSD 280-445753/5 | MS1_1909.D | 01/28/2019 | 19:56 |
| | LCS 280-445753/6 | MS1_1910.D | 01/28/2019 | 20:16 |
| | LCSD 280-445753/7 | MS1_1911.D | 01/28/2019 | 20:37 |
| | 280-119359-C-1 MS | MS1_1913.D | 01/28/2019 | 21:18 |
| | 280-119359-A-1 MSD | MS1_1914.D | 01/28/2019 | 21:38 |
| | 280-119359-C-1 MS | MS1_1915.D | 01/28/2019 | 21:59 |
| | 280-119359-A-1 MSD | MS1_1916.D | 01/28/2019 | 22:19 |
| CRC-MW-1-011519 | 160-32649-1 | MS1_1919.D | 01/28/2019 | 23:21 |

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Sample No.: ICIS 280-444687/16  Date Analyzed: 01/18/2019 13:10

Instrument ID: VMS_MS1  GC Column: DB-624 (60.25)  ID: 0.25(mm)

Lab File ID (Standard): MS1_1425.D  Heated Purge: (Y/N) N

Calibration ID: 34948

| | | TBAd9 | | FB | | CBNZd5 | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| INITIAL CALIBRATION MID-POINT | | 585242 | 5.57 | 3226220 | 7.51 | 740423 | 9.79 |
| UPPER LIMIT | | 1170484 | 6.07 | 6452440 | 8.01 | 1480846 | 10.29 |
| LOWER LIMIT | | 292621 | 5.07 | 1613110 | 7.01 | 370212 | 9.29 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICV 280-444687/19 | | 646532 | 5.57 | 3475339 | 7.51 | 799224 | 9.79 |
| CCV 280-445753/2 | | 536780 | 5.57 | 3067525 | 7.51 | 716789 | 9.79 |
| CCV 280-445753/3 | | 536940 | 5.56 | 3012871 | 7.51 | 701328 | 9.79 |
| MB 280-445753/8 | | 507284 | 5.57 | 3010287 | 7.51 | 687321 | 9.79 |
| LCS 280-445753/4 | | 503449 | 5.57 | 3001882 | 7.51 | 693912 | 9.79 |
| LCSD 280-445753/5 | | 566568 | 5.57 | 3182142 | 7.51 | 742529 | 9.79 |
| LCS 280-445753/6 | | 530072 | 5.57 | 3162407 | 7.51 | 710409 | 9.79 |
| LCSD 280-445753/7 | | 541859 | 5.57 | 3087873 | 7.51 | 710150 | 9.77 |
| 280-119359-C-1 MS | | 527335 | 5.57 | 3196191 | 7.51 | 755868 | 9.77 |
| 280-119359-A-1 MSD | | 513656 | 5.56 | 3442086 | 7.51 | 800599 | 9.77 |
| 280-119359-C-1 MS | | 554440 | 5.57 | 3200508 | 7.51 | 731753 | 9.77 |
| 280-119359-A-1 MSD | | 548178 | 5.57 | 3331082 | 7.51 | 766101 | 9.79 |
| 160-32649-1 | CRC-MW-1-011519 | 433964 | 5.57 | 3076948 | 7.51 | 697916 | 9.79 |

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Sample No.: ICIS 280-444687/16  Date Analyzed: 01/18/2019 13:10

Instrument ID: VMS_MS1  GC Column: DB-624 (60.25)  ID: 0.25(mm)

Lab File ID (Standard): MS1_1425.D  Heated Purge: (Y/N) N

Calibration ID: 34948

| | | DCBd4 | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| INITIAL CALIBRATION MID-POINT | | 1126170 | 11.60 | | | | |
| UPPER LIMIT | | 2252340 | 12.10 | | | | |
| LOWER LIMIT | | 563085 | 11.10 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICV 280-444687/19 | | 1204600 | 11.60 | | | | |
| CCV 280-445753/2 | | 1139766 | 11.60 | | | | |
| CCV 280-445753/3 | | 1072362 | 11.60 | | | | |
| MB 280-445753/8 | | 1059066 | 11.60 | | | | |
| LCS 280-445753/4 | | 1093147 | 11.60 | | | | |
| LCSD 280-445753/5 | | 1170096 | 11.60 | | | | |
| LCS 280-445753/6 | | 1087064 | 11.60 | | | | |
| LCSD 280-445753/7 | | 1094220 | 11.60 | | | | |
| 280-119359-C-1 MS | | 1182196 | 11.60 | | | | |
| 280-119359-A-1 MSD | | 1219522 | 11.60 | | | | |
| 280-119359-C-1 MS | | 1119488 | 11.60 | | | | |
| 280-119359-A-1 MSD | | 1182542 | 11.60 | | | | |
| 160-32649-1 | CRC-MW-1-011519 | 1063114 | 11.60 | | | | |

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: CRC-MW-1-011519 | Lab Sample ID: 160-32649-1

Matrix: Water | Lab File ID: MS1_1919.D

Analysis Method: 8260B | Date Collected: 01/15/2019 12:30

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 23:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.16 | U | 1.0 | 0.16 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.21 | U | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.27 | U | 1.0 | 0.27 |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.42 | U | 3.0 | 0.42 |
| 75-34-3 | 1,1-Dichloroethane | 0.22 | U | 1.0 | 0.22 |
| 75-35-4 | 1,1-Dichloroethene | 0.23 | U | 1.0 | 0.23 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.21 | U | 1.0 | 0.21 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.21 | U | 1.0 | 0.21 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.47 | U | 5.0 | 0.47 |
| 106-93-4 | 1,2-Dibromoethane | 0.18 | U | 1.0 | 0.18 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.15 | U | 1.0 | 0.15 |
| 107-06-2 | 1,2-Dichloroethane | 0.13 | U | 1.0 | 0.13 |
| 78-87-5 | 1,2-Dichloropropane | 0.18 | U | 1.0 | 0.18 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.16 | U | 1.0 | 0.16 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.13 | U | 1.0 | 0.13 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.16 | U | 1.0 | 0.16 |
| 123-91-1 | 1,4-Dioxane | 57 | U | 200 | 57 |
| 78-93-3 | 2-Butanone (MEK) | 2.0 | U | 6.0 | 2.0 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 0.69 | U | 3.0 | 0.69 |
| 591-78-6 | 2-Hexanone | 1.7 | U | 5.0 | 1.7 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 0.98 | U | 5.0 | 0.98 |
| 67-64-1 | Acetone | 8.7 | J | 10 | 1.9 |
| 75-05-8 | Acetonitrile | 9.6 | U | 30 | 9.6 |
| 107-02-8 | Acrolein | 2.8 | U | 20 | 2.8 |
| 107-13-1 | Acrylonitrile | 1.4 | U | 20 | 1.4 |
| 71-43-2 | Benzene | 0.16 | U | 1.0 | 0.16 |
| 75-25-2 | Bromoform | 0.19 | U | 1.0 | 0.19 |
| 74-83-9 | Bromomethane | 0.21 | U | 2.0 | 0.21 |
| 75-15-0 | Carbon disulfide | 0.45 | U | 2.0 | 0.45 |
| 56-23-5 | Carbon tetrachloride | 0.19 | U | 1.0 | 0.19 |
| 108-90-7 | Chlorobenzene | 0.17 | U | 1.0 | 0.17 |
| 74-97-5 | Chlorobromomethane | 0.10 | U | 1.0 | 0.10 |
| 124-48-1 | Chlorodibromomethane | 0.17 | U | 1.0 | 0.17 |
| 75-00-3 | Chloroethane | 0.41 | U * | 2.0 | 0.41 |
| 67-66-3 | Chloroform | 0.16 | U | 1.0 | 0.16 |
| 74-87-3 | Chloromethane | 0.30 | U | 2.0 | 0.30 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: CRC-MW-1-011519 | Lab Sample ID: 160-32649-1

Matrix: Water | Lab File ID: MS1_1919.D

Analysis Method: 8260B | Date Collected: 01/15/2019 12:30

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 23:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 0.15 | U | 1.0 | 0.15 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.16 | U | 1.0 | 0.16 |
| 110-82-7 | Cyclohexane | 0.28 | U | 2.0 | 0.28 |
| 75-27-4 | Dichlorobromomethane | 0.17 | U | 1.0 | 0.17 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U * | 2.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.16 | U | 1.0 | 0.16 |
| 98-82-8 | Isopropylbenzene | 0.19 | U | 1.0 | 0.19 |
| 79-20-9 | Methyl acetate | 1.6 | U | 5.0 | 1.6 |
| 1634-04-4 | Methyl tert-butyl ether | 0.25 | U | 5.0 | 0.25 |
| 108-87-2 | Methylcyclohexane | 0.36 | U | 1.0 | 0.36 |
| 75-09-2 | Methylene Chloride | 0.40 | J | 2.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.34 | U | 2.0 | 0.34 |
| 95-47-6 | o-Xylene | 0.19 | U | 1.0 | 0.19 |
| 100-42-5 | Styrene | 0.17 | U | 1.0 | 0.17 |
| 127-18-4 | Tetrachloroethene | 0.20 | U | 1.0 | 0.20 |
| 108-88-3 | Toluene | 0.17 | U | 1.0 | 0.17 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.15 | U | 1.0 | 0.15 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.19 | U | 3.0 | 0.19 |
| 79-01-6 | Trichloroethene | 0.16 | U | 1.0 | 0.16 |
| 75-69-4 | Trichlorofluoromethane | 0.29 | U | 2.0 | 0.29 |
| 75-01-4 | Vinyl chloride | 0.10 | U | 1.0 | 0.10 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 110 | | 70-127 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 100 | | 78-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 107 | | 77-120 |
| 2037-26-5 | Toluene-d8 (Surr) | 106 | | 80-125 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: CRC-MW-1-011519 | Lab Sample ID: 160-32649-1

Matrix: Water | Lab File ID: MS1_1919.D

Analysis Method: 8260B | Date Collected: 01/15/2019 12:30

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 23:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

Number TICs Found: 2 | TIC Result Total: 3.2

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Unknown | 6.53 | 1.7 | T J | |
| | Unknown | 10.54 | 1.5 | T J | |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1919.D
Lims ID: 160-32649-A-1
Client ID: CRC-MW-1-011519
Sample Type: Client
Inject. Date: 28-Jan-2019 23:21:30 ALS Bottle#: 15 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 160-32649-A-1 pH<2
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 23:41:05

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.570 | 5.557 | 0.013 | 35 | 433964 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3076948 | 12.5 | |
| * 149 1,4-Dioxane-d8 | 96 | 8.713 | 8.727 | -0.014 | 0 | 24488 | 0 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 85 | 697916 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 94 | 1063114 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 695836 | 10.7 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 555225 | 11.0 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2770471 | 10.6 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.654 | -0.014 | 0 | 908814 | 9.98 | |
| 24 Dichlorodifluoromethane | 85 | | 3.894 | | | | ND | |
| 26 Chloromethane | 50 | | 4.132 | | | | ND | |
| 27 Vinyl chloride | 62 | | 4.244 | | | | ND | |
| 29 Bromomethane | 94 | | 4.607 | | | | ND | |
| 31 Chloroethane | 64 | | 4.663 | | | | ND | |
| 33 Trichlorofluoromethane | 101 | | 4.914 | | | | ND | |
| 39 Acrolein | 56 | | 5.193 | | | | ND | |
| 40 Acetone | 43 | 5.305 | 5.291 | 0.014 | 61 | 60507 | 8.71 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | | 5.305 | | | | ND | |
| 43 1,1-Dichloroethene | 96 | | 5.333 | | | | ND | |
| 44 Acetonitrile | 41 | | 5.501 | | | | ND | U |
| 46 Methyl acetate | 43 | | 5.528 | | | | ND | |
| 48 Carbon disulfide | 76 | | 5.598 | | | | ND | |
| 50 Methylene Chloride | 84 | 5.668 | 5.668 | 0.000 | 89 | 31314 | 0.3986 | |
| 51 Acrylonitrile | 53 | | 5.808 | | | | ND | |
| 52 Methyl tert-butyl ether | 73 | | 5.864 | | | | ND | |
| 53 trans-1,2-Dichloroethene | 96 | | 5.892 | | | | ND | |
| 57 1,1-Dichloroethane | 63 | | 6.213 | | | | ND | |
| 61 2-Butanone (MEK) | 43 | | 6.576 | | | | ND | |
| 64 cis-1,2-Dichloroethene | 96 | | 6.632 | | | | ND | |
| 67 Chlorobromomethane | 128 | | 6.827 | | | | ND | |
| 68 Chloroform | 83 | | 6.841 | | | | ND | |
| 71 1,1,1-Trichloroethane | 97 | | 7.065 | | | | ND | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 72 Cyclohexane | 56 | | 7.149 | | | | ND | |
| 74 Carbon tetrachloride | 117 | | 7.204 | | | | ND | |
| 75 1,2-Dichloroethane | 62 | | 7.302 | | | | ND | |
| 77 Benzene | 78 | | 7.344 | | | | ND | |
| 79 Trichloroethene | 95 | | 7.805 | | | | ND | |
| 82 1,2-Dichloropropane | 63 | | 7.987 | | | | ND | |
| 83 Methylcyclohexane | 55 | | 8.014 | | | | ND | |
| 84 1,4-Dioxane | 88 | | 8.028 | | | | ND | |
| 86 Dichlorobromomethane | 83 | | 8.154 | | | | ND | |
| 88 2-Chloroethyl vinyl ether | 63 | | 8.294 | | | | ND | |
| 89 cis-1,3-Dichloropropene | 75 | | 8.475 | | | | ND | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | | 8.531 | | | | ND | |
| 91 Toluene | 91 | | 8.769 | | | | ND | |
| 93 trans-1,3-Dichloropropene | 75 | | 8.852 | | | | ND | |
| 94 1,1,2-Trichloroethane | 97 | | 9.006 | | | | ND | |
| 95 2-Hexanone | 43 | | 9.118 | | | | ND | |
| 97 Tetrachloroethene | 164 | | 9.188 | | | | ND | |
| 98 Chlorodibromomethane | 129 | | 9.341 | | | | ND | |
| 100 Ethylene Dibromide | 107 | | 9.467 | | | | ND | |
| 102 Chlorobenzene | 112 | | 9.802 | | | | ND | |
| 104 Ethylbenzene | 106 | | 9.844 | | | | ND | |
| 105 m-Xylene & p-Xylene | 106 | | 9.928 | | | | ND | |
| 106 Styrene | 104 | | 10.235 | | | | ND | |
| 109 o-Xylene | 106 | | 10.235 | | | | ND | |
| 107 Bromoform | 173 | | 10.431 | | | | ND | |
| 108 Isopropylbenzene | 105 | | 10.500 | | | | ND | |
| 112 1,1,2,2-Tetrachloroethane | 83 | | 10.696 | | | | ND | |
| 120 1,3,5-Trimethylbenzene | 105 | | 10.933 | | | | ND | |
| 124 1,3-Dichlorobenzene | 146 | | 11.562 | | | | ND | |
| 126 1,4-Dichlorobenzene | 146 | | 11.632 | | | | ND | |
| 128 1,2-Dichlorobenzene | 146 | | 11.981 | | | | ND | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | | 12.707 | | | | ND | |
| 130 1,2,4-Trichlorobenzene | 180 | | 13.671 | | | | ND | |
| 133 1,2,3-Trichlorobenzene | 180 | | 14.341 | | | | ND | |

## QC Flag Legend

Review Flags

U - Marked Undetected

## Reagents:

| | | | | |
|---|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent |

TestAmerica Denver
Tentatively Identified Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1919.D | | | | |
| Lims ID: | 160-32649-A-1 | | | | |
| Client ID: | CRC-MW-1-011519 | | | | |
| Sample Type: | Client | | | | |
| Inject. Date: | 28-Jan-2019 23:21:30 | ALS Bottle#: | 15 | Worklist Smp#: | 19 |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | | |
| Sample Info: | 160-32649-A-1 pH<2 | | | | |
| Operator ID: | nwangumaf | Instrument ID: | VMS_MS1 | | |
| Method: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m | | | | |
| Limit Group: | MSV - 8260B Water and Solid | | | | |
| Last Update: | 29-Jan-2019 17:54:01 | Calib Date: | 18-Jan-2019 13:52:30 | | |
| Tic RT Window: | 0.000 -0.000 | Response: | area | | |
| Quant By: | Nearest ISTD | Quant LOD: | 10.00000 | | |
| MS Library: | \\chromna\Denver\Database\NIST98.L | | | | |
| Min. Match: | 85 | | | | |
| Column 1 : | DB-624 (60.25) ( 0.25 mm) | | Det: MS SCAN | | |
| Process Host: | CTX0327 | | | | |
| First Level Reviewer: nwangumaf | | Date: | 28-Jan-2019 23:41:05 | | |

Tentative Identified Compound Results

| RT | Area | Amount ug/l | Quant Cpnd | Qual | Lib Entry | Molecular Formula | Mol. Weight | Flags |
|---|---|---|---|---|---|---|---|---|
| | Unknown | | | | | | | |
| 6.534 | 842450 | 1.70 | 1 | | | | | |
| | Unknown | | | | | | | |
| 10.542 | 738931 | 1.48 | 2 | | | | | |

Quantitation Compounds

| Compound | RT | Area | Amount ug/l |
|---|---|---|---|
| * 1 Fluorobenzene | 7.512 | 6187123 | 12.5 |
| * 2 Chlorobenzene-d5 | 9.774 | 6250901 | 12.5 |

## QC Flag Legend

Processing Flags

## Reagents:

| | | | | |
|---|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent |

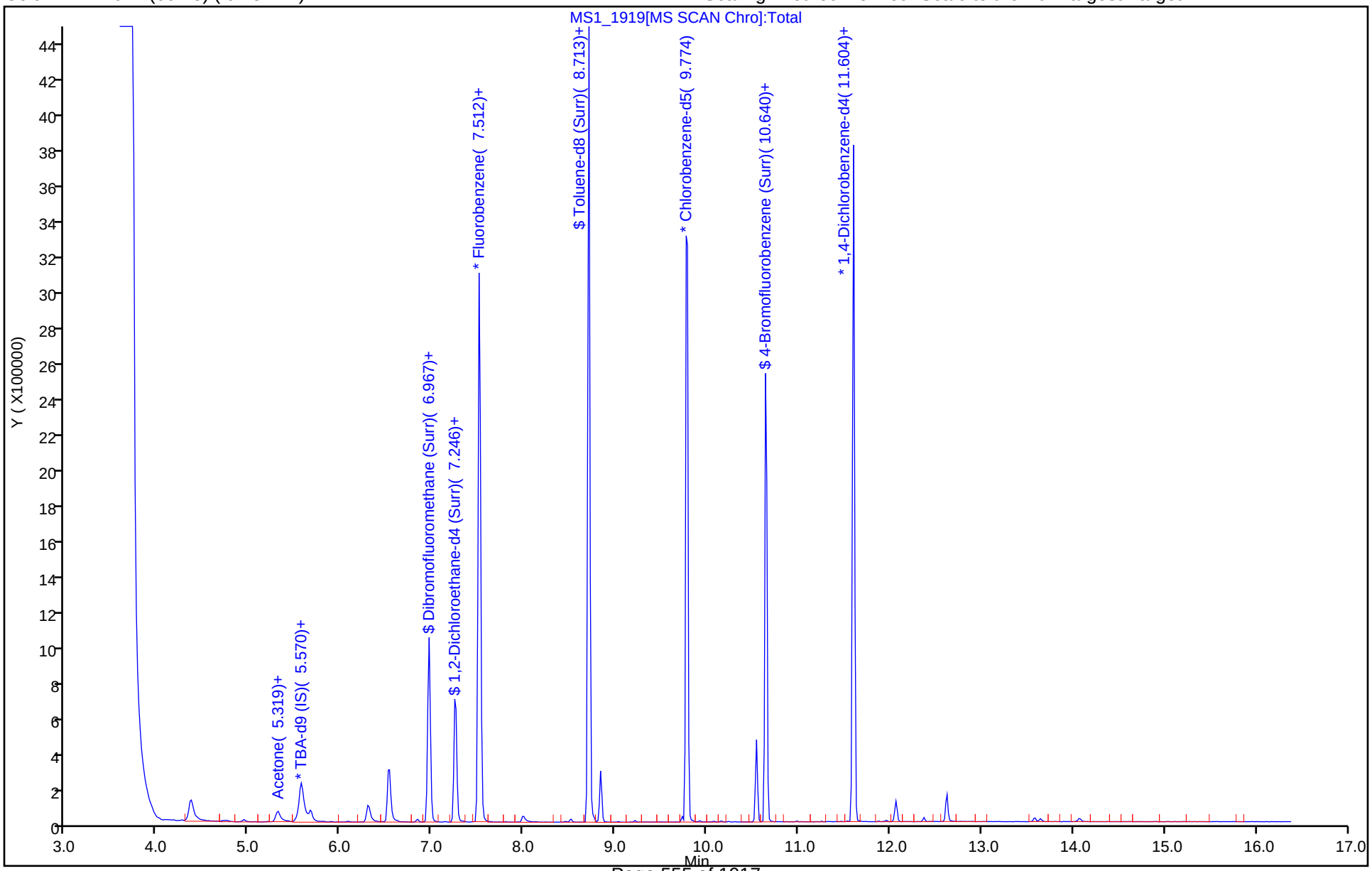
Report Date: 29-Jan-2019 17:54:48 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1919.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 23:21:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | 160-32649-A-1 | Lab Sample ID: | 280-32649-1 | Worklist Smp#: | 19 |
| Client ID: | CRC-MW-1-011519 | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 15 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Report Date: 29-Jan-2019 17:54:48 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1919.D | | | | |
| Lims ID: | 160-32649-A-1 | | | | |
| Client ID: | CRC-MW-1-011519 | | | | |
| Sample Type: | Client | | | | |
| Inject. Date: | 28-Jan-2019 23:21:30 | ALS Bottle#: | 15 | Worklist Smp#: | 19 |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | | |
| Sample Info: | 160-32649-A-1 pH<2 | | | | |
| Operator ID: | nwangumaf | Instrument ID: | VMS_MS1 | | |
| Method: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m | | | | |
| Limit Group: | MSV - 8260B Water and Solid | | | | |
| Last Update: | 29-Jan-2019 17:54:01 | Calib Date: | 18-Jan-2019 13:52:30 | | |
| Integrator: | RTE | ID Type: | Deconvolution ID | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D | | | | |
| Column 1 : | DB-624 (60.25) ( 0.25 mm) | | Det: MS SCAN | | |
| Process Host: | CTX0327 | | | | |

First Level Reviewer: nwangumaf Date: 28-Jan-2019 23:41:05

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 5 Dibromofluoromethane (Surr) | 10.0 | 10.7 | 107.48 |
| $ 6 1,2-Dichloroethane-d4 (Surr) | 10.0 | 11.0 | 109.83 |
| $ 7 Toluene-d8 (Surr) | 10.0 | 10.6 | 106.14 |
| $ 8 4-Bromofluorobenzene (Surr) | 10.0 | 9.98 | 99.82 |

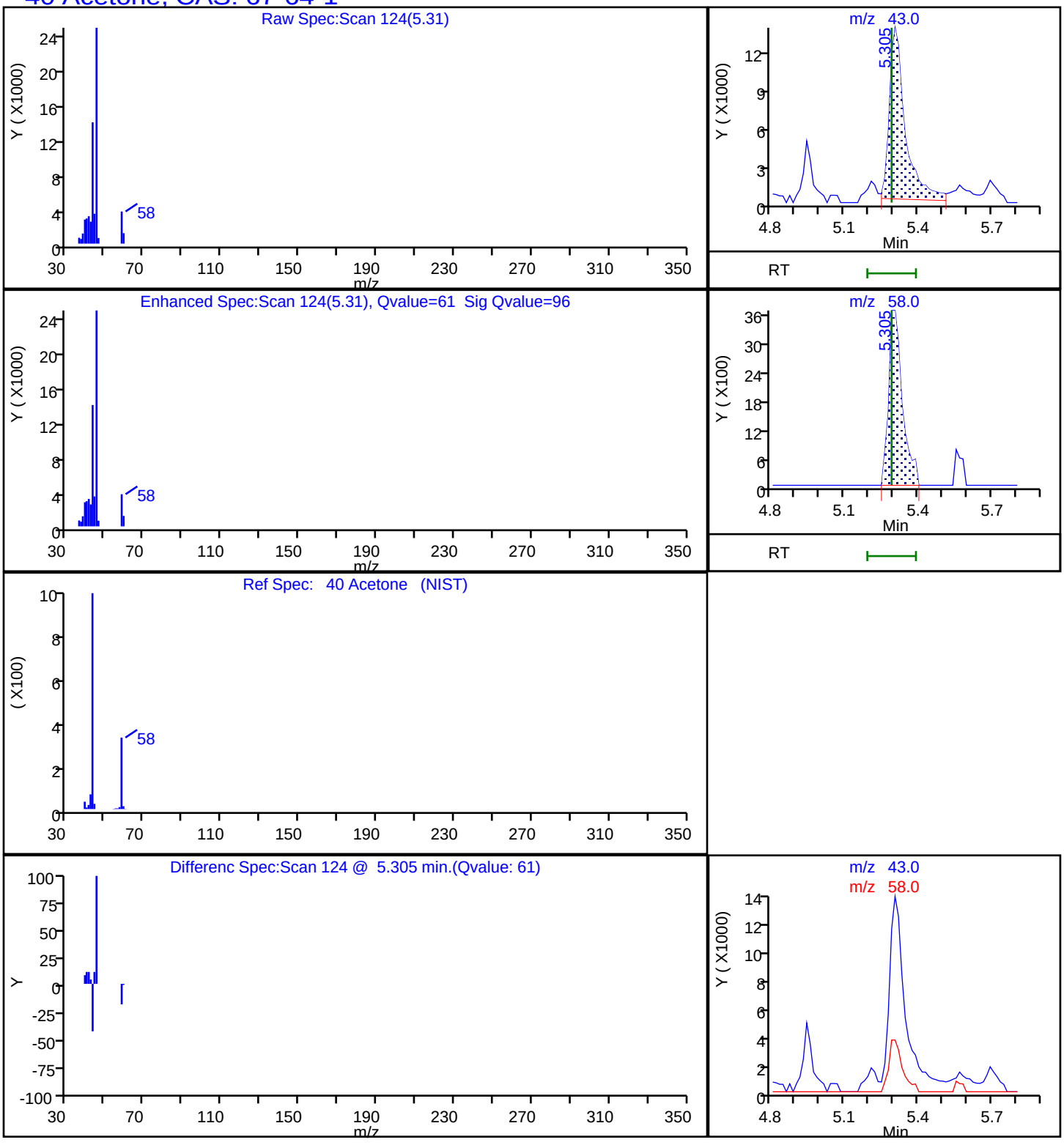
Report Date: 29-Jan-2019 17:54:48 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1919.D

| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 23:21:30 | Instrument ID: | VMS_MS1 |
| Lims ID: | 160-32649-A-1 | Lab Sample ID: | 280-32649-1 |
| Client ID: | CRC-MW-1-011519 | | |
| Operator ID: | nwangumaf | ALS Bottle#: | 15 Worklist Smp#: 19 |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid |
| Column: | DB-624 (60.25) ( 0.25 mm) | Detector | MS SCAN |

## 40 Acetone, CAS: 67-64-1



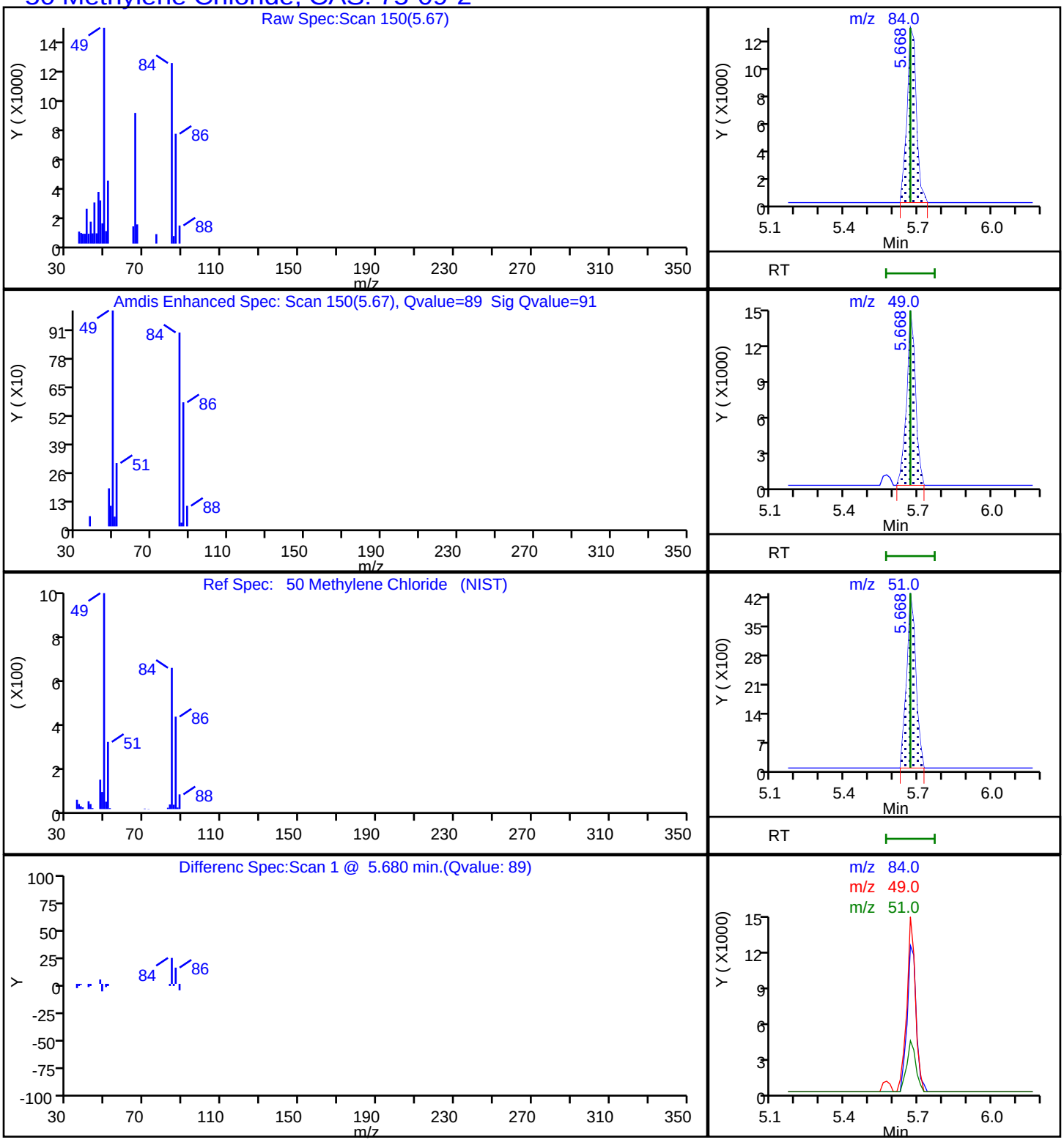
Report Date: 29-Jan-2019 17:54:48 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1919.D

| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 23:21:30 | Instrument ID: | VMS_MS1 |
| Lims ID: | 160-32649-A-1 | Lab Sample ID: | 280-32649-1 |
| Client ID: | CRC-MW-1-011519 | | |
| Operator ID: | nwangumaf | ALS Bottle#: | 15 Worklist Smp#: 19 |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid |
| Column: | DB-624 (60.25) ( 0.25 mm) | Detector | MS SCAN |

## 50 Methylene Chloride, CAS: 75-09-2



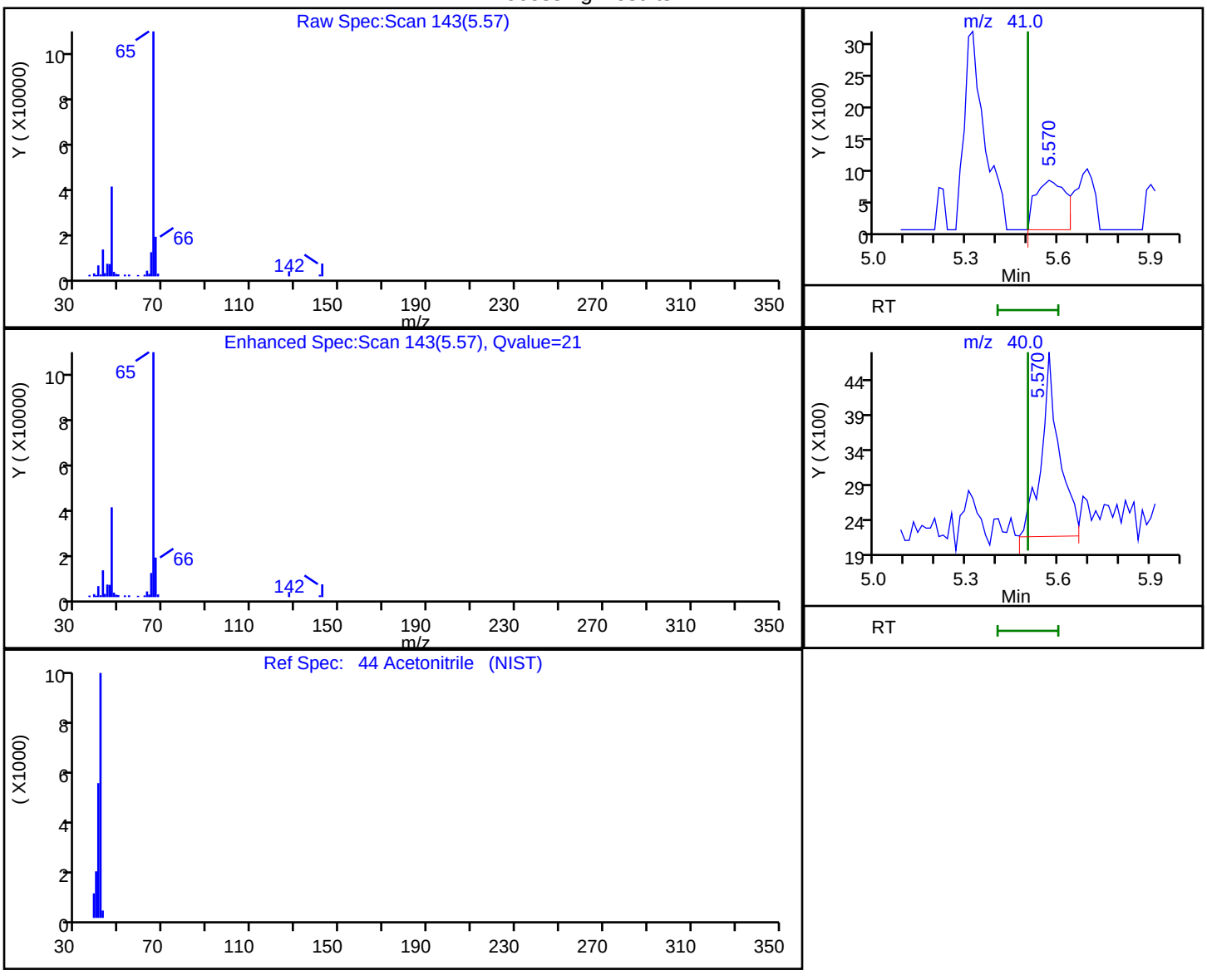
User Disabled Compound Report

TestAmerica Denver

| | | | |
|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1919.D | | |
| Injection Date: | 28-Jan-2019 23:21:30 | Instrument ID: | VMS_MS1 |
| Lims ID: | 160-32649-A-1 | Lab Sample ID: | 280-32649-1 |
| Client ID: | CRC-MW-1-011519 | | |
| Operator ID: | nwangumaf | ALS Bottle#: | 15 Worklist Smp#: 19 |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid |
| Column: | DB-624 (60.25) ( 0.25 mm) | Detector | MS SCAN |

## 44 Acetonitrile, CAS: 75-05-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 5.57 | 41.00 | 5451 | 1.609498 |
| 5.57 | 40.00 | 10401 | |

Reviewer: nwangumaf, 28-Jan-2019 23:41:01

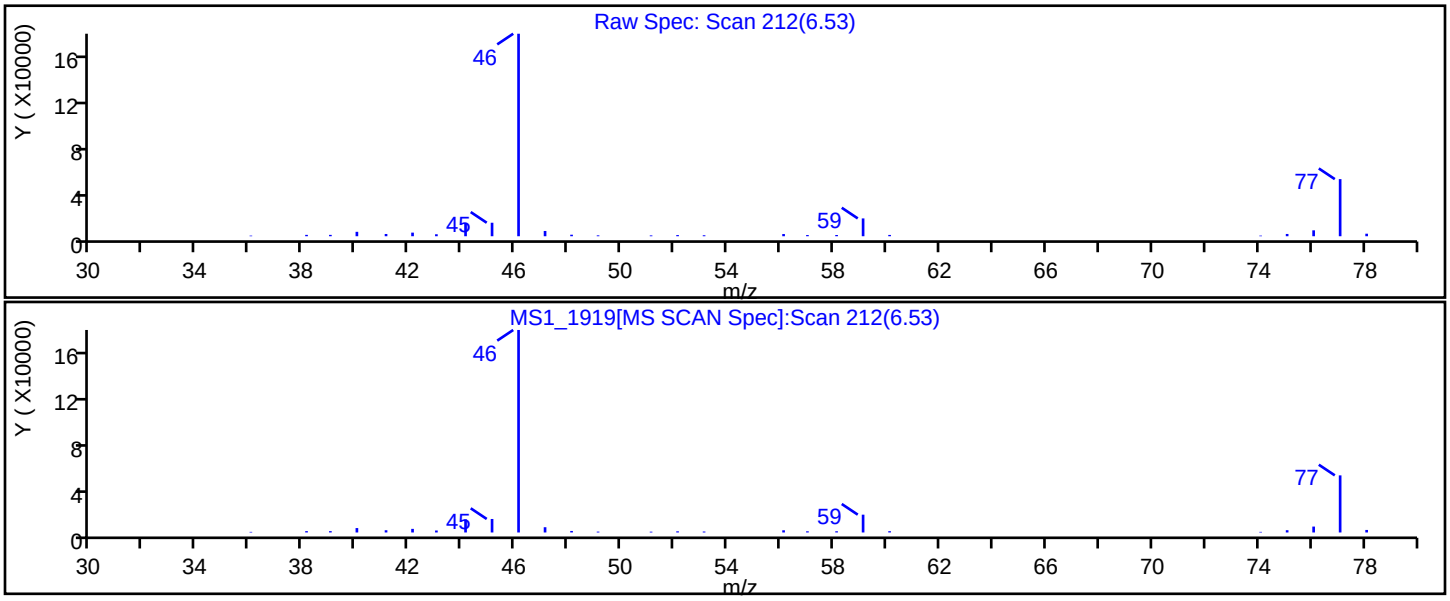
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 29-Jan-2019 17:54:48 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1919.D | | | | |
| Injection Date: | 28-Jan-2019 23:21:30 | Instrument ID: | VMS_MS1 | | |
| Lims ID: | 160-32649-A-1 | Lab Sample ID: | 280-32649-1 | | |
| Client ID: | CRC-MW-1-011519 | | | | |
| Operator ID: | nwangumaf | ALS Bottle#: | 15 | Worklist Smp#: | 19 |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |
| Column: | | Detector | MS SCAN | | |

No Library Matches Found above the Threshold: 85

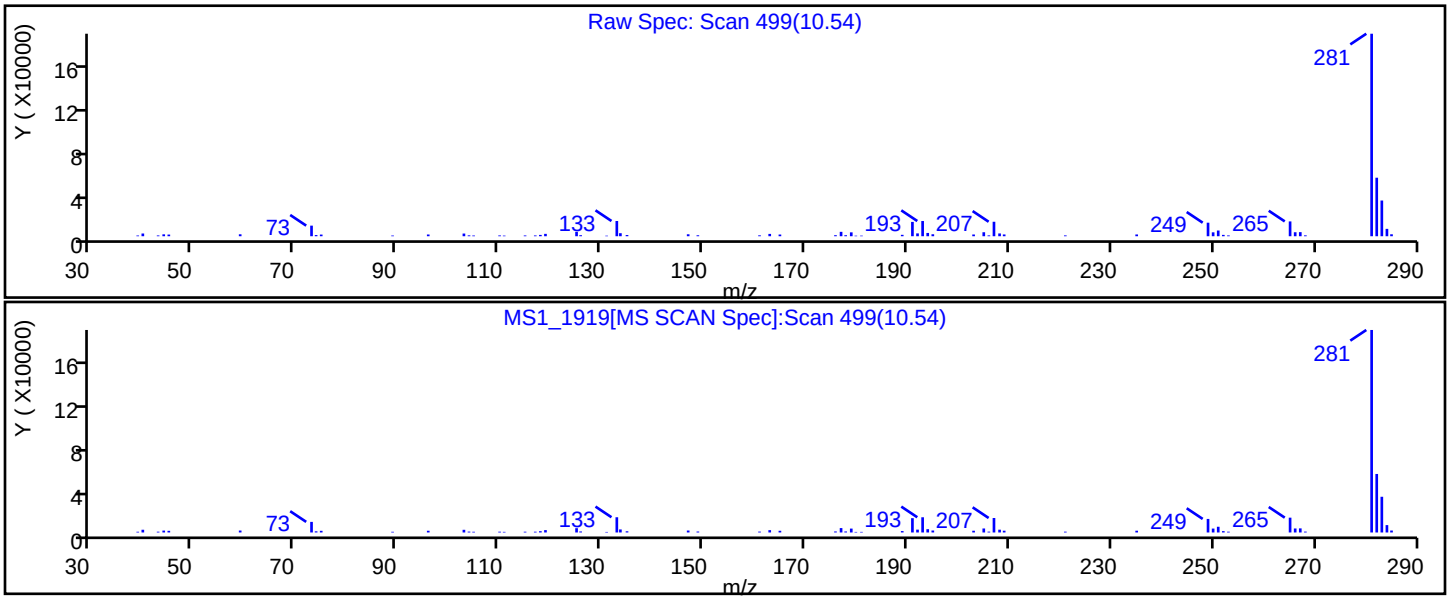


Report Date: 29-Jan-2019 17:54:48 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1919.D | | | | |
| Injection Date: | 28-Jan-2019 23:21:30 | Instrument ID: | VMS_MS1 | | |
| Lims ID: | 160-32649-A-1 | Lab Sample ID: | 280-32649-1 | | |
| Client ID: | CRC-MW-1-011519 | | | | |
| Operator ID: | nwangumaf | ALS Bottle#: | 15 | Worklist Smp#: | 19 |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |
| Column: | | Detector | MS SCAN | | |

No Library Matches Found above the Threshold: 85



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443512

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 12:31 Calibration End Date: 01/08/2019 14:14 Calibration ID: 34749

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD 280-443512/20 | MS1_1077.D |
| Level 2 | STD 280-443512/21 | MS1_1078.D |
| Level 3 | STD 280-443512/22 | MS1_1079.D |
| Level 4 | STD 280-443512/23 | MS1_1080.D |
| Level 5 | STD 280-443512/24 | MS1_1081.D |
| Level 6 | STD 280-443512/25 | MS1_1082.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 LVL 6 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Ethylene oxide | 0.0038 0.0024 | 0.0034 | 0.0033 | 0.0032 | 0.0026 | Lin1 | 0.2058 | 0.0025 | | | | | | | 0.9930 | | 0.9900 |
| Ethanol | 0.1448 0.1413 | 0.1402 | 0.1484 | 0.1522 | 0.1310 | Ave | | 0.1430 | | | | 5.2 | | 15.0 | | | |
| Propene oxide | 0.0193 0.0144 | 0.0183 | 0.0188 | 0.0183 | 0.0173 | Ave | | 0.0177 | | | | 10.0 | | 15.0 | | | |
| 2-Propanol | 1.0998 0.8500 | 0.9604 | 0.8626 | 0.9115 | 0.8210 | Ave | | 0.9175 | | | | 11.1 | | 15.0 | | | |
| Acetonitrile | 0.0167 0.0121 | 0.0142 | 0.0139 | 0.0133 | 0.0124 | Ave | | 0.0138 | | | | 11.9 | | 15.0 | | | |
| Di-isopropyl ether (DIPE) | 0.2139 0.2250 | 0.2130 | 0.2281 | 0.2283 | 0.2181 | Ave | | 0.2211 | | | | 3.1 | | 15.0 | | | |
| Chloroprene | 0.3429 0.3549 | 0.3549 | 0.3752 | 0.3832 | 0.3569 | Ave | | 0.3613 | | | | 4.1 | | 15.0 | | | |
| Tert-butyl ethyl ether | 0.6299 0.6426 | 0.6151 | 0.6578 | 0.6519 | 0.6484 | Ave | | 0.6410 | | | | 2.5 | | 15.0 | | | |
| Ethyl acetate | 0.1249 0.0978 | 0.1071 | 0.1094 | 0.1037 | 0.1021 | Ave | | 0.1075 | | | | 8.8 | | 15.0 | | | |
| Propionitrile | 0.0175 0.0157 | 0.0168 | 0.0171 | 0.0166 | 0.0163 | Ave | | 0.0167 | | | | 3.9 | | 15.0 | | | |
| Methacrylonitrile | 0.0723 0.0604 | 0.0687 | 0.0711 | 0.0690 | 0.0657 | Ave | | 0.0679 | | | | 6.4 | | 15.0 | | | |
| Tert-amyl methyl ether | 0.5005 0.5535 | 0.4925 | 0.5356 | 0.5438 | 0.5494 | Ave | | 0.5292 | | | | 4.9 | | 15.0 | | | |
| n-Butanol | 0.5937 0.4456 | 0.4570 | 0.4187 | 0.4121 | 0.4005 | Lin2 | 4.5269 | 0.4016 | | | | | | | 0.9950 | | 0.9900 |
| Methyl methacrylate | 0.0274 0.0364 | 0.0298 | 0.0327 | 0.0341 | 0.0360 | Ave | | 0.0327 | | | | 10.9 | | 15.0 | | | |
| 2-Nitropropane | 0.0149 0.0197 | 0.0156 | 0.0170 | 0.0182 | 0.0188 | Ave | | 0.0174 | | | | 10.9 | | 15.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443512

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 12:31 Calibration End Date: 01/08/2019 14:14 Calibration ID: 34749

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| cis-1,4-Dichloro-2-butene | 0.0715<br>0.0855 | 0.0672 | 0.0735 | 0.0780 | 0.0825 | Ave | | 0.0764 | | | | 9.1 | | 15.0 | | | |
| 1,2,3-Trimethylbenzene | 3.3414<br>3.3872 | 3.4569 | 3.7427 | 3.7640 | 3.4348 | Ave | | 3.5212 | | | | 5.2 | | 15.0 | | | |
| 1,3,5-Trichlorobenzene | 1.4103<br>1.3785 | 1.4515 | 1.4726 | 1.5029 | 1.3576 | Ave | | 1.4289 | | | | 3.9 | | 15.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443512

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 12:31 Calibration End Date: 01/08/2019 14:14 Calibration ID: 34749

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD 280-443512/20 | MS1_1077.D |
| Level 2 | STD 280-443512/21 | MS1_1078.D |
| Level 3 | STD 280-443512/22 | MS1_1079.D |
| Level 4 | STD 280-443512/23 | MS1_1080.D |
| Level 5 | STD 280-443512/24 | MS1_1081.D |
| Level 6 | STD 280-443512/25 | MS1_1082.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2 | LVL 3 | LVL 4 | LVL 5 |
| Ethylene oxide | FB | Lin1 | 72670<br>2950906 | 152697 | 302877 | 582616 | 1309879 | 100<br>6000 | 250 | 500 | 1000 | 2500 |
| Ethanol | TBAd9 | Ave | 15008<br>851566 | 31980 | 68501 | 136306 | 363447 | 60.0<br>3600 | 150 | 300 | 600 | 1500 |
| Propene oxide | FB | Ave | 370152<br>17350846 | 834642 | 1720495 | 3390234 | 8827109 | 100<br>6000 | 250 | 500 | 1000 | 2500 |
| 2-Propanol | TBAd9 | Ave | 18994<br>853742 | 36499 | 66357 | 136037 | 379605 | 10.0<br>600 | 25.0 | 50.0 | 100 | 250 |
| Acetonitrile | FB | Ave | 32024<br>1465081 | 64494 | 126755 | 245942 | 632086 | 10.0<br>600 | 25.0 | 50.0 | 100 | 250 |
| Di-isopropyl ether (DIPE) | FB | Ave | 41096<br>2717578 | 96995 | 208218 | 422142 | 1111224 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 | 25.0 |
| Chloroprene | FB | Ave | 65870<br>4285925 | 161653 | 342596 | 708645 | 1818368 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 | 25.0 |
| Tert-butyl ethyl ether | FB | Ave | 121000<br>7759960 | 280167 | 600592 | 1205740 | 3303441 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 | 25.0 |
| Ethyl acetate | FB | Ave | 47977<br>2361886 | 97520 | 199828 | 383642 | 1040349 | 2.00<br>120 | 5.00 | 10.0 | 20.0 | 50.0 |
| Propionitrile | FB | Ave | 33674<br>1893250 | 76390 | 156266 | 307633 | 830627 | 10.0<br>600 | 25.0 | 50.0 | 100 | 250 |
| Methacrylonitrile | FB | Ave | 138909<br>7289084 | 312865 | 649149 | 1276442 | 3346408 | 10.0<br>600 | 25.0 | 50.0 | 100 | 250 |
| Tert-amyl methyl ether | FB | Ave | 96149<br>6683287 | 224320 | 489019 | 1005803 | 2798986 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 | 25.0 |
| n-Butanol | TBAd9 | Lin2 | 25634<br>1118938 | 43416 | 80512 | 153764 | 462965 | 25.0<br>1500 | 62.5 | 125 | 250 | 625 |
| Methyl methacrylate | FB | Ave | 10521<br>879328 | 27106 | 59630 | 126053 | 366669 | 2.00<br>120 | 5.00 | 10.0 | 20.0 | 50.0 |
| 2-Nitropropane | FB | Ave | 5709<br>475461 | 14171 | 31034 | 67477 | 191997 | 2.00<br>120 | 5.00 | 10.0 | 20.0 | 50.0 |
| cis-1,4-Dichloro-2-butene | DCBd4 | Ave | 7679<br>582954 | 17086 | 36933 | 79672 | 240511 | 2.00<br>120 | 5.00 | 10.0 | 20.0 | 50.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443512

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 12:31 Calibration End Date: 01/08/2019 14:14 Calibration ID: 34749

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2 | LVL 3 | LVL 4 | LVL 5 |
| 1,2,3-Trimethylbenzene | DCBd 4 | Ave | 179339<br>11543777 | 439635 | 940961 | 1922556 | 5008297 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 | 25.0 |
| 1,3,5-Trichlorobenzene | DCBd 4 | Ave | 75694<br>4698114 | 184590 | 370236 | 767642 | 1979598 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 | 25.0 |

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1077.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jan-2019 12:31:30 ALS Bottle#: 12 Worklist Smp#: 20
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub109

Method: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Jan-2019 06:41:59 Calib Date: 08-Jan-2019 14:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1082.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: wickhamt Date: 09-Jan-2019 06:29:50

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.584 | 5.584 | 0.000 | 69 | 431764 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.526 | 7.526 | 0.000 | 99 | 2401119 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 86 | 483937 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 96 | 670899 | 12.5 | 12.5 | |
| 28 Ethylene oxide | 43 | 4.551 | 4.551 | 0.000 | 98 | 72670 | 100.0 | 69.0 | |
| 34 Ethanol | 45 | 4.942 | 4.942 | 0.000 | 68 | 15008 | 60.0 | 60.8 | |
| 38 Propene oxide | 58 | 5.166 | 5.166 | 0.000 | 0 | 370152 | 100.0 | 108.6 | |
| 41 Isopropyl alcohol | 45 | 5.333 | 5.333 | 0.000 | 94 | 18994 | 10.0 | 12.0 | |
| 44 Acetonitrile | 41 | 5.529 | 5.529 | 0.000 | 100 | 32024 | 10.0 | 12.1 | |
| 56 Isopropyl ether | 87 | 6.185 | 6.185 | 0.000 | 94 | 41096 | 1.00 | 0.9678 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.297 | 6.297 | 0.000 | 89 | 65870 | 1.00 | 0.9490 | |
| 59 Tert-butyl ethyl ether | 59 | 6.464 | 6.464 | 0.000 | 96 | 121000 | 1.00 | 0.9828 | |
| 60 Ethyl acetate | 43 | 6.576 | 6.590 | -0.014 | 96 | 47977 | 2.00 | 2.32 | |
| 63 Propionitrile | 54 | 6.632 | 6.632 | 0.000 | 98 | 33674 | 10.0 | 10.5 | |
| 66 Methacrylonitrile | 41 | 6.758 | 6.758 | 0.000 | 89 | 138909 | 10.0 | 10.7 | |
| 76 Tert-amyl methyl ether | 73 | 7.344 | 7.358 | -0.014 | 96 | 96149 | 1.00 | 0.9458 | |
| 78 n-Butanol | 56 | 7.540 | 7.540 | 0.000 | 85 | 25634 | 25.0 | 25.7 | |
| 81 Methyl methacrylate | 100 | 7.945 | 7.945 | 0.000 | 85 | 10521 | 2.00 | 1.67 | |
| 87 2-Nitropropane | 41 | 8.294 | 8.294 | 0.000 | 94 | 5709 | 2.00 | 1.71 | |
| 99 Tetrahydrothiophene | 60 | | 9.397 | | | | ND | ND | U |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 90 | 7679 | 2.00 | 1.87 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 97 | 179339 | 1.00 | 0.9489 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.931 | 0.000 | 97 | 75694 | 1.00 | 0.9870 | |

## QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
U - Marked Undetected

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-Supp A_00033 | Amount Added: | 0.40 | Units: uL |

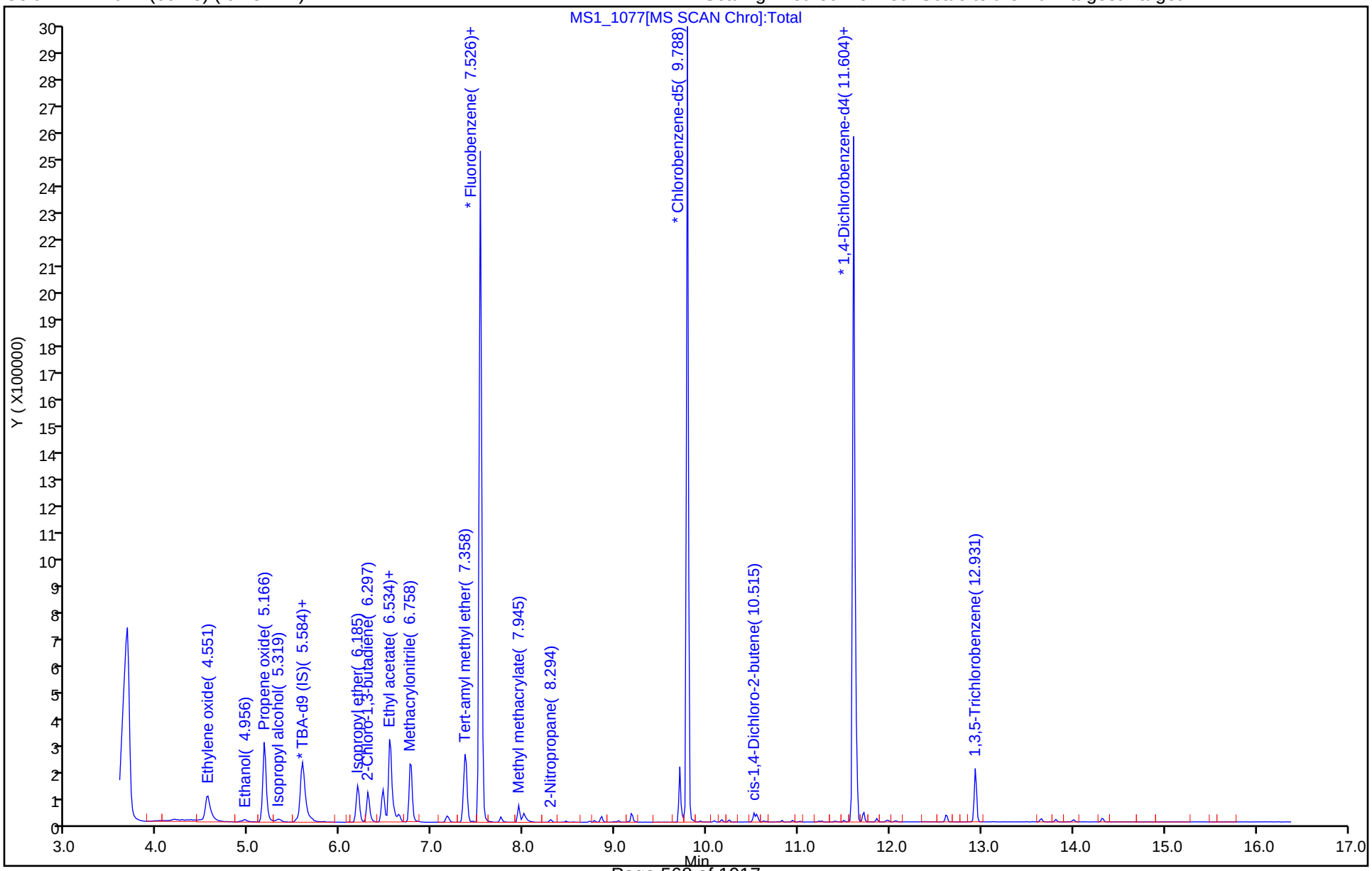
Report Date: 09-Jan-2019 06:42:00 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1077.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 12:31:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 20 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 12 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1078.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jan-2019 12:52:30 ALS Bottle#: 13 Worklist Smp#: 21
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub109

Method: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Jan-2019 06:42:02 Calib Date: 08-Jan-2019 14:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1082.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: wickhamt Date: 09-Jan-2019 06:30:11

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.585 | 5.584 | 0.001 | 69 | 380039 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.526 | 7.526 | 0.000 | 99 | 2277314 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 86 | 458062 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 95 | 635877 | 12.5 | 12.5 | |
| 28 Ethylene oxide | 43 | 4.551 | 4.551 | 0.000 | 98 | 152697 | 250.0 | 252.9 | |
| 34 Ethanol | 45 | 4.928 | 4.942 | -0.014 | 92 | 31980 | 150.0 | 147.1 | |
| 38 Propene oxide | 58 | 5.166 | 5.166 | 0.000 | 0 | 834642 | 250.0 | 258.2 | |
| 41 Isopropyl alcohol | 45 | 5.319 | 5.333 | -0.014 | 97 | 36499 | 25.0 | 26.2 | |
| 44 Acetonitrile | 41 | 5.529 | 5.529 | 0.000 | 99 | 64494 | 25.0 | 25.7 | |
| 56 Isopropyl ether | 87 | 6.185 | 6.185 | 0.000 | 94 | 96995 | 2.50 | 2.41 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.297 | 6.297 | 0.000 | 90 | 161653 | 2.50 | 2.46 | |
| 59 Tert-butyl ethyl ether | 59 | 6.464 | 6.464 | 0.000 | 96 | 280167 | 2.50 | 2.40 | |
| 60 Ethyl acetate | 43 | 6.576 | 6.590 | -0.014 | 97 | 97520 | 5.00 | 4.98 | |
| 63 Propionitrile | 54 | 6.632 | 6.632 | 0.000 | 99 | 76390 | 25.0 | 25.1 | |
| 66 Methacrylonitrile | 41 | 6.758 | 6.758 | 0.000 | 88 | 312865 | 25.0 | 25.3 | |
| 76 Tert-amyl methyl ether | 73 | 7.344 | 7.358 | -0.014 | 96 | 224320 | 2.50 | 2.33 | |
| 78 n-Butanol | 56 | 7.540 | 7.540 | 0.000 | 86 | 43416 | 62.5 | 59.8 | |
| 81 Methyl methacrylate | 100 | 7.945 | 7.945 | 0.000 | 87 | 27106 | 5.00 | 4.55 | |
| 87 2-Nitropropane | 41 | 8.294 | 8.294 | 0.000 | 96 | 14171 | 5.00 | 4.48 | |
| 99 Tetrahydrothiophene | 60 | | 9.397 | | | | ND | ND | U |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 87 | 17086 | 5.00 | 4.40 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 98 | 439635 | 2.50 | 2.45 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.931 | 0.000 | 97 | 184590 | 2.50 | 2.54 | |

## QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags
U - Marked Undetected

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-Supp A_00033 | Amount Added: | 1.00 | Units: uL |

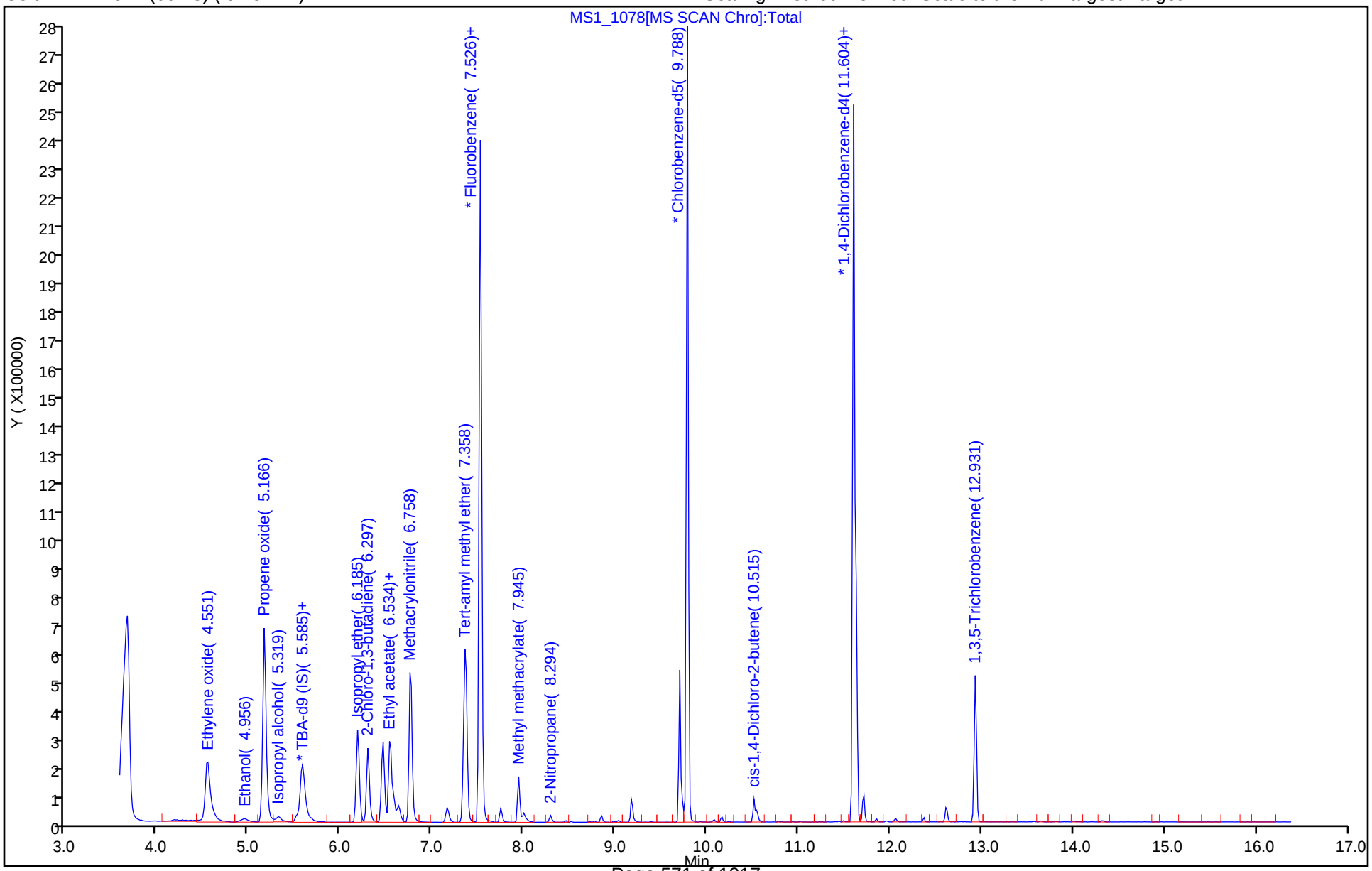
Report Date: 09-Jan-2019 06:42:03 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1078.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 12:52:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 21 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 13 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1079.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jan-2019 13:13:30 ALS Bottle#: 14 Worklist Smp#: 22
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub109

Method: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Jan-2019 06:42:05 Calib Date: 08-Jan-2019 14:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1082.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: wickhamt Date: 09-Jan-2019 06:30:45

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.584 | 5.584 | 0.000 | 68 | 384624 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.526 | 7.526 | 0.000 | 99 | 2282532 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 86 | 462313 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 95 | 628528 | 12.5 | 12.5 | |
| 28 Ethylene oxide | 43 | 4.551 | 4.551 | 0.000 | 98 | 302877 | 500.0 | 581.0 | |
| 34 Ethanol | 45 | 4.928 | 4.942 | -0.014 | 93 | 68501 | 300.0 | 311.4 | |
| 38 Propene oxide | 58 | 5.165 | 5.166 | -0.001 | 0 | 1720495 | 500.0 | 531.0 | |
| 41 Isopropyl alcohol | 45 | 5.319 | 5.333 | -0.014 | 98 | 66357 | 50.0 | 47.0 | |
| 44 Acetonitrile | 41 | 5.529 | 5.529 | 0.000 | 100 | 126755 | 50.0 | 50.5 | |
| 56 Isopropyl ether | 87 | 6.185 | 6.185 | 0.000 | 94 | 208218 | 5.00 | 5.16 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.297 | 6.297 | 0.000 | 89 | 342596 | 5.00 | 5.19 | |
| 59 Tert-butyl ethyl ether | 59 | 6.464 | 6.464 | 0.000 | 97 | 600592 | 5.00 | 5.13 | |
| 60 Ethyl acetate | 43 | 6.576 | 6.590 | -0.014 | 97 | 199828 | 10.0 | 10.2 | |
| 63 Propionitrile | 54 | 6.632 | 6.632 | 0.000 | 99 | 156266 | 50.0 | 51.3 | |
| 66 Methacrylonitrile | 41 | 6.758 | 6.758 | 0.000 | 88 | 649149 | 50.0 | 52.4 | |
| 76 Tert-amyl methyl ether | 73 | 7.344 | 7.358 | -0.014 | 96 | 489019 | 5.00 | 5.06 | |
| 78 n-Butanol | 56 | 7.540 | 7.540 | 0.000 | 85 | 80512 | 125.0 | 119.0 | |
| 81 Methyl methacrylate | 100 | 7.945 | 7.945 | 0.000 | 87 | 59630 | 10.0 | 9.98 | |
| 87 2-Nitropropane | 41 | 8.294 | 8.294 | 0.000 | 98 | 31034 | 10.0 | 9.79 | |
| 99 Tetrahydrothiophene | 60 | | 9.397 | | | | ND | ND | U |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.514 | 10.515 | -0.001 | 85 | 36933 | 10.0 | 9.62 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 98 | 940961 | 5.00 | 5.31 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.931 | 0.000 | 97 | 370236 | 5.00 | 5.15 | |

## QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
U - Marked Undetected

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-Supp A_00033 | Amount Added: | 2.00 | Units: uL |

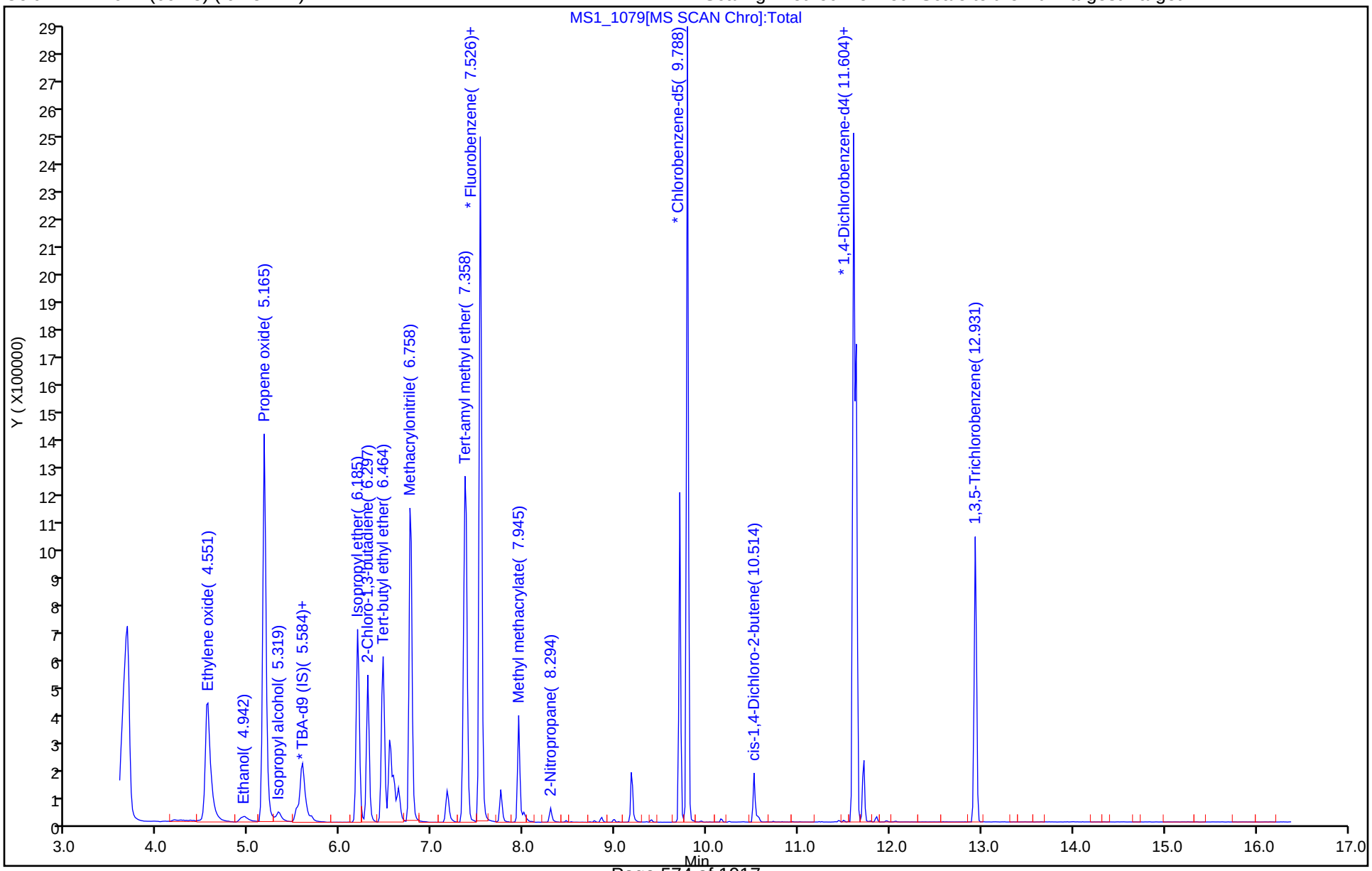
Report Date: 09-Jan-2019 06:42:05 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1079.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 13:13:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 22 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 14 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1080.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jan-2019 13:33:30 ALS Bottle#: 15 Worklist Smp#: 23
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub109

Method: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Jan-2019 06:42:08 Calib Date: 08-Jan-2019 14:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1082.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: wickhamt Date: 09-Jan-2019 06:31:06

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.585 | 5.585 | 0.000 | 68 | 373122 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.526 | 7.526 | 0.000 | 99 | 2311825 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 86 | 466744 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 96 | 638470 | 12.5 | 12.5 | |
| 28 Ethylene oxide | 43 | 4.551 | 4.551 | 0.000 | 98 | 582616 | 1000.0 | 1177.5 | |
| 34 Ethanol | 45 | 4.942 | 4.942 | 0.000 | 98 | 136306 | 600.0 | 638.6 | |
| 38 Propene oxide | 58 | 5.166 | 5.166 | 0.000 | 0 | 3390234 | 1000.0 | 1033.1 | |
| 41 Isopropyl alcohol | 45 | 5.333 | 5.333 | 0.000 | 99 | 136037 | 100.0 | 99.3 | |
| 44 Acetonitrile | 41 | 5.529 | 5.529 | 0.000 | 99 | 245942 | 100.0 | 96.7 | |
| 56 Isopropyl ether | 87 | 6.185 | 6.185 | 0.000 | 95 | 422142 | 10.0 | 10.3 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.297 | 6.297 | 0.000 | 89 | 708645 | 10.0 | 10.6 | |
| 59 Tert-butyl ethyl ether | 59 | 6.464 | 6.464 | 0.000 | 97 | 1205740 | 10.0 | 10.2 | |
| 60 Ethyl acetate | 43 | 6.590 | 6.590 | 0.000 | 98 | 383642 | 20.0 | 19.3 | |
| 63 Propionitrile | 54 | 6.632 | 6.632 | 0.000 | 99 | 307633 | 100.0 | 99.8 | |
| 66 Methacrylonitrile | 41 | 6.758 | 6.758 | 0.000 | 88 | 1276442 | 100.0 | 101.7 | |
| 76 Tert-amyl methyl ether | 73 | 7.358 | 7.358 | 0.000 | 97 | 1005803 | 10.0 | 10.3 | |
| 78 n-Butanol | 56 | 7.540 | 7.540 | 0.000 | 83 | 153764 | 250.0 | 245.3 | |
| 81 Methyl methacrylate | 100 | 7.945 | 7.945 | 0.000 | 87 | 126053 | 20.0 | 20.8 | |
| 87 2-Nitropropane | 41 | 8.294 | 8.294 | 0.000 | 98 | 67477 | 20.0 | 21.0 | |
| 99 Tetrahydrothiophene | 60 | | 9.397 | | | | ND | ND | U |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 83 | 79672 | 20.0 | 20.4 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 98 | 1922556 | 10.0 | 10.7 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.931 | 0.000 | 97 | 767642 | 10.0 | 10.5 | |

## QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags
U - Marked Undetected

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-Supp A_00033 | Amount Added: | 4.00 | Units: uL |

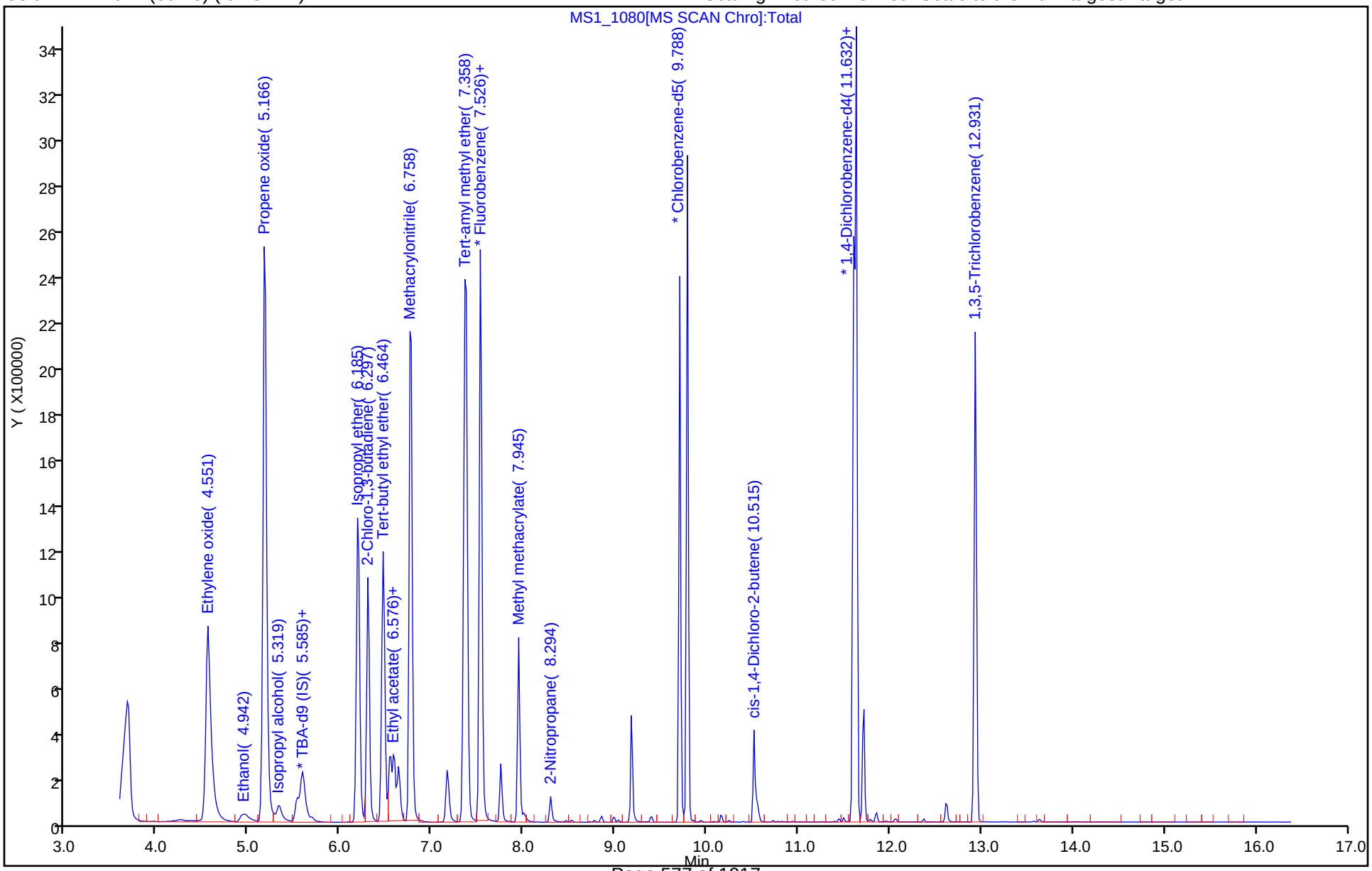
Report Date: 09-Jan-2019 06:42:08 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1080.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 13:33:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 23 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 15 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1081.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jan-2019 13:54:30 ALS Bottle#: 16 Worklist Smp#: 24
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub109

Method: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Jan-2019 06:42:11 Calib Date: 08-Jan-2019 14:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1082.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: wickhamt Date: 09-Jan-2019 06:31:27

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.584 | 5.585 | -0.001 | 68 | 462387 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.526 | 7.526 | 0.000 | 99 | 2547394 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 86 | 513861 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 96 | 729061 | 12.5 | 12.5 | |
| 28 Ethylene oxide | 43 | 4.551 | 4.551 | 0.000 | 98 | 1309879 | 2500.0 | 2488.2 | |
| 34 Ethanol | 45 | 4.942 | 4.942 | 0.000 | 100 | 363447 | 1500.0 | 1374.1 | |
| 38 Propene oxide | 58 | 5.165 | 5.166 | -0.001 | 0 | 8827109 | 2500.0 | 2441.1 | |
| 41 Isopropyl alcohol | 45 | 5.333 | 5.333 | 0.000 | 99 | 379605 | 250.0 | 223.7 | |
| 44 Acetonitrile | 41 | 5.529 | 5.529 | -0.001 | 99 | 632086 | 250.0 | 225.4 | |
| 56 Isopropyl ether | 87 | 6.185 | 6.185 | 0.000 | 94 | 1111224 | 25.0 | 24.7 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.297 | 6.297 | 0.000 | 89 | 1818368 | 25.0 | 24.7 | |
| 59 Tert-butyl ethyl ether | 59 | 6.464 | 6.464 | 0.000 | 97 | 3303441 | 25.0 | 25.3 | |
| 60 Ethyl acetate | 43 | 6.576 | 6.590 | -0.014 | 98 | 1040349 | 50.0 | 47.5 | |
| 63 Propionitrile | 54 | 6.632 | 6.632 | 0.000 | 99 | 830627 | 250.0 | 244.5 | |
| 66 Methacrylonitrile | 41 | 6.758 | 6.758 | 0.000 | 88 | 3346408 | 250.0 | 242.0 | |
| 76 Tert-amyl methyl ether | 73 | 7.358 | 7.358 | 0.000 | 98 | 2798986 | 25.0 | 26.0 | |
| 78 n-Butanol | 56 | 7.540 | 7.540 | 0.000 | 84 | 462965 | 625.0 | 612.1 | |
| 81 Methyl methacrylate | 100 | 7.945 | 7.945 | 0.000 | 87 | 366669 | 50.0 | 55.0 | |
| 87 2-Nitropropane | 41 | 8.294 | 8.294 | 0.000 | 98 | 191997 | 50.0 | 54.3 | |
| 99 Tetrahydrothiophene | 60 | | 9.397 | | | | ND | ND | U |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.514 | 10.515 | -0.001 | 79 | 240511 | 50.0 | 54.0 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 98 | 5008297 | 25.0 | 24.4 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.931 | 0.000 | 97 | 1979598 | 25.0 | 23.8 | |

## QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
U - Marked Undetected

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-Supp A_00033 | Amount Added: | 10.00 | Units: uL |

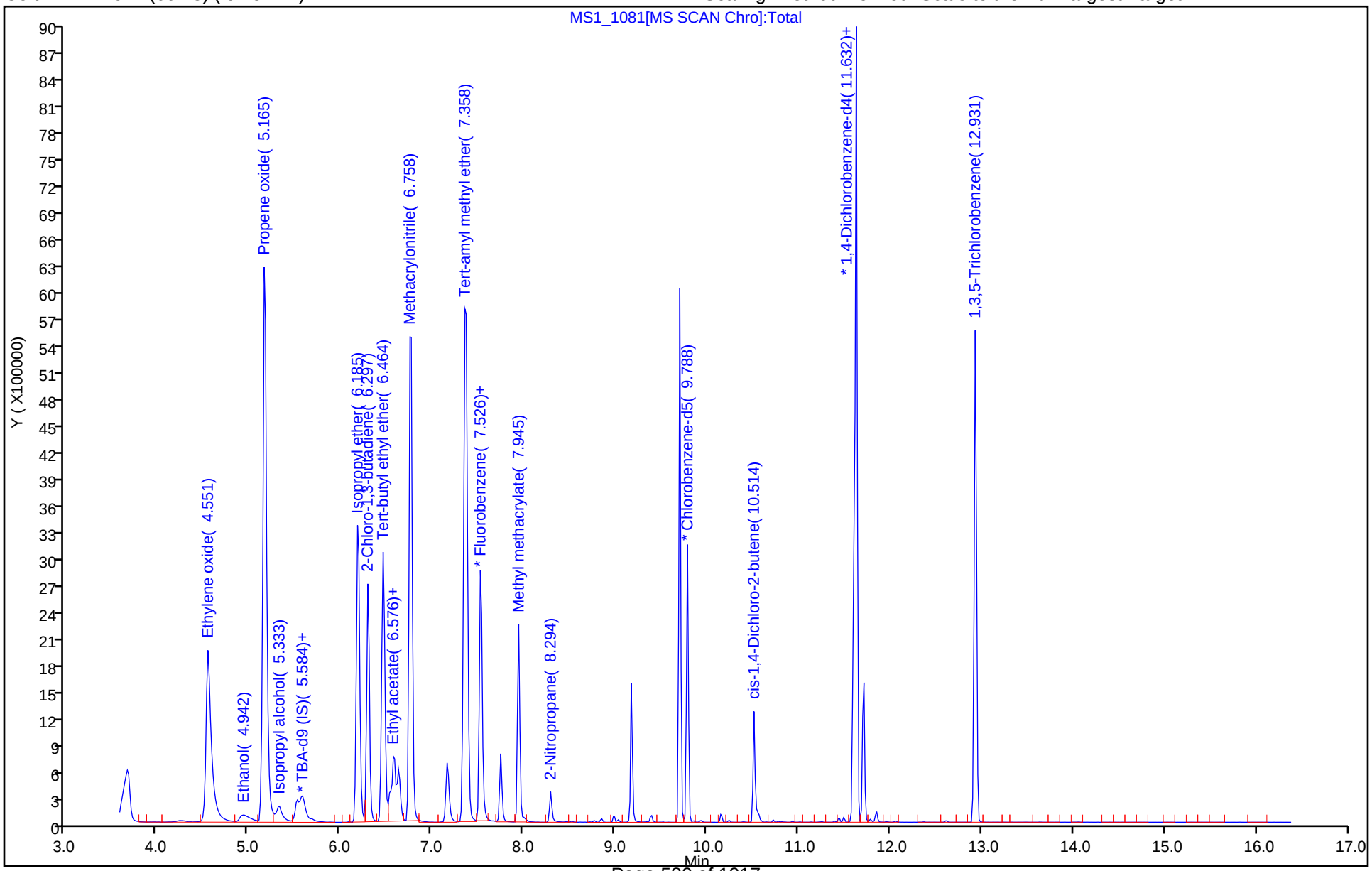
Report Date: 09-Jan-2019 06:42:11 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1081.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 13:54:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 24 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 16 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1082.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 08-Jan-2019 14:14:30 ALS Bottle#: 17 Worklist Smp#: 25
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub109

Method: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Jan-2019 06:42:14 Calib Date: 08-Jan-2019 14:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1082.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: wickhamt Date: 09-Jan-2019 06:31:49

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.584 | 5.585 | -0.001 | 69 | 418493 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.526 | 7.526 | 0.000 | 98 | 2515736 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 86 | 508975 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 96 | 710019 | 12.5 | 12.5 | |
| 28 Ethylene oxide | 43 | 4.537 | 4.551 | -0.014 | 99 | 2950906 | 6000.0 | 5781.4 | |
| 34 Ethanol | 45 | 4.914 | 4.942 | -0.028 | 99 | 851566 | 3600.0 | 3557.3 | |
| 38 Propene oxide | 58 | 5.166 | 5.166 | 0.000 | 0 | 17350846 | 6000.0 | 4858.6 | |
| 41 Isopropyl alcohol | 45 | 5.319 | 5.333 | -0.014 | 100 | 853742 | 600.0 | 555.8 | |
| 44 Acetonitrile | 41 | 5.515 | 5.529 | -0.014 | 99 | 1465081 | 600.0 | 529.1 | |
| 56 Isopropyl ether | 87 | 6.185 | 6.185 | 0.000 | 94 | 2717578 | 60.0 | 61.1 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.297 | 6.297 | 0.000 | 89 | 4285925 | 60.0 | 58.9 | |
| 59 Tert-butyl ethyl ether | 59 | 6.464 | 6.464 | 0.000 | 96 | 7759960 | 60.0 | 60.2 | |
| 60 Ethyl acetate | 43 | 6.576 | 6.590 | -0.014 | 98 | 2361886 | 120.0 | 109.2 | |
| 63 Propionitrile | 54 | 6.632 | 6.632 | 0.000 | 99 | 1893250 | 600.0 | 564.2 | |
| 66 Methacrylonitrile | 41 | 6.758 | 6.758 | 0.000 | 86 | 7289084 | 600.0 | 533.7 | |
| 76 Tert-amyl methyl ether | 73 | 7.344 | 7.358 | -0.014 | 98 | 6683287 | 60.0 | 62.7 | |
| 78 n-Butanol | 56 | 7.540 | 7.540 | 0.000 | 83 | 1118938 | 1500.0 | 1653.3 | |
| 81 Methyl methacrylate | 100 | 7.945 | 7.945 | 0.000 | 86 | 879328 | 120.0 | 133.6 | |
| 87 2-Nitropropane | 41 | 8.294 | 8.294 | 0.000 | 97 | 475461 | 120.0 | 136.1 | |
| 99 Tetrahydrothiophene | 60 | | 9.397 | | | | ND | ND | U |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 77 | 582954 | 120.0 | 134.4 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 97 | 11543777 | 60.0 | 57.7 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.931 | 0.000 | 97 | 4698114 | 60.0 | 57.9 | |

## QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags
U - Marked Undetected

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-Supp A_00033 | Amount Added: | 24.00 | Units: uL |

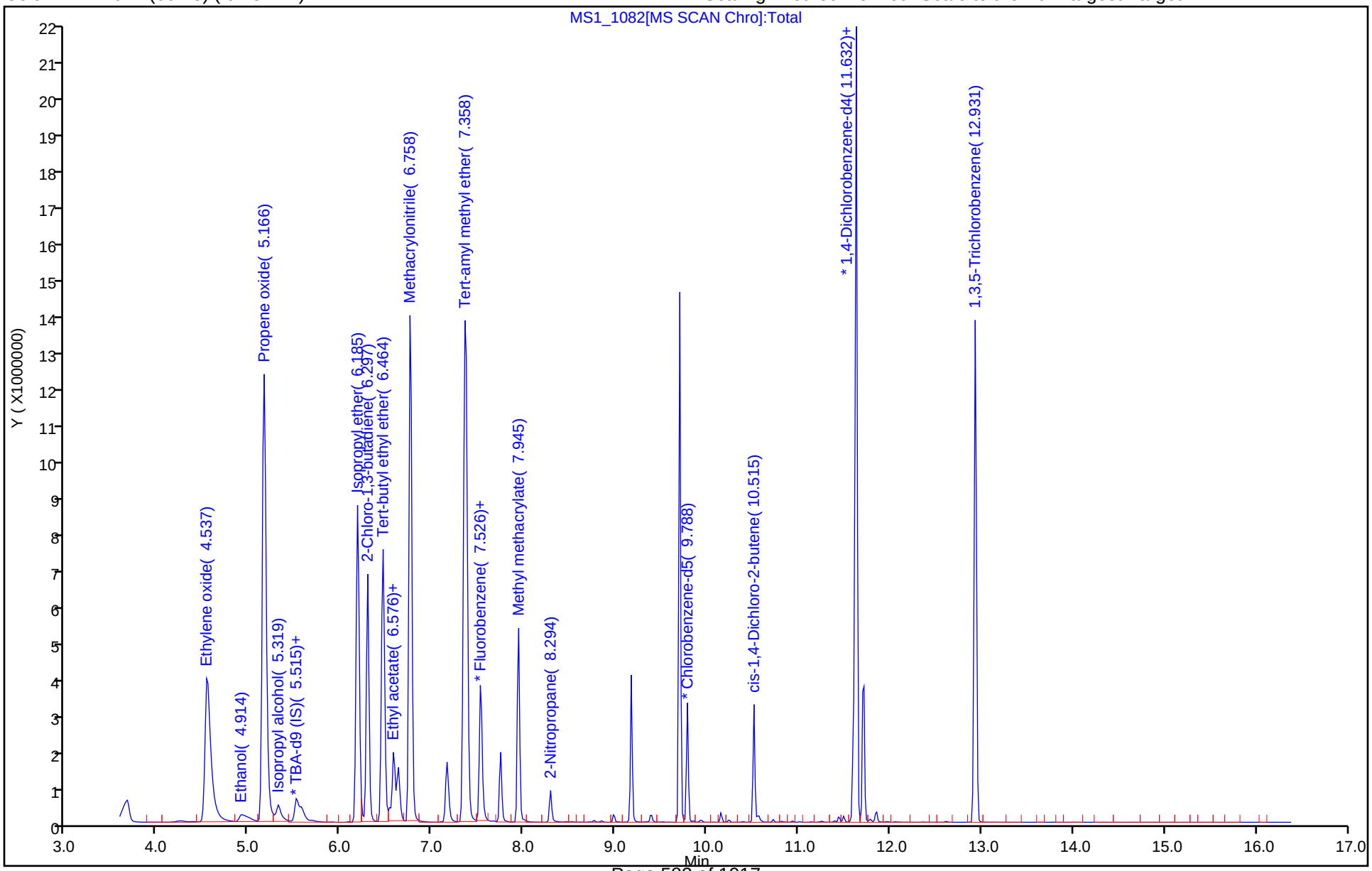
Report Date: 09-Jan-2019 06:42:14 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1082.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 14:14:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 25 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 17 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 444687

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2019 11:48 Calibration End Date: 01/18/2019 13:52 Calibration ID: 34948

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD 280-444687/12 | MS1_1421.D |
| Level 2 | STD 280-444687/13 | MS1_1422.D |
| Level 3 | STD 280-444687/14 | MS1_1423.D |
| Level 4 | STD 280-444687/15 | MS1_1424.D |
| Level 5 | ICIS 280-444687/16 | MS1_1425.D |
| Level 6 | STD 280-444687/17 | MS1_1426.D |
| Level 7 | STD 280-444687/18 | MS1_1427.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Dichlorodifluoromethane | 0.3052<br>0.3740 | 0.2880<br>0.3696 | 0.3254 | 0.4538 | 0.4541 | Lin1 | -0.029 | 0.3826 | | | | | | | 0.9920 | | 0.9900 |
| Chloromethane | 0.2626<br>0.2068 | 0.2168<br>0.2050 | 0.2195 | 0.2426 | 0.2434 | Ave | | 0.2281 | | | 0.1000 | 9.5 | | 15.0 | | | |
| Vinyl chloride | 0.2440<br>0.2166 | 0.2364<br>0.2081 | 0.2309 | 0.2625 | 0.2641 | Ave | | 0.2375 | | | | 9.0 | | 30.0 | | | |
| Bromomethane | 0.2817<br>0.2672 | 0.2828<br>0.2156 | 0.2885 | 0.3189 | 0.3274 | Ave | | 0.2831 | | | | 13.0 | | 15.0 | | | |
| Chloroethane | 0.2409<br>0.2086 | 0.2250<br>0.1746 | 0.2341 | 0.2475 | 0.2537 | Ave | | 0.2263 | | | | 12.0 | | 15.0 | | | |
| Dichlorofluoromethane | 0.5221<br>0.4950 | 0.5250<br>0.4834 | 0.5391 | 0.5783 | 0.5870 | Ave | | 0.5328 | | | | 7.3 | | 15.0 | | | |
| Trichlorofluoromethane | 0.4477<br>0.4362 | 0.4703<br>0.4327 | 0.4689 | 0.5204 | 0.5292 | Ave | | 0.4722 | | | | 8.2 | | 15.0 | | | |
| Ethyl ether | 0.1504<br>0.1558 | 0.1489<br>0.1570 | 0.1561 | 0.1681 | 0.1745 | Ave | | 0.1587 | | | | 5.9 | | 15.0 | | | |
| Acrolein | 0.0157<br>0.0147 | 0.0150<br>0.0145 | 0.0150 | 0.0167 | 0.0168 | Ave | | 0.0155 | | | | 6.1 | | 15.0 | | | |
| Acetone | 0.0367<br>0.0246 | 0.0278<br>0.0239 | 0.0284 | 0.0288 | 0.0274 | Ave | | 0.0282 | | | | 14.8 | | 15.0 | | | |
| 1,1,2-Trichlorotrifluoroethane | 0.2270<br>0.2306 | 0.2306<br>0.2252 | 0.2373 | 0.2551 | 0.2640 | Ave | | 0.2385 | | | | 6.3 | | 15.0 | | | |
| 1,1-Dichloroethene | 0.2747<br>0.2777 | 0.2745<br>0.2698 | 0.2846 | 0.3106 | 0.3170 | Ave | | 0.2870 | | | | 6.6 | | 30.0 | | | |
| Iodomethane | 0.4765<br>0.4910 | 0.4910<br>0.4832 | 0.5038 | 0.5481 | 0.5655 | Ave | | 0.5084 | | | | 6.8 | | 15.0 | | | |
| Methyl acetate | 0.0984<br>0.0685 | 0.0694<br>0.0686 | 0.0697 | 0.0742 | 0.0777 | Ave | | 0.0752 | | | | 14.3 | | 15.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 444687

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2019 11:48 Calibration End Date: 01/18/2019 13:52 Calibration ID: 34948

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Allyl chloride | 0.3874<br>0.3648 | 0.3944<br>0.3395 | 0.3995 | 0.4244 | 0.4252 | Ave | | 0.3907 | | | | 7.9 | | 15.0 | | | |
| Carbon disulfide | 1.2644<br>1.1247 | 1.2251<br>1.0326 | 1.2173 | 1.3055 | 1.3248 | Ave | | 1.2135 | | | | 8.5 | | 15.0 | | | |
| Tert-butyl alcohol<br>(2-methyl-2-propanol) | 1.3577<br>1.3822 | 1.3108<br>1.3522 | 1.4443 | 1.5161 | 1.4743 | Ave | | 1.4053 | | | | 5.3 | | 15.0 | | | |
| Methylene Chloride | 0.3857<br>0.2811 | 0.3383<br>0.2751 | 0.3144 | 0.3166 | 0.3227 | Ave | | 0.3191 | | | | 11.6 | | 15.0 | | | |
| Acrylonitrile | 0.0377<br>0.0365 | 0.0367<br>0.0361 | 0.0376 | 0.0404 | 0.0419 | Ave | | 0.0381 | | | | 5.8 | | 15.0 | | | |
| Methyl tert-butyl ether | 0.5257<br>0.5185 | 0.5261<br>0.5122 | 0.5358 | 0.5726 | 0.5943 | Ave | | 0.5408 | | | | 5.7 | | 15.0 | | | |
| trans-1,2-Dichloroethene | 0.3134<br>0.3119 | 0.3160<br>0.3049 | 0.3260 | 0.3485 | 0.3557 | Ave | | 0.3252 | | | | 6.0 | | 15.0 | | | |
| Hexane | 2.0167<br>1.8657 | 2.0110<br>1.7281 | 2.0056 | 2.1578 | 2.1422 | Ave | | 1.9896 | | | | 7.6 | | 15.0 | | | |
| Vinyl acetate | 0.2308<br>0.2244 | 0.2265<br>0.2085 | 0.2241 | 0.2465 | 0.2596 | Ave | | 0.2315 | | | | 7.2 | | 15.0 | | | |
| 1,1-Dichloroethane | 0.4797<br>0.4716 | 0.4844<br>0.4543 | 0.4984 | 0.5316 | 0.5460 | Ave | | 0.4951 | | | 0.1000 | 6.6 | | 15.0 | | | |
| 2-Butanone (MEK) | +++++<br>0.0481 | 0.0553<br>0.0481 | 0.0512 | 0.0537 | 0.0548 | Ave | | 0.0519 | | | | 6.3 | | 15.0 | | | |
| sec-Butyl Alcohol | 0.9782<br>0.9865 | 0.9326<br>0.9439 | 1.0008 | 1.0651 | 1.0671 | Ave | | 0.9963 | | | | 5.3 | | 15.0 | | | |
| cis-1,2-Dichloroethene | 0.3394<br>0.3391 | 0.3389<br>0.3328 | 0.3521 | 0.3741 | 0.3859 | Ave | | 0.3518 | | | | 5.8 | | 15.0 | | | |
| 2,2-Dichloropropane | 0.4556<br>0.3933 | 0.4387<br>0.3797 | 0.4390 | 0.4550 | 0.4609 | Ave | | 0.4318 | | | | 7.5 | | 15.0 | | | |
| Chlorobromomethane | 0.1284<br>0.1282 | 0.1251<br>0.1293 | 0.1273 | 0.1380 | 0.1453 | Ave | | 0.1317 | | | | 5.5 | | 15.0 | | | |
| Chloroform | 0.4817<br>0.4730 | 0.4729<br>0.4558 | 0.4953 | 0.5248 | 0.5406 | Ave | | 0.4920 | | | | 6.2 | | 30.0 | | | |
| Tetrahydrofuran | 0.0397<br>0.0277 | 0.0406<br>0.0280 | 0.0284 | 0.0310 | 0.0319 | Lin1 | 0.0163 | 0.0281 | | | | | | | 0.9980 | | 0.9900 |
| Isobutyl alcohol | 0.3935<br>0.3639 | 0.3198<br>0.3550 | 0.3538 | 0.3782 | 0.3827 | Ave | | 0.3638 | | | | 6.7 | | 15.0 | | | |
| 1,1,1-Trichloroethane | 0.4472<br>0.4412 | 0.4561<br>0.4300 | 0.4651 | 0.4968 | 0.5082 | Ave | | 0.4635 | | | | 6.3 | | 15.0 | | | |
| Cyclohexane | 0.5049<br>0.4943 | 0.5392<br>0.4574 | 0.5429 | 0.5626 | 0.5820 | Ave | | 0.5262 | | | | 8.2 | | 15.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 444687

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2019 11:48 Calibration End Date: 01/18/2019 13:52 Calibration ID: 34948

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| 1,1-Dichloropropene | 0.4067<br>0.3968 | 0.4169<br>0.3770 | 0.4234 | 0.4492 | 0.4588 | Ave | | 0.4184 | | | | 6.8 | | 15.0 | | | |
| Carbon tetrachloride | 0.3774<br>0.3840 | 0.3915<br>0.3728 | 0.4011 | 0.4249 | 0.4411 | Ave | | 0.3990 | | | | 6.4 | | 15.0 | | | |
| 1,2-Dichloroethane | 0.2420<br>0.2406 | 0.2400<br>0.2364 | 0.2468 | 0.2659 | 0.2754 | Ave | | 0.2496 | | | | 6.0 | | 15.0 | | | |
| Benzene | 1.2287<br>1.1553 | 1.2213<br>1.0415 | 1.2527 | 1.3227 | 1.3446 | Ave | | 1.2238 | | | | 8.4 | | 15.0 | | | |
| n-Heptane | 0.3915<br>0.3793 | 0.4068<br>0.3425 | 0.4083 | 0.4354 | 0.4446 | Ave | | 0.4012 | | | | 8.6 | | 15.0 | | | |
| Trichloroethene | 0.3171<br>0.3125 | 0.3112<br>0.3053 | 0.3248 | 0.3427 | 0.3514 | Ave | | 0.3236 | | | | 5.3 | | 15.0 | | | |
| 2-Pentanone | 0.0668<br>0.0688 | 0.0670<br>0.0680 | 0.0698 | 0.0740 | 0.0774 | Ave | | 0.0703 | | | | 5.7 | | 15.0 | | | |
| 1,2-Dichloropropane | 0.2685<br>0.2602 | 0.2645<br>0.2536 | 0.2724 | 0.2866 | 0.2971 | Ave | | 0.2718 | | | | 5.6 | | 30.0 | | | |
| Methylcyclohexane | 0.4116<br>0.3983 | 0.4153<br>0.3682 | 0.4272 | 0.4520 | 0.4660 | Ave | | 0.4198 | | | | 7.8 | | 15.0 | | | |
| 1,4-Dioxane | 0.0010<br>0.0012 | 0.0013<br>0.0012 | 0.0013 | 0.0014 | 0.0014 | Ave | | 0.0013 | | | | 12.3 | | 15.0 | | | |
| Dibromomethane | 0.1137<br>0.1186 | 0.1147<br>0.1198 | 0.1205 | 0.1278 | 0.1333 | Ave | | 0.1212 | | | | 5.8 | | 15.0 | | | |
| Dichlorobromomethane | 0.3190<br>0.3283 | 0.3177<br>0.3249 | 0.3345 | 0.3515 | 0.3702 | Ave | | 0.3352 | | | | 5.7 | | 15.0 | | | |
| 2-Chloroethyl vinyl ether | 0.0632<br>0.0788 | 0.0654<br>0.0836 | 0.0712 | 0.0766 | 0.0829 | Ave | | 0.0745 | | | | 10.9 | | 15.0 | | | |
| cis-1,3-Dichloropropene | 1.6720<br>1.7156 | 1.6823<br>1.6638 | 1.7739 | 1.9012 | 1.9084 | Ave | | 1.7596 | | | | 6.0 | | 15.0 | | | |
| 4-Methyl-2-pentanone (MIBK) | 0.0968<br>0.0963 | 0.0976<br>0.0931 | 0.0999 | 0.1068 | 0.1110 | Ave | | 0.1002 | | | | 6.4 | | 15.0 | | | |
| Toluene | 1.3209<br>1.2061 | 1.3094<br>0.9987 | 1.3363 | 1.3992 | 1.4212 | Ave | | 1.2845 | | | | 11.2 | | 30.0 | | | |
| Ethyl methacrylate | 0.9758<br>0.9306 | 0.9308<br>0.9232 | 0.9723 | 1.0169 | 1.0549 | Ave | | 0.9721 | | | | 5.1 | | 15.0 | | | |
| trans-1,3-Dichloropropene | 0.2920<br>0.3050 | 0.2961<br>0.2992 | 0.3074 | 0.3320 | 0.3474 | Ave | | 0.3113 | | | | 6.6 | | 15.0 | | | |
| 1,1,2-Trichloroethane | 0.1648<br>0.1696 | 0.1676<br>0.1717 | 0.1710 | 0.1827 | 0.1911 | Ave | | 0.1741 | | | | 5.4 | | 15.0 | | | |
| 2-Hexanone | 0.2981<br>0.2903 | 0.2909<br>0.2794 | 0.3035 | 0.3223 | 0.3205 | Ave | | 0.3007 | | | | 5.3 | | 15.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 444687

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2019 11:48 Calibration End Date: 01/18/2019 13:52 Calibration ID: 34948

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| 1,3-Dichloropropane | 1.2620<br>1.2820 | 1.2859<br>1.2526 | 1.3277 | 1.4124 | 1.4364 | Ave | | 1.3227 | | | | 5.6 | | 15.0 | | | |
| Tetrachloroethene | 1.1768<br>1.1653 | 1.1819<br>1.1204 | 1.2301 | 1.2976 | 1.3035 | Ave | | 1.2108 | | | | 5.7 | | 15.0 | | | |
| Chlorodibromomethane | 0.8602<br>0.9404 | 0.8687<br>0.9518 | 0.9074 | 0.9932 | 1.0215 | Ave | | 0.9347 | | | | 6.5 | | 15.0 | | | |
| 1,2-Dibromoethane | 0.6699<br>0.7140 | 0.6907<br>0.7260 | 0.7145 | 0.7741 | 0.7924 | Ave | | 0.7259 | | | | 6.0 | | 15.0 | | | |
| 1-Chlorohexane | 1.9971<br>1.9385 | 2.0164<br>1.8036 | 2.0582 | 2.1760 | 2.1948 | Ave | | 2.0264 | | | | 6.7 | | 15.0 | | | |
| Chlorobenzene | 3.6158<br>3.4750 | 3.6096<br>3.1500 | 3.7615 | 3.9470 | 3.9663 | Ave | | 3.6465 | | | 0.3000 | 7.8 | | 15.0 | | | |
| 1,1,1,2-Tetrachloroethane | 1.1387<br>1.2123 | 1.1599<br>1.1556 | 1.2166 | 1.3005 | 1.3406 | Ave | | 1.2177 | | | | 6.3 | | 15.0 | | | |
| Ethylbenzene | 2.1034<br>2.1097 | 2.1324<br>1.8899 | 2.2251 | 2.3258 | 2.3567 | Ave | | 2.1633 | | | | 7.3 | | 30.0 | | | |
| m-Xylene & p-Xylene | 2.6724<br>2.5605 | 2.5883<br>2.3510 | 2.7190 | 2.8477 | 2.8995 | Ave | | 2.6626 | | | | 7.0 | | 15.0 | | | |
| o-Xylene | 2.4865<br>2.4326 | 2.5095<br>2.1205 | 2.6212 | 2.7465 | 2.8035 | Ave | | 2.5315 | | | | 9.0 | | 15.0 | | | |
| Styrene | 3.9025<br>3.8460 | 3.9799<br>3.2372 | 4.1218 | 4.3716 | 4.4621 | Ave | | 3.9887 | | | | 10.1 | | 15.0 | | | |
| Bromoform | 0.4246<br>0.5059 | 0.4500<br>0.5313 | 0.4668 | 0.5153 | 0.5488 | Ave | | 0.4918 | | | 0.1000 | 9.3 | | 15.0 | | | |
| Isopropylbenzene | +++++<br>3.8657 | 4.3905<br>2.8358 | 4.5817 | 4.7412 | 4.7356 | Qua | 0.8154 | 4.6662 | -0.030787 | | | | | | 0.9990 | | 0.9900 |
| Cyclohexanone | +++++<br>0.0311 | 0.0272<br>0.0296 | 0.0345 | 0.0373 | 0.0341 | Ave | | 0.0323 | | | | 11.3 | | 15.0 | | | |
| 1,1,2,2-Tetrachloroethane | 0.5151<br>0.5120 | 0.5007<br>0.5191 | 0.5264 | 0.5727 | 0.5855 | Ave | | 0.5331 | | | 0.3000 | 6.1 | | 15.0 | | | |
| trans-1,4-Dichloro-2-butene | 0.1159<br>0.1119 | 0.1109<br>0.1141 | 0.1085 | 0.1258 | 0.1282 | Ave | | 0.1165 | | | | 6.5 | | 15.0 | | | |
| 1,2,3-Trichloropropane | 0.1328<br>0.1471 | 0.1468<br>0.1525 | 0.1524 | 0.1602 | 0.1681 | Ave | | 0.1514 | | | | 7.4 | | 15.0 | | | |
| Bromobenzene | 0.9111<br>0.9368 | 0.9195<br>0.8963 | 0.9789 | 1.0259 | 1.0633 | Ave | | 0.9617 | | | | 6.6 | | 15.0 | | | |
| N-Propylbenzene | 1.2165<br>1.1951 | 1.2103<br>1.1043 | 1.2782 | 1.3497 | 1.3797 | Ave | | 1.2477 | | | | 7.6 | | 15.0 | | | |
| 1,3,5-Trimethylbenzene | 3.5892<br>3.2868 | 3.5521<br>2.6972 | 3.7335 | 3.9005 | 3.9876 | Ave | | 3.5353 | | | | 12.4 | | 15.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 444687

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2019 11:48 Calibration End Date: 01/18/2019 13:52 Calibration ID: 34948

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| 2-Chlorotoluene | 1.0021<br>0.9803 | 1.0221<br>0.8834 | 1.0486 | 1.1071 | 1.1328 | Ave | | 1.0252 | | | | 8.1 | | 15.0 | | | |
| 4-Chlorotoluene | 1.0010<br>0.9966 | 1.0089<br>0.9507 | 1.0634 | 1.1021 | 1.1546 | Ave | | 1.0396 | | | | 6.8 | | 15.0 | | | |
| tert-Butylbenzene | 3.6082<br>3.4192 | 3.5977<br>2.9390 | 3.7953 | 3.9284 | 4.0340 | Ave | | 3.6174 | | | | 10.1 | | 15.0 | | | |
| 1,2,4-Trimethylbenzene | 3.6109<br>3.3576 | 3.6078<br>2.7169 | 3.7900 | 3.9522 | 4.0332 | Ave | | 3.5812 | | | | 12.4 | | 15.0 | | | |
| sec-Butylbenzene | 0.9856<br>0.9855 | 1.0155<br>0.9309 | 1.0439 | 1.1101 | 1.1396 | Ave | | 1.0302 | | | | 7.2 | | 15.0 | | | |
| 4-Isopropyltoluene | 4.0509<br>3.6765 | 4.0957<br>2.7730 | 4.2538 | 4.4301 | 4.5317 | Qua | 0.4378 | 4.4260 | -0.027734 | | | | | | 0.9990 | | 0.9900 |
| 1,3-Dichlorobenzene | 1.9267<br>1.8397 | 1.9205<br>1.7192 | 2.0063 | 2.0874 | 2.1583 | Ave | | 1.9512 | | | | 7.6 | | 15.0 | | | |
| 1,4-Dichlorobenzene | 1.9464<br>1.8257 | 1.9132<br>1.7066 | 1.9876 | 2.0731 | 2.1311 | Ave | | 1.9405 | | | | 7.4 | | 15.0 | | | |
| n-Butylbenzene | 3.6587<br>3.3528 | 3.7008<br>2.6758 | 3.8661 | 3.9761 | 4.1020 | Ave | | 3.6189 | | | | 13.3 | | 15.0 | | | |
| 1,2-Dichlorobenzene | 1.6408<br>1.5954 | 1.6259<br>1.5293 | 1.6931 | 1.7885 | 1.8530 | Ave | | 1.6751 | | | | 6.7 | | 15.0 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0806<br>0.1000 | 0.0869<br>0.1049 | 0.0963 | 0.1048 | 0.1117 | Ave | | 0.0979 | | | | 11.1 | | 15.0 | | | |
| 1,2,4-Trichlorobenzene | 1.1882<br>1.1859 | 1.1574<br>1.1863 | 1.2404 | 1.3006 | 1.3999 | Ave | | 1.2370 | | | | 7.0 | | 15.0 | | | |
| Hexachlorobutadiene | 0.7439<br>0.7463 | 0.7430<br>0.7434 | 0.7949 | 0.8266 | 0.8822 | Ave | | 0.7829 | | | | 7.0 | | 15.0 | | | |
| Naphthalene | 1.7846<br>1.7841 | 1.7485<br>1.8029 | 1.8273 | 1.9974 | 2.1293 | Ave | | 1.8677 | | | | 7.5 | | 15.0 | | | |
| 1,2,3-Trichlorobenzene | 0.9441<br>0.9541 | 0.9460<br>0.9717 | 0.9949 | 1.0561 | 1.1464 | Ave | | 1.0019 | | | | 7.5 | | 15.0 | | | |
| Dibromofluoromethane (Surr) | +++++<br>0.2512 | 0.2613<br>0.2552 | 0.2590 | 0.2701 | 0.2813 | Ave | | 0.2630 | | | | 4.2 | | 15.0 | | | |
| 1,2-Dichloroethane-d4 (Surr) | +++++<br>0.1929 | 0.2114<br>0.1964 | 0.2007 | 0.2121 | 0.2188 | Ave | | 0.2054 | | | | 5.0 | | 15.0 | | | |
| Toluene-d8 (Surr) | +++++<br>4.2521 | 5.0018<br>3.8609 | 4.9734 | 4.9750 | 4.9865 | Ave | | 4.6749 | | | | 10.6 | | 15.0 | | | |
| 4-Bromofluorobenzene (Surr) | +++++<br>0.9856 | 1.1439<br>0.9827 | 1.0752 | 1.1024 | 1.1328 | Ave | | 1.0704 | | | | 6.6 | | 15.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 444687

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2019 11:48 Calibration End Date: 01/18/2019 13:52 Calibration ID: 34948

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD 280-444687/12 | MS1_1421.D |
| Level 2 | STD 280-444687/13 | MS1_1422.D |
| Level 3 | STD 280-444687/14 | MS1_1423.D |
| Level 4 | STD 280-444687/15 | MS1_1424.D |
| Level 5 | ICIS 280-444687/16 | MS1_1425.D |
| Level 6 | STD 280-444687/17 | MS1_1426.D |
| Level 7 | STD 280-444687/18 | MS1_1427.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Dichlorodifluoromethane | FB | Lin1 | 42506<br>2755734 | 81000<br>6166967 | 226645 | 617482 | 1171966 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Chloromethane | FB | Ave | 36572<br>1524004 | 60980<br>3421101 | 152857 | 330166 | 628325 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Vinyl chloride | FB | Ave | 33991<br>1596019 | 66500<br>3472179 | 160837 | 357201 | 681643 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Bromomethane | FB | Ave | 39238<br>1968771 | 79534<br>3596940 | 200925 | 433937 | 845059 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Chloroethane | FB | Ave | 33548<br>1536922 | 63280<br>2913143 | 163041 | 336778 | 654681 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Dichlorofluoromethane | FB | Ave | 72728<br>3647134 | 147672<br>8064893 | 375483 | 786920 | 1514981 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Trichlorofluoromethane | FB | Ave | 62359<br>3214343 | 132301<br>7219290 | 326600 | 708084 | 1365881 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Ethyl ether | FB | Ave | 20955<br>1148307 | 41880<br>2619692 | 108706 | 228735 | 450400 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Acrolein | FB | Ave | 21897<br>1083086 | 42270<br>2424818 | 104834 | 227935 | 434014 | 5.00<br>250 | 10.0<br>600 | 25.0 | 50.0 | 100 |
| Acetone | FB | Ave | 20458<br>724562 | 31272<br>1597385 | 79094 | 156501 | 282912 | 2.00<br>100 | 4.00<br>240 | 10.0 | 20.0 | 40.0 |
| 1,1,2-Trichlorotrifluoroethane | FB | Ave | 31619<br>1699288 | 64851<br>3757398 | 165261 | 347160 | 681313 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,1-Dichloroethene | FB | Ave | 38258<br>2046414 | 77225<br>4500944 | 198198 | 422593 | 818273 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Iodomethane | FB | Ave | 66370<br>3617706 | 138103<br>8061514 | 350930 | 745744 | 1459534 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Methyl acetate | FB | Ave | 27412<br>1009810 | 39047<br>2289449 | 97080 | 201795 | 401302 | 1.00<br>50.0 | 2.00<br>120 | 5.00 | 10.0 | 20.0 |
| Allyl chloride | FB | Ave | 53954<br>2688245 | 110924<br>5664648 | 278279 | 577462 | 1097527 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 444687

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2019 11:48 Calibration End Date: 01/18/2019 13:52 Calibration ID: 34948

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Carbon disulfide | FB | Ave | 176111<br>8287243 | 344607<br>17228126 | 847862 | 1776366 | 3419341 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Tert-butyl alcohol (2-methyl-2-propanol) | TBAd9 | Ave | 16891<br>869689 | 33829<br>1987739 | 86065 | 180533 | 345121 | 5.00<br>250 | 10.0<br>600 | 25.0 | 50.0 | 100 |
| Methylene Chloride | FB | Ave | 53718<br>2071405 | 95166<br>4589531 | 219009 | 430812 | 832794 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Acrylonitrile | FB | Ave | 52463<br>2689827 | 103219<br>6018440 | 261579 | 550005 | 1081364 | 5.00<br>250 | 10.0<br>600 | 25.0 | 50.0 | 100 |
| Methyl tert-butyl ether | FB | Ave | 73230<br>3820736 | 147977<br>8545378 | 373196 | 779088 | 1533979 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| trans-1,2-Dichloroethene | FB | Ave | 43656<br>2298004 | 88872<br>5086564 | 227067 | 474238 | 918029 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Hexane | CBNZ d5 | Ave | 63029<br>3119695 | 127282<br>6585828 | 313434 | 656431 | 1268896 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Vinyl acetate | FB | Ave | 64289<br>3306095 | 127433<br>6958320 | 312175 | 670735 | 1339954 | 1.00<br>50.0 | 2.00<br>120 | 5.00 | 10.0 | 20.0 |
| 1,1-Dichloroethane | FB | Ave | 66813<br>3474463 | 136254<br>7580767 | 347127 | 723273 | 1409113 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 2-Butanone (MEK) | FB | Ave | +++++<br>1418529 | 62195<br>3206890 | 142529 | 292072 | 566227 | +++++<br>100 | 4.00<br>240 | 10.0 | 20.0 | 40.0 |
| sec-Butyl Alcohol | TBAd9 | Ave | 36512<br>1862088 | 72203<br>4162502 | 178911 | 380489 | 749412 | 15.0<br>750 | 30.0<br>1800 | 75.0 | 150 | 300 |
| cis-1,2-Dichloroethene | FB | Ave | 47270<br>2498241 | 95336<br>5552817 | 245234 | 509057 | 996019 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 2,2-Dichloropropane | FB | Ave | 63463<br>2898201 | 123409<br>6334823 | 305762 | 619089 | 1189653 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Chlorobromomethane | FB | Ave | 17879<br>944402 | 35184<br>2157417 | 88693 | 187779 | 375027 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Chloroform | FB | Ave | 67094<br>3484996 | 133017<br>7604455 | 344966 | 714035 | 1395397 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Tetrahydrofuran | FB | Lin1 | 11057<br>407809 | 22822<br>934688 | 39518 | 84394 | 164865 | 1.00<br>50.0 | 2.00<br>120 | 5.00 | 10.0 | 20.0 |
| Isobutyl alcohol | TBAd9 | Ave | 12238<br>572428 | 20633<br>1304557 | 52714 | 112578 | 223951 | 12.5<br>625 | 25.0<br>1500 | 62.5 | 125 | 250 |
| 1,1,1-Trichloroethane | FB | Ave | 62290<br>3250627 | 128286<br>7173707 | 323928 | 675964 | 1311669 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Cyclohexane | FB | Ave | 70333<br>3642411 | 151656<br>7631263 | 378136 | 765511 | 1502194 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,1-Dichloropropene | FB | Ave | 56646<br>2923720 | 117256<br>6290244 | 294869 | 611162 | 1184111 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Carbon tetrachloride | FB | Ave | 52562<br>2829288 | 110112<br>6220315 | 279352 | 578186 | 1138428 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 444687

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2019 11:48 Calibration End Date: 01/18/2019 13:52 Calibration ID: 34948

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| 1,2-Dichloroethane | FB | Ave | 33702<br>1772537 | 67513<br>3944821 | 171915 | 361743 | 710689 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Benzene | FB | Ave | 171141<br>8512447 | 343541<br>17377078 | 872512 | 1799735 | 3470438 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| n-Heptane | FB | Ave | 54535<br>2794861 | 114421<br>5714314 | 284389 | 592484 | 1147621 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Trichloroethene | FB | Ave | 44168<br>2302650 | 87547<br>5093263 | 226235 | 466283 | 906869 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 2-Pentanone | FB | Ave | 37209<br>2027143 | 75379<br>4539381 | 194406 | 402782 | 799547 | 2.00<br>100 | 4.00<br>240 | 10.0 | 20.0 | 40.0 |
| 1,2-Dichloropropane | FB | Ave | 37396<br>1917043 | 74397<br>4230718 | 189717 | 389975 | 766794 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Methylcyclohexane | FB | Ave | 57328<br>2934952 | 116804<br>6142671 | 297554 | 615003 | 1202753 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,4-Dioxane | FB | Ave | 2687<br>179458 | 7059<br>406440 | 17992 | 39080 | 72472 | 10.0<br>500 | 20.0<br>1200 | 50.0 | 100 | 200 |
| Dibromomethane | FB | Ave | 15838<br>873941 | 32263<br>1999575 | 83918 | 173924 | 344068 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Dichlorobromomethane | FB | Ave | 44437<br>2418940 | 89350<br>5420232 | 233014 | 478287 | 955495 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 2-Chloroethyl vinyl ether | FB | Ave | 17604<br>1160995 | 36776<br>2790762 | 99198 | 208371 | 427974 | 1.00<br>50.0 | 2.00<br>120 | 5.00 | 10.0 | 20.0 |
| cis-1,3-Dichloropropene | CBNZ d5 | Ave | 52258<br>2868741 | 106479<br>6340608 | 277222 | 578361 | 1130448 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 4-Methyl-2-pentanone (MIBK) | FB | Ave | 53960<br>2836911 | 109775<br>6215576 | 278328 | 581176 | 1146299 | 2.00<br>100 | 4.00<br>240 | 10.0 | 20.0 | 40.0 |
| Toluene | FB | Ave | 183980<br>8886654 | 368323<br>16663360 | 930711 | 1903843 | 3668181 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Ethyl methacrylate | CBNZ d5 | Ave | 30499<br>1556039 | 58911<br>3518432 | 151949 | 309338 | 624874 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| trans-1,3-Dichloropropene | FB | Ave | 40672<br>2246928 | 83296<br>4991365 | 214088 | 451708 | 896600 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,1,2-Trichloroethane | FB | Ave | 22960<br>1249882 | 47138<br>2864131 | 119128 | 248643 | 493250 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 2-Hexanone | CBNZ d5 | Ave | 37263<br>1941952 | 73659<br>4259574 | 189723 | 392202 | 759469 | 2.00<br>100 | 4.00<br>240 | 10.0 | 20.0 | 40.0 |
| 1,3-Dichloropropane | CBNZ d5 | Ave | 39441<br>2143737 | 81385<br>4773527 | 207485 | 429655 | 850812 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Tetrachloroethene | CBNZ d5 | Ave | 36780<br>1948502 | 74804<br>4269613 | 192241 | 394732 | 772120 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Chlorodibromomethane | CBNZ d5 | Ave | 26884<br>1572542 | 54980<br>3627417 | 141802 | 302141 | 605059 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 444687

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2019 11:48 Calibration End Date: 01/18/2019 13:52 Calibration ID: 34948

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| 1,2-Dibromoethane | CBNZ d5 | Ave | 20937<br>1193909 | 43713<br>2766596 | 111666 | 235500 | 469389 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1-Chlorohexane | CBNZ d5 | Ave | 62418<br>3241360 | 127622<br>6873379 | 321657 | 661955 | 1300046 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Chlorobenzene | CBNZ d5 | Ave | 113008<br>5810648 | 228460<br>12004410 | 587851 | 1200703 | 2349381 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,1,1,2-Tetrachloroethane | CBNZ d5 | Ave | 35590<br>2027070 | 73411<br>4404026 | 190126 | 395625 | 794088 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Ethylbenzene | CBNZ d5 | Ave | 65739<br>3527761 | 134964<br>7202198 | 347743 | 707523 | 1395967 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| m-Xylene & p-Xylene | CBNZ d5 | Ave | 83523<br>4281499 | 163818<br>8959315 | 424915 | 866303 | 1717480 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| o-Xylene | CBNZ d5 | Ave | 77714<br>4067594 | 158829<br>8081245 | 409633 | 835498 | 1660638 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Styrene | CBNZ d5 | Ave | 121968<br>6431083 | 251897<br>12336644 | 644153 | 1329887 | 2643061 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Bromoform | CBNZ d5 | Ave | 13271<br>845942 | 28482<br>2024587 | 72950 | 156767 | 325072 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Isopropylbenzene | DCBd 4 | Qua | +++++<br>10027852 | 424580<br>16649604 | 1078810 | 2183142 | 4266474 | +++++<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Cyclohexanone | CBNZ d5 | Ave | +++++<br>2078277 | 68962<br>4512595 | 215895 | 453424 | 807200 | +++++<br>1000 | 40.0<br>2400 | 100 | 200 | 400 |
| 1,1,2,2-Tetrachloroethane | DCBd 4 | Ave | 24326<br>1328163 | 48418<br>3047475 | 123938 | 263699 | 527516 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| trans-1,4-Dichloro-2-butene | DCBd 4 | Ave | 5475<br>290248 | 10724<br>669658 | 25545 | 57938 | 115500 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,2,3-Trichloropropane | DCBd 4 | Ave | 6273<br>381483 | 14192<br>895480 | 35881 | 73778 | 151486 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Bromobenzene | DCBd 4 | Ave | 43028<br>2430041 | 88916<br>5262250 | 230485 | 472386 | 958002 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| N-Propylbenzene | DCBd 4 | Ave | 57455<br>3100243 | 117044<br>6483693 | 300968 | 621485 | 1243004 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,3,5-Trimethylbenzene | DCBd 4 | Ave | 169511<br>8526075 | 343505<br>15836029 | 879081 | 1796031 | 3592583 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 2-Chlorotoluene | DCBd 4 | Ave | 47329<br>2543045 | 98837<br>5186436 | 246900 | 509791 | 1020584 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 4-Chlorotoluene | DCBd 4 | Ave | 47275<br>2585286 | 97568<br>5581654 | 250380 | 507490 | 1040244 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| tert-Butylbenzene | DCBd 4 | Ave | 170411<br>8869613 | 347913<br>17255519 | 893627 | 1808885 | 3634412 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,2,4-Trimethylbenzene | DCBd 4 | Ave | 170535<br>8709650 | 348885<br>15951842 | 892379 | 1819813 | 3633619 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 444687

SDG No.:

Instrument ID: VMS_MS1 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2019 11:48 Calibration End Date: 01/18/2019 13:52 Calibration ID: 34948

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| sec-Butylbenzene | DCBd 4 | Ave | 46549<br>2556477 | 98199<br>5465780 | 245793 | 511160 | 1026741 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 4-Isopropyltoluene | DCBd 4 | Qua | 191318<br>9536958 | 396072<br>16280804 | 1001589 | 2039873 | 4082802 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,3-Dichlorobenzene | DCBd 4 | Ave | 90993<br>4772169 | 185725<br>10093815 | 472406 | 961160 | 1944498 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,4-Dichlorobenzene | DCBd 4 | Ave | 91925<br>4736011 | 185014<br>10019669 | 467999 | 954591 | 1919952 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| n-Butylbenzene | DCBd 4 | Ave | 172793<br>8697203 | 357880<br>15710223 | 910306 | 1830811 | 3695681 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,2-Dichlorobenzene | DCBd 4 | Ave | 77494<br>4138624 | 157229<br>8978699 | 398658 | 823552 | 1669394 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,2-Dibromo-3-Chloropropane | DCBd 4 | Ave | 3808<br>259331 | 8406<br>615705 | 22668 | 48255 | 100644 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,2,4-Trichlorobenzene | DCBd 4 | Ave | 56117<br>3076277 | 111922<br>6965105 | 292063 | 598862 | 1261251 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Hexachlorobutadiene | DCBd 4 | Ave | 35134<br>1935981 | 71849<br>4364826 | 187175 | 380632 | 794800 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Naphthalene | DCBd 4 | Ave | 84284<br>4627993 | 169087<br>10585375 | 430242 | 919731 | 1918358 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| 1,2,3-Trichlorobenzene | DCBd 4 | Ave | 44587<br>2474963 | 91481<br>5705267 | 234259 | 486301 | 1032802 | 0.500<br>25.0 | 1.00<br>60.0 | 2.50 | 5.00 | 10.0 |
| Dibromofluoromethane (Surr) | FB | Ave | +++++<br>2221023 | 73493<br>4258269 | 144295 | 367529 | 726028 | +++++<br>30.0 | 1.00<br>60.0 | 2.00 | 5.00 | 10.0 |
| 1,2-Dichloroethane-d4 (Surr) | FB | Ave | +++++<br>1705149 | 59454<br>3276937 | 111817 | 288650 | 564701 | +++++<br>30.0 | 1.00<br>60.0 | 2.00 | 5.00 | 10.0 |
| Toluene-d8 (Surr) | CBNZ d5 | Ave | +++++<br>8532119 | 316574<br>14713483 | 621791 | 1513428 | 2953719 | +++++<br>30.0 | 1.00<br>60.0 | 2.00 | 5.00 | 10.0 |
| 4-Bromofluorobenzene (Surr) | DCBd 4 | Ave | +++++<br>3068055 | 110619<br>5769717 | 202535 | 507631 | 1020600 | +++++<br>30.0 | 1.00<br>60.0 | 2.00 | 5.00 | 10.0 |

Curve Type Legend:

| |
|---|
| Ave = Average ISTD |
| Lin1 = Linear 1/conc ISTD |
| Qua = Quadratic ISTD |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1421.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Jan-2019 11:48:30 ALS Bottle#: 3 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub76

Method: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Jan-2019 11:46:27 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0316

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.571 | 5.571 | 0.001 | 85 | 622064 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3482193 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 84 | 781347 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 94 | 1180709 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | | 6.967 | | | | ND | ND | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | | 7.246 | | | | ND | ND | |
| $ 7 Toluene-d8 (Surr) | 98 | | 8.713 | | | | ND | ND | U |
| $ 8 4-Bromofluorobenzene (Surr | 95 | | 10.640 | | | | ND | ND | |
| 24 Dichlorodifluoromethane | 85 | 3.895 | 3.909 | -0.014 | 98 | 42506 | 0.5000 | 0.4741 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 98 | 36572 | 0.5000 | 0.5755 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.258 | 0.000 | 91 | 33991 | 0.5000 | 0.5137 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 90 | 39238 | 0.5000 | 0.4974 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 33548 | 0.5000 | 0.5321 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 97 | 72728 | 0.5000 | 0.4900 | |
| 33 Trichlorofluoromethane | 101 | 4.914 | 4.928 | -0.014 | 98 | 62359 | 0.5000 | 0.4740 | |
| 36 Ethyl ether | 59 | 5.068 | 5.068 | 0.000 | 87 | 20955 | 0.5000 | 0.4740 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 98 | 21897 | 5.00 | 5.07 | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 94 | 20458 | 2.00 | 2.60 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.305 | 5.319 | -0.014 | 92 | 31619 | 0.5000 | 0.4758 | |
| 43 1,1-Dichloroethene | 96 | 5.333 | 5.347 | -0.014 | 95 | 38258 | 0.5000 | 0.4785 | |
| 45 Iodomethane | 142 | 5.501 | 5.515 | -0.014 | 97 | 66370 | 0.5000 | 0.4686 | |
| 46 Methyl acetate | 43 | 5.529 | 5.529 | 0.000 | 93 | 27412 | 1.00 | 1.31 | |
| 47 3-Chloro-1-propene | 41 | 5.585 | 5.584 | 0.001 | 82 | 53954 | 0.5000 | 0.4957 | |
| 48 Carbon disulfide | 76 | 5.612 | 5.612 | 0.000 | 99 | 176111 | 0.5000 | 0.5210 | |
| 49 2-Methyl-2-propanol | 59 | 5.626 | 5.640 | -0.014 | 34 | 16891 | 5.00 | 4.83 | |
| 50 Methylene Chloride | 84 | 5.668 | 5.668 | 0.000 | 84 | 53718 | 0.5000 | 0.6042 | |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 100 | 52463 | 5.00 | 4.94 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 92 | 73230 | 0.5000 | 0.4861 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.892 | 5.906 | -0.014 | 97 | 43656 | 0.5000 | 0.4819 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 85 | 63029 | 0.5000 | 0.5068 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 96 | 64289 | 1.00 | 1.00 | |
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 95 | 66813 | 0.5000 | 0.4844 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 97 | 31139 | 2.00 | 2.16 | |
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 94 | 36512 | 15.0 | 14.7 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 78 | 47270 | 0.5000 | 0.4824 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 83 | 63463 | 0.5000 | 0.5276 | |
| 67 Chlorobromomethane | 128 | 6.828 | 6.827 | 0.001 | 92 | 17879 | 0.5000 | 0.4875 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 92 | 67094 | 0.5000 | 0.4895 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 81 | 11057 | 1.00 | 0.8322 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 93 | 12238 | 12.5 | 13.5 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 97 | 62290 | 0.5000 | 0.4824 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 85 | 70333 | 0.5000 | 0.4798 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 98 | 56646 | 0.5000 | 0.4860 | |
| 74 Carbon tetrachloride | 117 | 7.205 | 7.219 | -0.014 | 97 | 52562 | 0.5000 | 0.4729 | |
| 75 1,2-Dichloroethane | 62 | 7.316 | 7.316 | 0.000 | 96 | 33702 | 0.5000 | 0.4847 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 93 | 171141 | 0.5000 | 0.5020 | |
| 9 n-Heptane | 43 | 7.428 | 7.442 | -0.014 | 86 | 54535 | 0.5000 | 0.4879 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 97 | 44168 | 0.5000 | 0.4900 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 97 | 37209 | 2.00 | 1.90 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 86 | 37396 | 0.5000 | 0.4938 | |
| 83 Methylcyclohexane | 55 | 8.015 | 8.015 | 0.000 | 87 | 57328 | 0.5000 | 0.4902 | |
| 84 1,4-Dioxane | 88 | 8.029 | 8.029 | 0.000 | 80 | 2687 | 10.0 | 7.68 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 93 | 15838 | 0.5000 | 0.4690 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 99 | 44437 | 0.5000 | 0.4759 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 89 | 17604 | 1.00 | 0.8480 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.476 | 8.475 | 0.001 | 99 | 52258 | 0.5000 | 0.4751 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 91 | 53960 | 2.00 | 1.93 | |
| 91 Toluene | 91 | 8.769 | 8.769 | 0.000 | 98 | 183980 | 0.5000 | 0.5141 | |
| 92 Ethyl methacrylate | 69 | 8.839 | 8.839 | 0.000 | 79 | 30499 | 0.5000 | 0.5019 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.853 | 8.853 | 0.000 | 93 | 40672 | 0.5000 | 0.4690 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 88 | 22960 | 0.5000 | 0.4734 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 91 | 37263 | 2.00 | 1.98 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 87 | 39441 | 0.5000 | 0.4770 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 97 | 36780 | 0.5000 | 0.4860 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 89 | 26884 | 0.5000 | 0.4601 | |
| 100 Ethylene Dibromide | 107 | 9.467 | 9.467 | 0.000 | 100 | 20937 | 0.5000 | 0.4614 | |
| 101 1-Chlorohexane | 91 | 9.705 | 9.705 | 0.000 | 0 | 62418 | 0.5000 | 0.4928 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 98 | 113008 | 0.5000 | 0.4958 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 97 | 65739 | 0.5000 | 0.4862 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 96 | 35590 | 0.5000 | 0.4676 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 97 | 83523 | 0.5000 | 0.5018 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 88 | 77714 | 0.5000 | 0.4911 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 88 | 121968 | 0.5000 | 0.4892 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 97 | 13271 | 0.5000 | 0.4317 | |
| 108 Isopropylbenzene | 105 | 10.501 | 10.501 | 0.000 | 94 | 206820 | 0.5000 | 0.2951 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 86 | 41753 | 20.0 | 20.7 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.682 | 0.000 | 93 | 24326 | 0.5000 | 0.4831 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 85 | 5475 | 0.5000 | 0.4977 | |
| 114 1,2,3-Trichloropropane | 110 | 10.752 | 10.752 | 0.000 | 82 | 6273 | 0.5000 | 0.4386 | |
| 116 Bromobenzene | 156 | 10.808 | 10.808 | 0.000 | 94 | 43028 | 0.5000 | 0.4737 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 97 | 57455 | 0.5000 | 0.4875 | |
| 117 2-Chlorotoluene | 126 | 10.934 | 10.934 | 0.000 | 96 | 47329 | 0.5000 | 0.4887 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.934 | 10.934 | 0.000 | 94 | 169511 | 0.5000 | 0.5076 | |
| 118 4-Chlorotoluene | 126 | 11.017 | 11.003 | 0.014 | 96 | 47275 | 0.5000 | 0.4814 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 91 | 170411 | 0.5000 | 0.4987 | |
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 95 | 170535 | 0.5000 | 0.5041 | |
| 122 sec-Butylbenzene | 134 | 11.408 | 11.394 | 0.014 | 93 | 46549 | 0.5000 | 0.4784 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.492 | 0.000 | 97 | 191318 | 0.5000 | 0.3595 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 95 | 90993 | 0.5000 | 0.4937 | |
| 126 1,4-Dichlorobenzene | 146 | 11.618 | 11.618 | 0.000 | 95 | 91925 | 0.5000 | 0.5015 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 97 | 172793 | 0.5000 | 0.5055 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 98 | 77494 | 0.5000 | 0.4898 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 87 | 3808 | 0.5000 | 0.4119 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.657 | 0.000 | 95 | 56117 | 0.5000 | 0.4803 | |
| 131 Hexachlorobutadiene | 225 | 13.825 | 13.825 | 0.000 | 95 | 35134 | 0.5000 | 0.4751 | |
| 132 Naphthalene | 128 | 14.020 | 14.006 | 0.014 | 96 | 84284 | 0.5000 | 0.4777 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.327 | 14.327 | 0.000 | 95 | 44587 | 0.5000 | 0.4711 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 1.00 | 0.9643 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 1.00 | 0.99 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 2.00 | 1.86 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 1.00 | 0.99 | |
| S 137 Total BTEX | 1 | | | | 0 | | | 2.50 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 1.00 | 0.9643 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 1.00 | 0.9441 | |

## QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-ARCH SS A_00108 | Amount Added: | 0.04 | Units: uL |
| MV-MegaMainA_00009 | Amount Added: | 0.20 | Units: uL |
| MV-Gas A_00005 | Amount Added: | 0.20 | Units: uL |

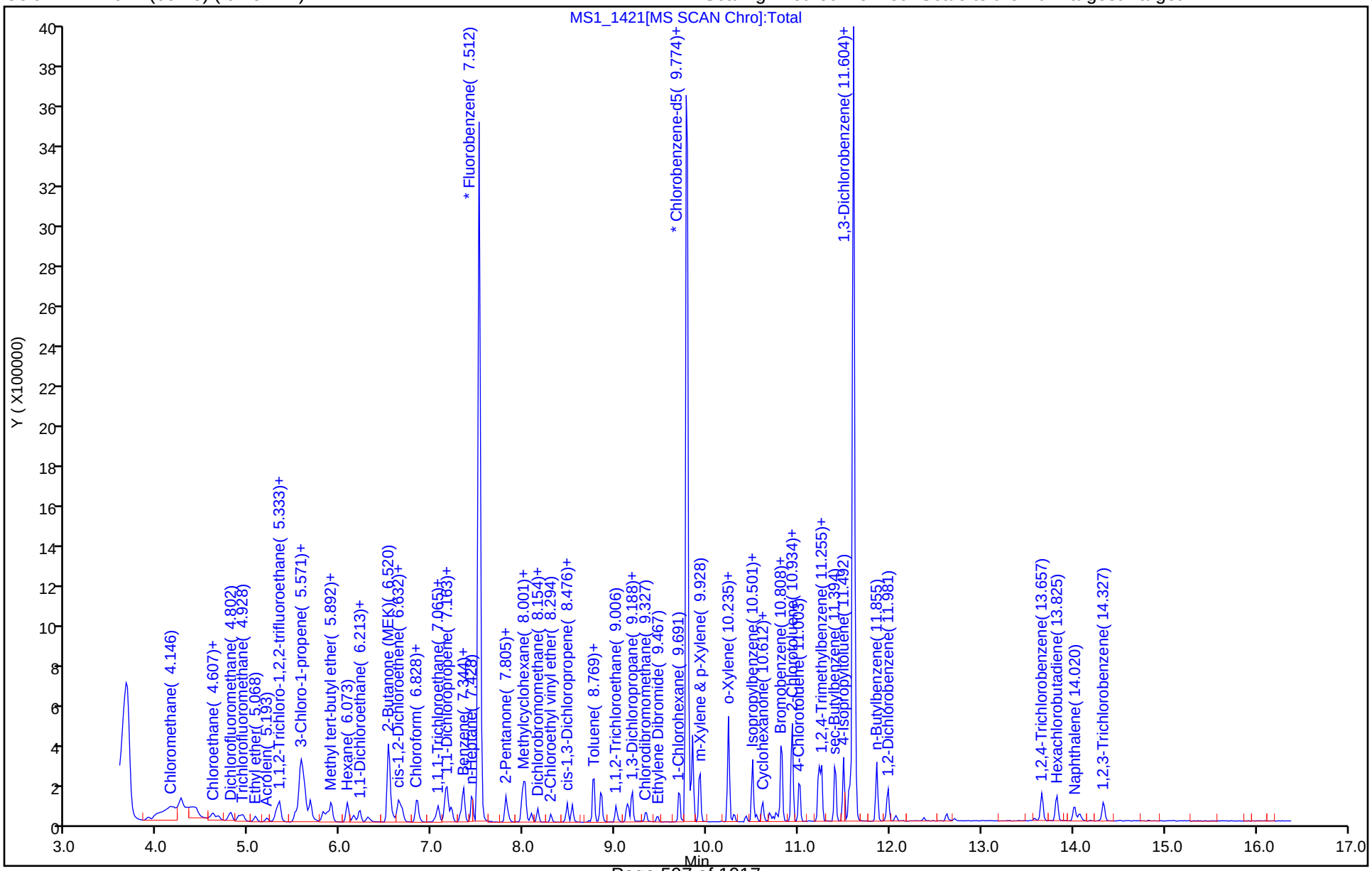
Report Date: 24-Jan-2019 11:46:29 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1421.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 18-Jan-2019 11:48:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 12 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 3 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



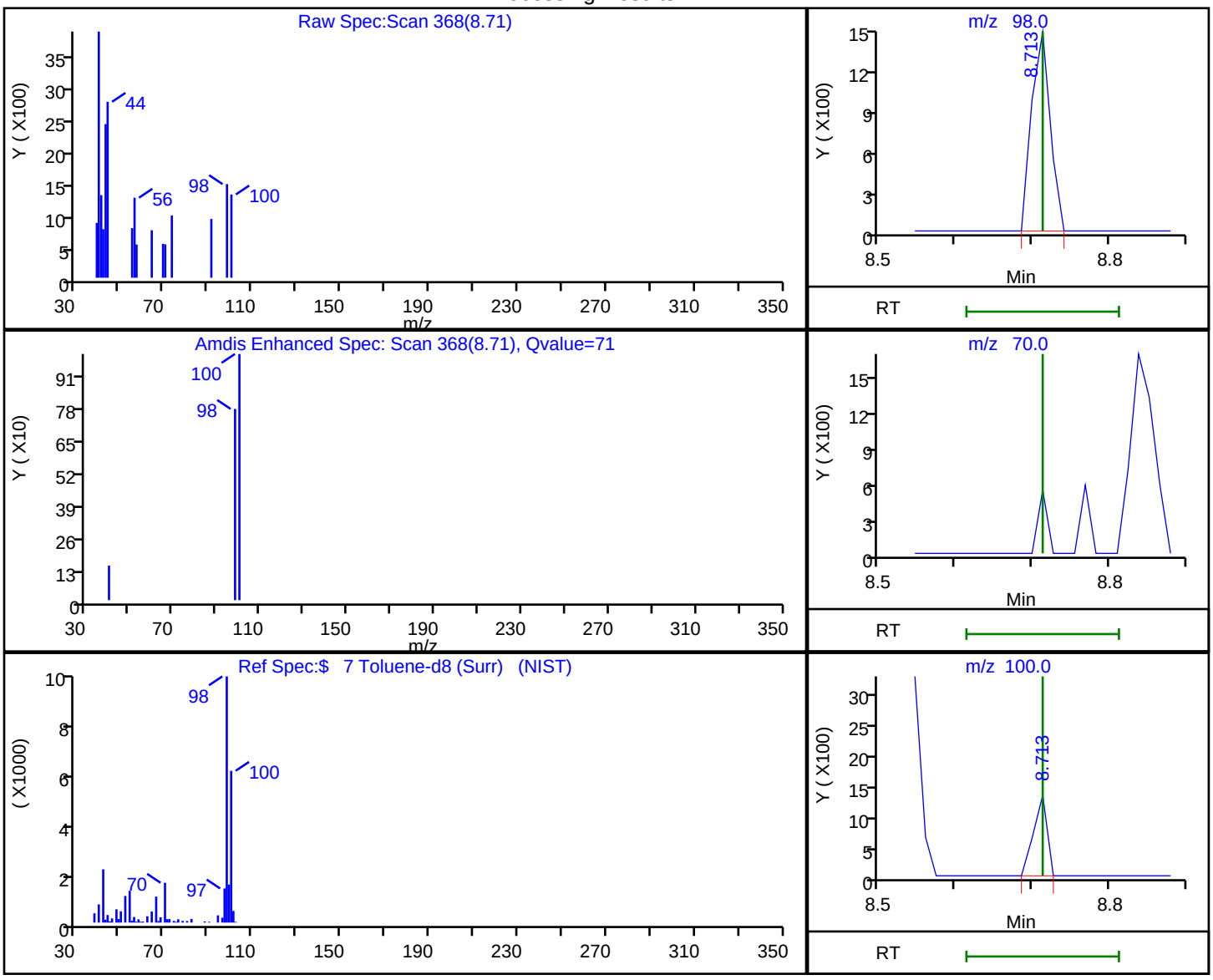
User Disabled Compound Report

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1421.D
Injection Date: 18-Jan-2019 11:48:30 Instrument ID: VMS_MS1
Lims ID: std
Client ID:
Operator ID: wickhamt ALS Bottle#: 3 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) ( 0.25 mm) Detector MS SCAN

## $ 7 Toluene-d8 (Surr), CAS: 2037-26-5

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 8.71 | 98.00 | 2481 | 0.009877 |
| 8.71 | 70.00 | 0 | |
| 8.71 | 100.00 | 1606 | |

Reviewer: ornelasg, 22-Jan-2019 17:07:44
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1422.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Jan-2019 12:09:30 ALS Bottle#: 4 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub76

Method: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Jan-2019 11:46:39 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0316

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.570 | 5.571 | 0.000 | 84 | 645195 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3516029 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 84 | 791152 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 94 | 1208803 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 73493 | 1.00 | 0.99 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 59454 | 1.00 | 1.03 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 316574 | 1.00 | 1.07 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.640 | 0.000 | 0 | 110619 | 1.00 | 1.07 | |
| 24 Dichlorodifluoromethane | 85 | 3.908 | 3.909 | -0.001 | 98 | 81000 | 1.00 | 0.8280 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 99 | 60980 | 1.00 | 0.9504 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.258 | 0.000 | 90 | 66500 | 1.00 | 1.00 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 88 | 79534 | 1.00 | 1.00 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 98 | 63280 | 1.00 | 0.99 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 96 | 147672 | 1.00 | 0.9853 | |
| 33 Trichlorofluoromethane | 101 | 4.900 | 4.928 | -0.028 | 98 | 132301 | 1.00 | 1.00 | |
| 36 Ethyl ether | 59 | 5.082 | 5.068 | 0.014 | 85 | 41880 | 1.00 | 0.9382 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 98 | 42270 | 10.0 | 9.69 | |
| 40 Acetone | 43 | 5.305 | 5.291 | 0.014 | 97 | 31272 | 4.00 | 3.94 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.319 | 5.319 | 0.000 | 93 | 64851 | 1.00 | 0.9665 | |
| 43 1,1-Dichloroethene | 96 | 5.347 | 5.347 | 0.000 | 96 | 77225 | 1.00 | 0.9567 | |
| 45 Iodomethane | 142 | 5.515 | 5.515 | -0.001 | 97 | 138103 | 1.00 | 0.9657 | |
| 46 Methyl acetate | 43 | 5.528 | 5.529 | -0.001 | 96 | 39047 | 2.00 | 1.85 | |
| 47 3-Chloro-1-propene | 41 | 5.584 | 5.584 | 0.000 | 83 | 110924 | 1.00 | 1.01 | |
| 48 Carbon disulfide | 76 | 5.612 | 5.612 | 0.000 | 98 | 344607 | 1.00 | 1.01 | |
| 49 2-Methyl-2-propanol | 59 | 5.640 | 5.640 | 0.000 | 93 | 33829 | 10.0 | 9.33 | |
| 50 Methylene Chloride | 84 | 5.682 | 5.668 | 0.014 | 85 | 95166 | 1.00 | 1.06 | |
| 51 Acrylonitrile | 53 | 5.822 | 5.808 | 0.014 | 99 | 103219 | 10.0 | 9.63 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 92 | 147977 | 1.00 | 0.9729 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.906 | 5.906 | 0.000 | 96 | 88872 | 1.00 | 0.9716 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 87 | 127282 | 1.00 | 1.01 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 96 | 127433 | 2.00 | 1.96 | |
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 95 | 136254 | 1.00 | 0.9783 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 97 | 62195 | 4.00 | 4.26 | |
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 94 | 72203 | 30.0 | 28.1 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 78 | 95336 | 1.00 | 0.9635 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 86 | 123409 | 1.00 | 1.02 | |
| 67 Chlorobromomethane | 128 | 6.827 | 6.827 | 0.000 | 93 | 35184 | 1.00 | 0.9501 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 92 | 133017 | 1.00 | 0.9612 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 89 | 22822 | 2.00 | 2.31 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 95 | 20633 | 25.0 | 22.0 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 97 | 128286 | 1.00 | 0.9840 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 87 | 151656 | 1.00 | 1.02 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 98 | 117256 | 1.00 | 1.00 | |
| 74 Carbon tetrachloride | 117 | 7.218 | 7.219 | -0.001 | 94 | 110112 | 1.00 | 0.9812 | |
| 75 1,2-Dichloroethane | 62 | 7.316 | 7.316 | 0.000 | 98 | 67513 | 1.00 | 0.9617 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 94 | 343541 | 1.00 | 1.00 | |
| 9 n-Heptane | 43 | 7.442 | 7.442 | 0.000 | 87 | 114421 | 1.00 | 1.01 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 97 | 87547 | 1.00 | 0.9619 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 97 | 75379 | 4.00 | 3.81 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 91 | 74397 | 1.00 | 0.9730 | |
| 83 Methylcyclohexane | 55 | 8.014 | 8.015 | -0.001 | 87 | 116804 | 1.00 | 0.9892 | |
| 84 1,4-Dioxane | 88 | 8.042 | 8.029 | 0.013 | 87 | 7059 | 20.0 | 20.0 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 95 | 32263 | 1.00 | 0.9463 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 99 | 89350 | 1.00 | 0.9478 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 91 | 36776 | 2.00 | 1.75 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.475 | 8.475 | 0.000 | 99 | 106479 | 1.00 | 0.9561 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 92 | 109775 | 4.00 | 3.89 | |
| 91 Toluene | 91 | 8.769 | 8.769 | 0.000 | 99 | 368323 | 1.00 | 1.02 | |
| 92 Ethyl methacrylate | 69 | 8.838 | 8.839 | -0.001 | 81 | 58911 | 1.00 | 0.9575 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.852 | 8.853 | -0.001 | 94 | 83296 | 1.00 | 0.9513 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 89 | 47138 | 1.00 | 0.9626 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 90 | 73659 | 4.00 | 3.87 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 94 | 81385 | 1.00 | 0.9722 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 97 | 74804 | 1.00 | 0.9761 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 90 | 54980 | 1.00 | 0.9293 | |
| 100 Ethylene Dibromide | 107 | 9.467 | 9.467 | 0.000 | 99 | 43713 | 1.00 | 0.9514 | |
| 101 1-Chlorohexane | 91 | 9.704 | 9.705 | -0.001 | 0 | 127622 | 1.00 | 1.00 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 97 | 228460 | 1.00 | 0.9899 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 98 | 134964 | 1.00 | 0.9857 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 82 | 73411 | 1.00 | 0.9525 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 98 | 163818 | 1.00 | 0.9721 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 88 | 158829 | 1.00 | 0.99 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 88 | 251897 | 1.00 | 1.00 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 98 | 28482 | 1.00 | 0.9150 | |
| 108 Isopropylbenzene | 105 | 10.500 | 10.501 | -0.001 | 94 | 424580 | 1.00 | 0.7701 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 89 | 68962 | 40.0 | 33.7 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.682 | 0.000 | 93 | 48418 | 1.00 | 0.9393 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 89 | 10724 | 1.00 | 0.9521 | |
| 114 1,2,3-Trichloropropane | 110 | 10.752 | 10.752 | 0.000 | 83 | 14192 | 1.00 | 0.9692 | |
| 116 Bromobenzene | 156 | 10.808 | 10.808 | 0.000 | 95 | 88916 | 1.00 | 0.9561 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 98 | 117044 | 1.00 | 0.9700 | |
| 117 2-Chlorotoluene | 126 | 10.933 | 10.934 | -0.001 | 96 | 98837 | 1.00 | 1.00 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.933 | 10.934 | -0.001 | 96 | 343505 | 1.00 | 1.00 | |
| 118 4-Chlorotoluene | 126 | 11.017 | 11.003 | 0.014 | 97 | 97568 | 1.00 | 0.9705 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 91 | 347913 | 1.00 | 0.99 | |
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 96 | 348885 | 1.00 | 1.01 | |
| 122 sec-Butylbenzene | 134 | 11.408 | 11.394 | 0.014 | 93 | 98199 | 1.00 | 0.9857 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.492 | 0.000 | 97 | 396072 | 1.00 | 0.8308 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 97 | 185725 | 1.00 | 0.9843 | |
| 126 1,4-Dichlorobenzene | 146 | 11.632 | 11.618 | 0.014 | 95 | 185014 | 1.00 | 0.9859 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 97 | 357880 | 1.00 | 1.02 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 98 | 157229 | 1.00 | 0.9706 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 89 | 8406 | 1.00 | 0.8881 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.657 | 0.000 | 95 | 111922 | 1.00 | 0.9357 | |
| 131 Hexachlorobutadiene | 225 | 13.824 | 13.825 | -0.001 | 97 | 71849 | 1.00 | 0.9490 | |
| 132 Naphthalene | 128 | 14.020 | 14.006 | 0.014 | 96 | 169087 | 1.00 | 0.9362 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.327 | 14.327 | 0.000 | 96 | 91481 | 1.00 | 0.9442 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 2.00 | 1.94 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 4.00 | 3.75 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 2.00 | 1.96 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 2.00 | 1.96 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 2.00 | 1.94 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 2.00 | 1.91 | |
| S 137 Total BTEX | 1 | | | | 0 | | | 4.97 | |

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-ARCH SS A_00108 | Amount Added: | 0.08 | Units: uL |
| MV-MegaMainA_00009 | Amount Added: | 0.40 | Units: uL |
| MV-Gas A_00005 | Amount Added: | 0.40 | Units: uL |

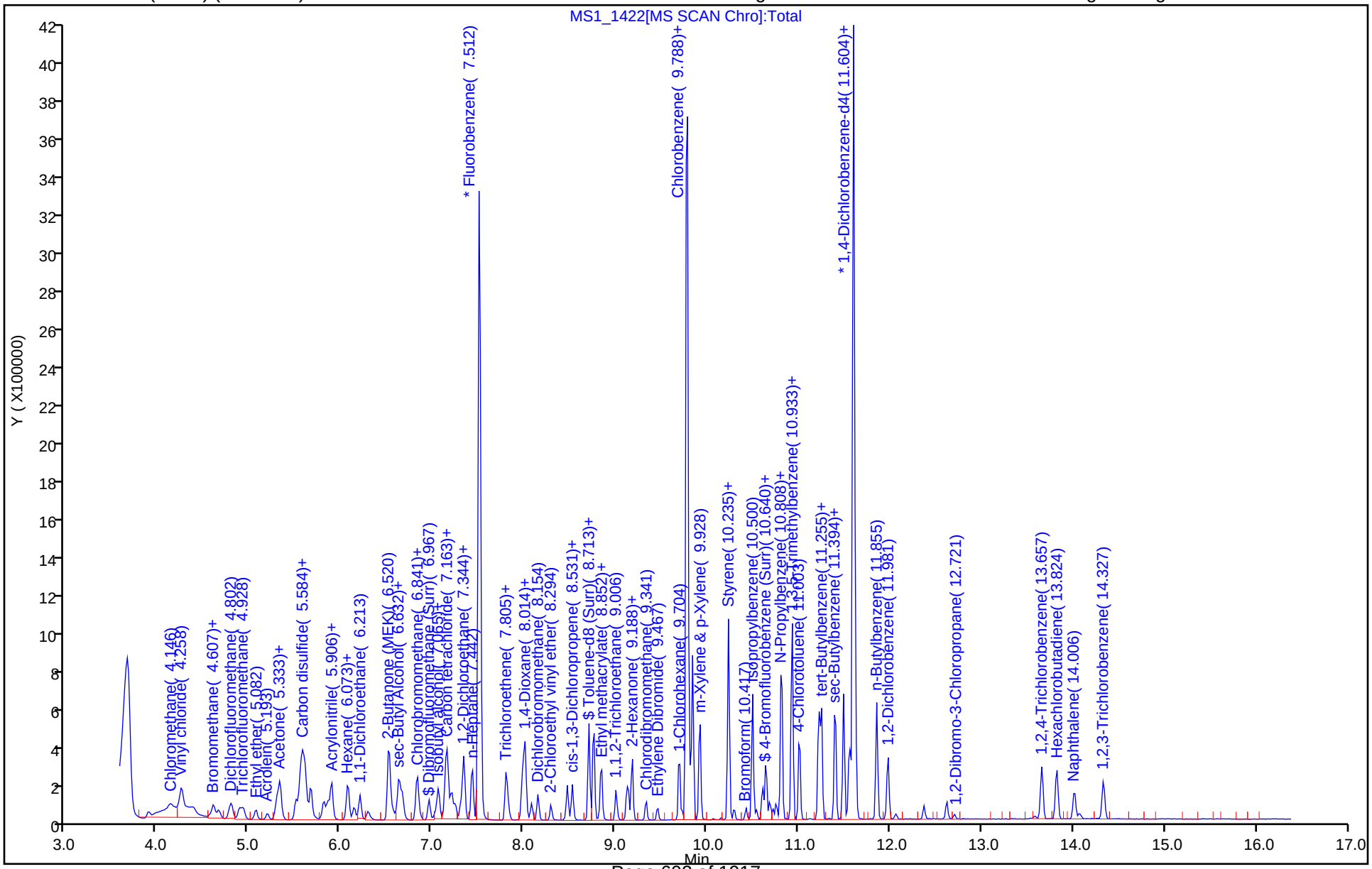
Report Date: 24-Jan-2019 11:46:41 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1422.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 18-Jan-2019 12:09:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 13 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 4 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1423.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Jan-2019 12:29:30 ALS Bottle#: 5 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub76

Method: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Jan-2019 11:46:50 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0316

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.571 | 5.571 | 0.001 | 86 | 595902 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 100 | 3482523 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.774 | 9.788 | -0.014 | 85 | 781395 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 94 | 1177293 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 144295 | 2.00 | 1.97 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.247 | 7.246 | 0.001 | 97 | 111817 | 2.00 | 1.95 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 621791 | 2.00 | 2.13 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.640 | 0.000 | 0 | 202535 | 2.00 | 2.01 | |
| 24 Dichlorodifluoromethane | 85 | 3.895 | 3.909 | -0.014 | 99 | 226645 | 2.50 | 2.20 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 99 | 152857 | 2.50 | 2.41 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.258 | 0.000 | 88 | 160837 | 2.50 | 2.43 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 88 | 200925 | 2.50 | 2.55 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 163041 | 2.50 | 2.59 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 96 | 375483 | 2.50 | 2.53 | |
| 33 Trichlorofluoromethane | 101 | 4.914 | 4.928 | -0.014 | 98 | 326600 | 2.50 | 2.48 | |
| 36 Ethyl ether | 59 | 5.068 | 5.068 | 0.000 | 87 | 108706 | 2.50 | 2.46 | |
| 39 Acrolein | 56 | 5.194 | 5.193 | 0.001 | 99 | 104834 | 25.0 | 24.3 | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 97 | 79094 | 10.0 | 10.1 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.305 | 5.319 | -0.014 | 93 | 165261 | 2.50 | 2.49 | |
| 43 1,1-Dichloroethene | 96 | 5.333 | 5.347 | -0.014 | 95 | 198198 | 2.50 | 2.48 | |
| 45 Iodomethane | 142 | 5.501 | 5.515 | -0.014 | 98 | 350930 | 2.50 | 2.48 | |
| 46 Methyl acetate | 43 | 5.529 | 5.529 | 0.000 | 94 | 97080 | 5.00 | 4.63 | |
| 47 3-Chloro-1-propene | 41 | 5.585 | 5.584 | 0.001 | 84 | 278279 | 2.50 | 2.56 | |
| 48 Carbon disulfide | 76 | 5.613 | 5.612 | 0.000 | 98 | 847862 | 2.50 | 2.51 | |
| 49 2-Methyl-2-propanol | 59 | 5.626 | 5.640 | -0.014 | 94 | 86065 | 25.0 | 25.7 | |
| 50 Methylene Chloride | 84 | 5.668 | 5.668 | 0.000 | 84 | 219009 | 2.50 | 2.46 | |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 100 | 261579 | 25.0 | 24.6 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 92 | 373196 | 2.50 | 2.48 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.892 | 5.906 | -0.014 | 97 | 227067 | 2.50 | 2.51 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 87 | 313434 | 2.50 | 2.52 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 97 | 312175 | 5.00 | 4.84 | |
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 96 | 347127 | 2.50 | 2.52 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 97 | 142529 | 10.0 | 9.87 | |
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 94 | 178911 | 75.0 | 75.3 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 78 | 245234 | 2.50 | 2.50 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 85 | 305762 | 2.50 | 2.54 | |
| 67 Chlorobromomethane | 128 | 6.828 | 6.827 | 0.001 | 90 | 88693 | 2.50 | 2.42 | |
| 68 Chloroform | 83 | 6.842 | 6.841 | 0.001 | 92 | 344966 | 2.50 | 2.52 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 83 | 39518 | 5.00 | 4.47 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 95 | 52714 | 62.5 | 60.8 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 97 | 323928 | 2.50 | 2.51 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 86 | 378136 | 2.50 | 2.58 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 98 | 294869 | 2.50 | 2.53 | |
| 74 Carbon tetrachloride | 117 | 7.205 | 7.219 | -0.014 | 96 | 279352 | 2.50 | 2.51 | |
| 75 1,2-Dichloroethane | 62 | 7.302 | 7.316 | -0.014 | 97 | 171915 | 2.50 | 2.47 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 94 | 872512 | 2.50 | 2.56 | |
| 9 n-Heptane | 43 | 7.428 | 7.442 | -0.014 | 87 | 284389 | 2.50 | 2.54 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 97 | 226235 | 2.50 | 2.51 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 97 | 194406 | 10.0 | 9.93 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 96 | 189717 | 2.50 | 2.51 | |
| 83 Methylcyclohexane | 55 | 8.015 | 8.015 | 0.000 | 90 | 297554 | 2.50 | 2.54 | |
| 84 1,4-Dioxane | 88 | 8.029 | 8.029 | 0.000 | 81 | 17992 | 50.0 | 51.4 | |
| 85 Dibromomethane | 93 | 8.085 | 8.084 | 0.001 | 95 | 83918 | 2.50 | 2.49 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 99 | 233014 | 2.50 | 2.50 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 90 | 99198 | 5.00 | 4.78 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.476 | 8.475 | 0.001 | 99 | 277222 | 2.50 | 2.52 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 91 | 278328 | 10.0 | 9.97 | |
| 91 Toluene | 91 | 8.769 | 8.769 | 0.000 | 99 | 930711 | 2.50 | 2.60 | |
| 92 Ethyl methacrylate | 69 | 8.839 | 8.839 | 0.000 | 87 | 151949 | 2.50 | 2.50 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.853 | 8.853 | 0.000 | 95 | 214088 | 2.50 | 2.47 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 89 | 119128 | 2.50 | 2.46 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 90 | 189723 | 10.0 | 10.1 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 87 | 207485 | 2.50 | 2.51 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 97 | 192241 | 2.50 | 2.54 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 89 | 141802 | 2.50 | 2.43 | |
| 100 Ethylene Dibromide | 107 | 9.453 | 9.467 | -0.014 | 100 | 111666 | 2.50 | 2.46 | |
| 101 1-Chlorohexane | 91 | 9.705 | 9.705 | 0.000 | 0 | 321657 | 2.50 | 2.54 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 97 | 587851 | 2.50 | 2.58 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 97 | 347743 | 2.50 | 2.57 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 92 | 190126 | 2.50 | 2.50 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 99 | 424915 | 2.50 | 2.55 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 87 | 409633 | 2.50 | 2.59 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 88 | 644153 | 2.50 | 2.58 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 98 | 72950 | 2.50 | 2.37 | |
| 108 Isopropylbenzene | 105 | 10.501 | 10.501 | 0.000 | 94 | 1078810 | 2.50 | 2.32 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 87 | 215895 | 100.0 | 106.9 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.682 | 0.000 | 94 | 123938 | 2.50 | 2.47 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 90 | 25545 | 2.50 | 2.33 | |
| 114 1,2,3-Trichloropropane | 110 | 10.752 | 10.752 | 0.000 | 82 | 35881 | 2.50 | 2.52 | |
| 116 Bromobenzene | 156 | 10.808 | 10.808 | 0.000 | 93 | 230485 | 2.50 | 2.54 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 97 | 300968 | 2.50 | 2.56 | |
| 117 2-Chlorotoluene | 126 | 10.934 | 10.934 | 0.000 | 96 | 246900 | 2.50 | 2.56 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.934 | 10.934 | 0.000 | 95 | 879081 | 2.50 | 2.64 | |
| 118 4-Chlorotoluene | 126 | 11.017 | 11.003 | 0.014 | 97 | 250380 | 2.50 | 2.56 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 91 | 893627 | 2.50 | 2.62 | |
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 96 | 892379 | 2.50 | 2.65 | |
| 122 sec-Butylbenzene | 134 | 11.395 | 11.394 | 0.001 | 94 | 245793 | 2.50 | 2.53 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.492 | 0.000 | 97 | 1001589 | 2.50 | 2.34 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 97 | 472406 | 2.50 | 2.57 | |
| 126 1,4-Dichlorobenzene | 146 | 11.618 | 11.618 | 0.000 | 95 | 467999 | 2.50 | 2.56 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 97 | 910306 | 2.50 | 2.67 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 99 | 398658 | 2.50 | 2.53 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 88 | 22668 | 2.50 | 2.46 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.657 | 0.000 | 94 | 292063 | 2.50 | 2.51 | |
| 131 Hexachlorobutadiene | 225 | 13.825 | 13.825 | 0.000 | 97 | 187175 | 2.50 | 2.54 | |
| 132 Naphthalene | 128 | 14.006 | 14.006 | 0.000 | 96 | 430242 | 2.50 | 2.45 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.327 | 14.327 | 0.000 | 96 | 234259 | 2.50 | 2.48 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 5.00 | 5.01 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 5.00 | 5.14 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 5.00 | 5.14 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 10.0 | 9.81 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 5.00 | 5.01 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 5.00 | 4.99 | |
| S 137 Total BTEX | 1 | | | | 0 | | | 12.9 | |

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-ARCH SS A_00108 | Amount Added: | 0.16 | Units: uL |
| MV-MegaMainA_00009 | Amount Added: | 1.00 | Units: uL |
| MV-Gas A_00005 | Amount Added: | 1.00 | Units: uL |

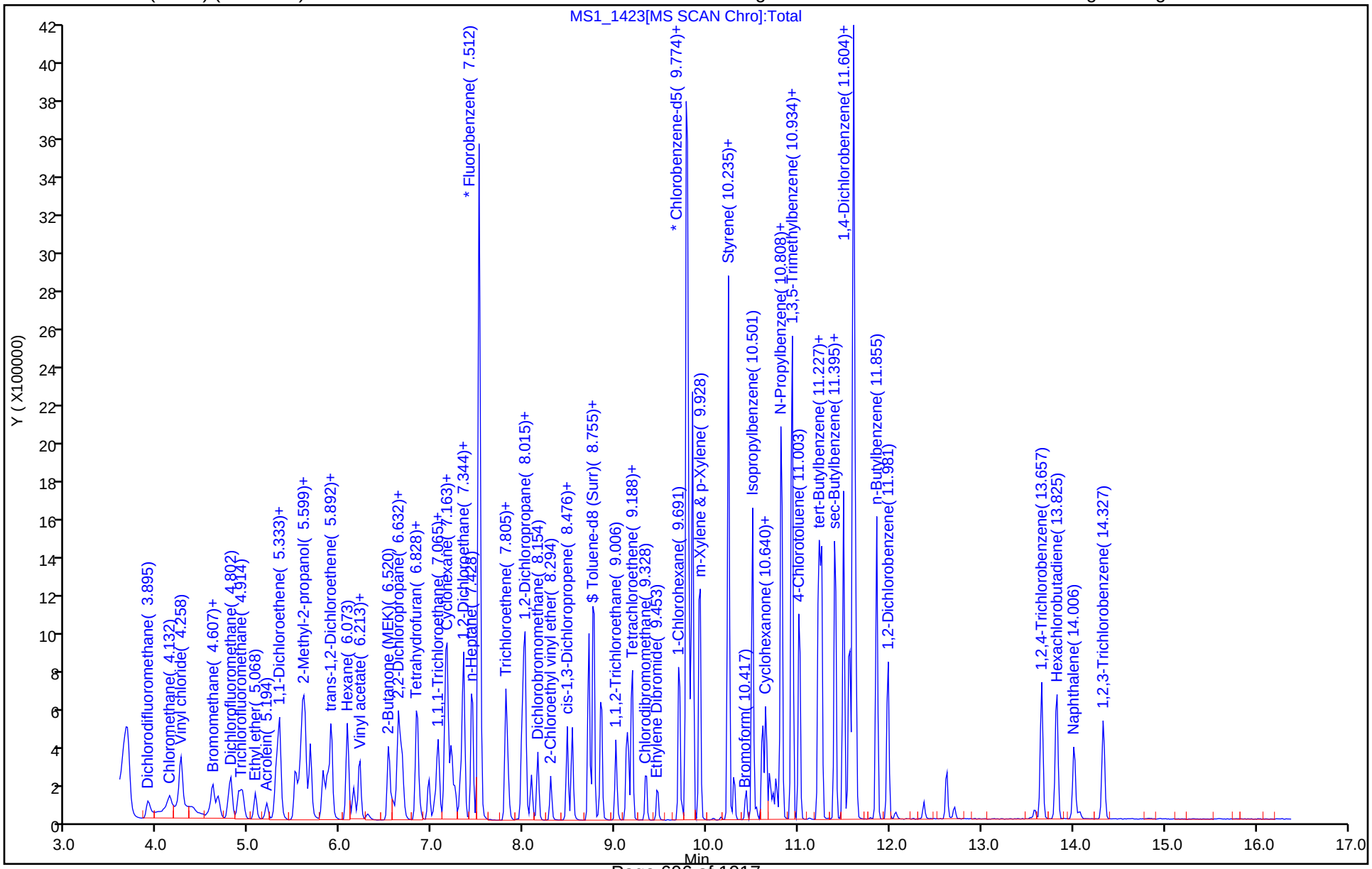
Report Date: 24-Jan-2019 11:46:54 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1423.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 18-Jan-2019 12:29:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 14 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 5 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1424.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Jan-2019 12:50:30 ALS Bottle#: 6 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub76

Method: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Jan-2019 11:47:02 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0316

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.570 | 5.571 | 0.000 | 86 | 595404 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3401695 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 83 | 760521 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 95 | 1151145 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 367529 | 5.00 | 5.13 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 288650 | 5.00 | 5.16 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 91 | 1513428 | 5.00 | 5.32 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.640 | 0.000 | 0 | 507631 | 5.00 | 5.15 | |
| 24 Dichlorodifluoromethane | 85 | 3.908 | 3.909 | -0.001 | 99 | 617482 | 5.00 | 6.01 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 99 | 330166 | 5.00 | 5.32 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.258 | 0.000 | 89 | 357201 | 5.00 | 5.53 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 90 | 433937 | 5.00 | 5.63 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 336778 | 5.00 | 5.47 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 96 | 786920 | 5.00 | 5.43 | |
| 33 Trichlorofluoromethane | 101 | 4.928 | 4.928 | 0.000 | 97 | 708084 | 5.00 | 5.51 | |
| 36 Ethyl ether | 59 | 5.082 | 5.068 | 0.014 | 86 | 228735 | 5.00 | 5.30 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 100 | 227935 | 50.0 | 54.0 | |
| 40 Acetone | 43 | 5.305 | 5.291 | 0.014 | 98 | 156501 | 20.0 | 20.4 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.319 | 5.319 | 0.000 | 93 | 347160 | 5.00 | 5.35 | |
| 43 1,1-Dichloroethene | 96 | 5.347 | 5.347 | 0.000 | 95 | 422593 | 5.00 | 5.41 | |
| 45 Iodomethane | 142 | 5.515 | 5.515 | 0.000 | 97 | 745744 | 5.00 | 5.39 | |
| 46 Methyl acetate | 43 | 5.529 | 5.529 | 0.000 | 94 | 201795 | 10.0 | 9.86 | |
| 47 3-Chloro-1-propene | 41 | 5.584 | 5.584 | 0.000 | 84 | 577462 | 5.00 | 5.43 | |
| 48 Carbon disulfide | 76 | 5.612 | 5.612 | 0.000 | 98 | 1776366 | 5.00 | 5.38 | |
| 49 2-Methyl-2-propanol | 59 | 5.640 | 5.640 | 0.000 | 93 | 180533 | 50.0 | 53.9 | |
| 50 Methylene Chloride | 84 | 5.682 | 5.668 | 0.014 | 84 | 430812 | 5.00 | 4.96 | |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 100 | 550005 | 50.0 | 53.0 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 92 | 779088 | 5.00 | 5.29 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.906 | 5.906 | 0.000 | 96 | 474238 | 5.00 | 5.36 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 87 | 656431 | 5.00 | 5.42 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 97 | 670735 | 10.0 | 10.6 | |
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 95 | 723273 | 5.00 | 5.37 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 97 | 292072 | 20.0 | 20.7 | |
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 96 | 380489 | 150.0 | 160.4 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 75 | 509057 | 5.00 | 5.32 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 86 | 619089 | 5.00 | 5.27 | |
| 67 Chlorobromomethane | 128 | 6.827 | 6.827 | 0.000 | 90 | 187779 | 5.00 | 5.24 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 92 | 714035 | 5.00 | 5.33 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 83 | 84394 | 10.0 | 10.5 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 96 | 112578 | 125.0 | 129.9 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 97 | 675964 | 5.00 | 5.36 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 87 | 765511 | 5.00 | 5.35 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 97 | 611162 | 5.00 | 5.37 | |
| 74 Carbon tetrachloride | 117 | 7.218 | 7.219 | -0.001 | 94 | 578186 | 5.00 | 5.33 | |
| 75 1,2-Dichloroethane | 62 | 7.316 | 7.316 | 0.000 | 97 | 361743 | 5.00 | 5.33 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 94 | 1799735 | 5.00 | 5.40 | |
| 9 n-Heptane | 43 | 7.442 | 7.442 | 0.000 | 85 | 592484 | 5.00 | 5.43 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 97 | 466283 | 5.00 | 5.30 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 97 | 402782 | 20.0 | 21.1 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 96 | 389975 | 5.00 | 5.27 | |
| 83 Methylcyclohexane | 55 | 8.015 | 8.015 | 0.000 | 87 | 615003 | 5.00 | 5.38 | |
| 84 1,4-Dioxane | 88 | 8.042 | 8.029 | 0.013 | 90 | 39080 | 100.0 | 114.4 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 94 | 173924 | 5.00 | 5.27 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 99 | 478287 | 5.00 | 5.24 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 91 | 208371 | 10.0 | 10.3 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.475 | 8.475 | 0.000 | 99 | 578361 | 5.00 | 5.40 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 92 | 581176 | 20.0 | 21.3 | |
| 91 Toluene | 91 | 8.769 | 8.769 | 0.000 | 99 | 1903843 | 5.00 | 5.45 | |
| 92 Ethyl methacrylate | 69 | 8.839 | 8.839 | 0.000 | 87 | 309338 | 5.00 | 5.23 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.853 | 8.853 | -0.001 | 94 | 451708 | 5.00 | 5.33 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 88 | 248643 | 5.00 | 5.25 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 91 | 392202 | 20.0 | 21.4 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 87 | 429655 | 5.00 | 5.34 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 97 | 394732 | 5.00 | 5.36 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 90 | 302141 | 5.00 | 5.31 | |
| 100 Ethylene Dibromide | 107 | 9.467 | 9.467 | 0.000 | 99 | 235500 | 5.00 | 5.33 | |
| 101 1-Chlorohexane | 91 | 9.704 | 9.705 | -0.001 | 0 | 661955 | 5.00 | 5.37 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 97 | 1200703 | 5.00 | 5.41 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 97 | 707523 | 5.00 | 5.38 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 95 | 395625 | 5.00 | 5.34 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 98 | 866303 | 5.00 | 5.35 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 87 | 835498 | 5.00 | 5.42 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 88 | 1329887 | 5.00 | 5.48 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 98 | 156767 | 5.00 | 5.24 | |
| 108 Isopropylbenzene | 105 | 10.501 | 10.501 | 0.000 | 95 | 2183142 | 5.00 | 5.08 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 88 | 453424 | 200.0 | 230.7 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.682 | 0.000 | 94 | 263699 | 5.00 | 5.37 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 90 | 57938 | 5.00 | 5.40 | |
| 114 1,2,3-Trichloropropane | 110 | 10.752 | 10.752 | 0.000 | 83 | 73778 | 5.00 | 5.29 | |
| 116 Bromobenzene | 156 | 10.808 | 10.808 | 0.000 | 93 | 472386 | 5.00 | 5.33 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 97 | 621485 | 5.00 | 5.41 | |
| 117 2-Chlorotoluene | 126 | 10.933 | 10.934 | -0.001 | 96 | 509791 | 5.00 | 5.40 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.933 | 10.934 | -0.001 | 95 | 1796031 | 5.00 | 5.52 | |
| 118 4-Chlorotoluene | 126 | 11.017 | 11.003 | 0.014 | 97 | 507490 | 5.00 | 5.30 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 91 | 1808885 | 5.00 | 5.43 | |
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 96 | 1819813 | 5.00 | 5.52 | |
| 122 sec-Butylbenzene | 134 | 11.408 | 11.394 | 0.014 | 93 | 511160 | 5.00 | 5.39 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.492 | 0.000 | 97 | 2039873 | 5.00 | 5.07 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 97 | 961160 | 5.00 | 5.35 | |
| 126 1,4-Dichlorobenzene | 146 | 11.618 | 11.618 | 0.000 | 95 | 954591 | 5.00 | 5.34 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 97 | 1830811 | 5.00 | 5.49 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 99 | 823552 | 5.00 | 5.34 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 90 | 48255 | 5.00 | 5.35 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.657 | 0.000 | 94 | 598862 | 5.00 | 5.26 | |
| 131 Hexachlorobutadiene | 225 | 13.824 | 13.825 | -0.001 | 96 | 380632 | 5.00 | 5.28 | |
| 132 Naphthalene | 128 | 14.006 | 14.006 | 0.000 | 97 | 919731 | 5.00 | 5.35 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.327 | 14.327 | 0.000 | 96 | 486301 | 5.00 | 5.27 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 10.0 | 10.7 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 10.0 | 10.8 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 20.0 | 21.1 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 10.0 | 10.8 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 10.0 | 10.7 | |
| S 137 Total BTEX | 1 | | | | 0 | | | 27.0 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 10.0 | 10.7 | |

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-ARCH SS A_00108 | Amount Added: | 0.40 | Units: uL |
| MV-MegaMainA_00009 | Amount Added: | 2.00 | Units: uL |
| MV-Gas A_00005 | Amount Added: | 2.00 | Units: uL |

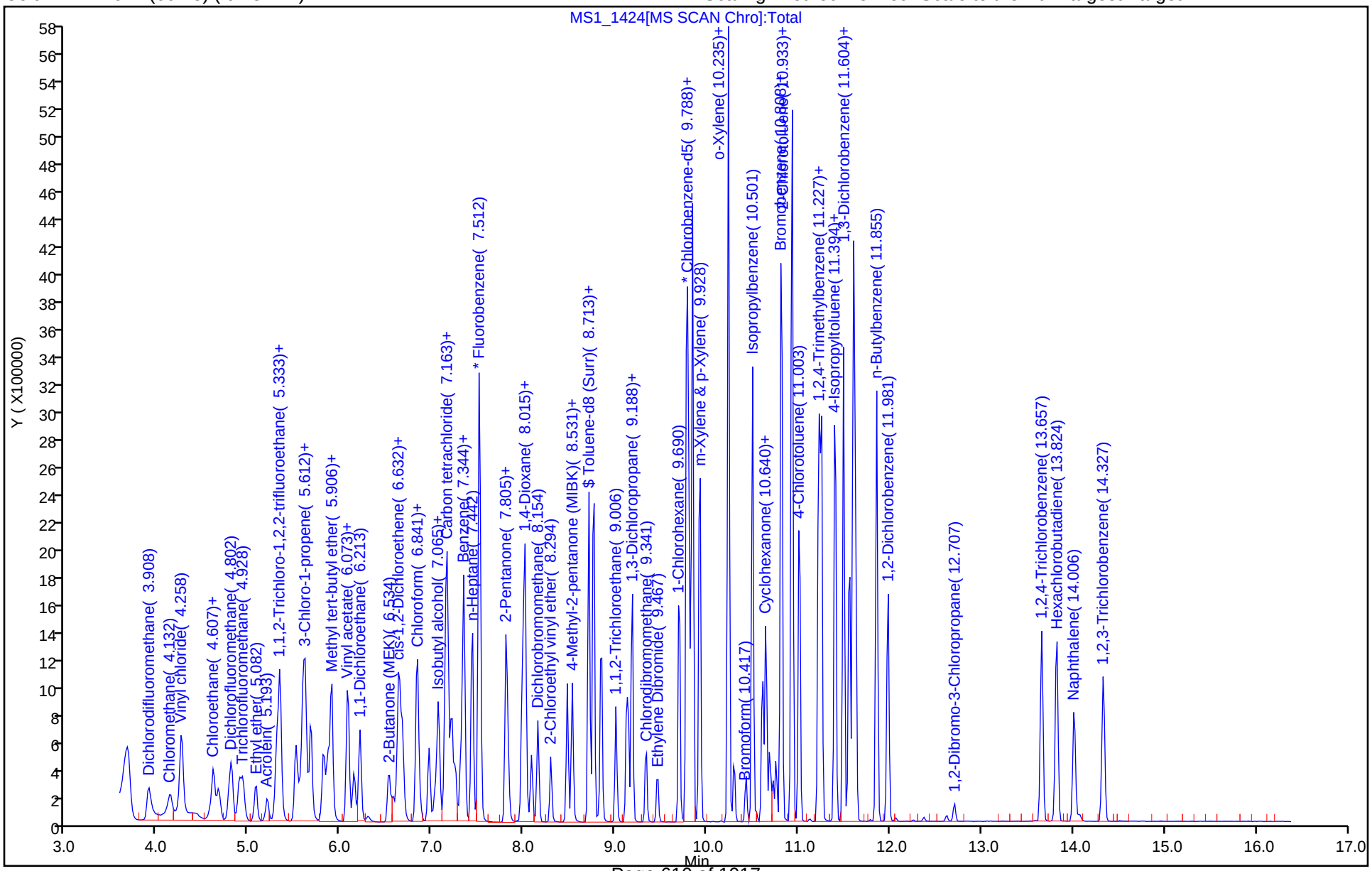
Report Date: 24-Jan-2019 11:47:05 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1424.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 18-Jan-2019 12:50:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 15 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 6 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1425.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 18-Jan-2019 13:10:30 ALS Bottle#: 7 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icis
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub76

Method: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Jan-2019 11:47:13 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0316

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.571 | 5.571 | 0.000 | 86 | 585242 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3226220 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 83 | 740423 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 93 | 1126170 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 726028 | 10.0 | 10.7 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 564701 | 10.0 | 10.7 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2953719 | 10.0 | 10.7 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.640 | 0.000 | 0 | 1020600 | 10.0 | 10.6 | |
| 24 Dichlorodifluoromethane | 85 | 3.909 | 3.909 | 0.000 | 99 | 1171966 | 10.0 | 11.9 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 99 | 628325 | 10.0 | 10.7 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.258 | 0.000 | 89 | 681643 | 10.0 | 11.1 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 89 | 845059 | 10.0 | 11.6 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 654681 | 10.0 | 11.2 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 96 | 1514981 | 10.0 | 11.0 | |
| 33 Trichlorofluoromethane | 101 | 4.928 | 4.928 | 0.000 | 98 | 1365881 | 10.0 | 11.2 | |
| 36 Ethyl ether | 59 | 5.068 | 5.068 | 0.000 | 86 | 450400 | 10.0 | 11.0 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 99 | 434014 | 100.0 | 108.4 | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 98 | 282912 | 40.0 | 38.8 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.319 | 5.319 | 0.000 | 93 | 681313 | 10.0 | 11.1 | |
| 43 1,1-Dichloroethene | 96 | 5.347 | 5.347 | 0.000 | 95 | 818273 | 10.0 | 11.0 | |
| 45 Iodomethane | 142 | 5.515 | 5.515 | 0.000 | 97 | 1459534 | 10.0 | 11.1 | |
| 46 Methyl acetate | 43 | 5.529 | 5.529 | 0.000 | 95 | 401302 | 20.0 | 20.7 | |
| 47 3-Chloro-1-propene | 41 | 5.584 | 5.584 | 0.000 | 83 | 1097527 | 10.0 | 10.9 | |
| 48 Carbon disulfide | 76 | 5.612 | 5.612 | 0.000 | 98 | 3419341 | 10.0 | 10.9 | |
| 49 2-Methyl-2-propanol | 59 | 5.640 | 5.640 | 0.000 | 93 | 345121 | 100.0 | 104.9 | |
| 50 Methylene Chloride | 84 | 5.668 | 5.668 | 0.000 | 84 | 832794 | 10.0 | 10.1 | |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 100 | 1081364 | 100.0 | 109.9 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 92 | 1533979 | 10.0 | 11.0 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.906 | 5.906 | 0.000 | 96 | 918029 | 10.0 | 10.9 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 87 | 1268896 | 10.0 | 10.8 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 97 | 1339954 | 20.0 | 22.4 | |
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 95 | 1409113 | 10.0 | 11.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 96 | 566227 | 40.0 | 42.3 | |
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 96 | 749412 | 300.0 | 321.3 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 79 | 996019 | 10.0 | 11.0 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 87 | 1189653 | 10.0 | 10.7 | |
| 67 Chlorobromomethane | 128 | 6.827 | 6.827 | 0.000 | 91 | 375027 | 10.0 | 11.0 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 92 | 1395397 | 10.0 | 11.0 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 84 | 164865 | 20.0 | 22.2 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 95 | 223951 | 250.0 | 262.9 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 97 | 1311669 | 10.0 | 11.0 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 87 | 1502194 | 10.0 | 11.1 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 97 | 1184111 | 10.0 | 11.0 | |
| 74 Carbon tetrachloride | 117 | 7.219 | 7.219 | 0.000 | 94 | 1138428 | 10.0 | 11.1 | |
| 75 1,2-Dichloroethane | 62 | 7.316 | 7.316 | 0.000 | 97 | 710689 | 10.0 | 11.0 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 94 | 3470438 | 10.0 | 11.0 | |
| 9 n-Heptane | 43 | 7.442 | 7.442 | 0.000 | 85 | 1147621 | 10.0 | 11.1 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 97 | 906869 | 10.0 | 10.9 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 97 | 799547 | 40.0 | 44.1 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 96 | 766794 | 10.0 | 10.9 | |
| 83 Methylcyclohexane | 55 | 8.015 | 8.015 | 0.000 | 91 | 1202753 | 10.0 | 11.1 | |
| 84 1,4-Dioxane | 88 | 8.029 | 8.029 | 0.000 | 86 | 72472 | 200.0 | 223.7 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 95 | 344068 | 10.0 | 11.0 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 99 | 955495 | 10.0 | 11.0 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 91 | 427974 | 20.0 | 22.3 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.475 | 8.475 | 0.000 | 99 | 1130448 | 10.0 | 10.8 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 92 | 1146299 | 40.0 | 44.3 | |
| 91 Toluene | 91 | 8.769 | 8.769 | 0.000 | 99 | 3668181 | 10.0 | 11.1 | |
| 92 Ethyl methacrylate | 69 | 8.839 | 8.839 | 0.000 | 88 | 624874 | 10.0 | 10.9 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.853 | 8.853 | 0.000 | 95 | 896600 | 10.0 | 11.2 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 89 | 493250 | 10.0 | 11.0 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 91 | 759469 | 40.0 | 42.6 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 87 | 850812 | 10.0 | 10.9 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 97 | 772120 | 10.0 | 10.8 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 90 | 605059 | 10.0 | 10.9 | |
| 100 Ethylene Dibromide | 107 | 9.467 | 9.467 | 0.000 | 99 | 469389 | 10.0 | 10.9 | |
| 101 1-Chlorohexane | 91 | 9.705 | 9.705 | 0.000 | 0 | 1300046 | 10.0 | 10.8 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 98 | 2349381 | 10.0 | 10.9 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 97 | 1395967 | 10.0 | 10.9 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 95 | 794088 | 10.0 | 11.0 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 98 | 1717480 | 10.0 | 10.9 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 87 | 1660638 | 10.0 | 11.1 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 88 | 2643061 | 10.0 | 11.2 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 99 | 325072 | 10.0 | 11.2 | |
| 108 Isopropylbenzene | 105 | 10.501 | 10.501 | 0.000 | 95 | 4266474 | 10.0 | 10.7 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 88 | 807200 | 400.0 | 421.9 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.682 | 0.000 | 94 | 527516 | 10.0 | 11.0 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 90 | 115500 | 10.0 | 11.0 | |
| 114 1,2,3-Trichloropropane | 110 | 10.752 | 10.752 | 0.000 | 83 | 151486 | 10.0 | 11.1 | |
| 116 Bromobenzene | 156 | 10.808 | 10.808 | 0.000 | 92 | 958002 | 10.0 | 11.1 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 97 | 1243004 | 10.0 | 11.1 | |
| 117 2-Chlorotoluene | 126 | 10.934 | 10.934 | 0.000 | 96 | 1020584 | 10.0 | 11.0 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.934 | 10.934 | 0.000 | 96 | 3592583 | 10.0 | 11.3 | |
| 118 4-Chlorotoluene | 126 | 11.003 | 11.003 | 0.000 | 98 | 1040244 | 10.0 | 11.1 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 91 | 3634412 | 10.0 | 11.2 | |
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 96 | 3633619 | 10.0 | 11.3 | |
| 122 sec-Butylbenzene | 134 | 11.394 | 11.394 | 0.000 | 94 | 1026741 | 10.0 | 11.1 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.492 | 0.000 | 96 | 4082802 | 10.0 | 10.9 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 97 | 1944498 | 10.0 | 11.1 | |
| 126 1,4-Dichlorobenzene | 146 | 11.618 | 11.618 | 0.000 | 95 | 1919952 | 10.0 | 11.0 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 97 | 3695681 | 10.0 | 11.3 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 99 | 1669394 | 10.0 | 11.1 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 91 | 100644 | 10.0 | 11.4 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.657 | 0.000 | 94 | 1261251 | 10.0 | 11.3 | |
| 131 Hexachlorobutadiene | 225 | 13.825 | 13.825 | 0.000 | 97 | 794800 | 10.0 | 11.3 | |
| 132 Naphthalene | 128 | 14.006 | 14.006 | 0.000 | 97 | 1918358 | 10.0 | 11.4 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.327 | 14.327 | 0.000 | 96 | 1032802 | 10.0 | 11.4 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 20.0 | 21.9 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 40.0 | 44.1 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 20.0 | 22.0 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 20.0 | 22.0 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 20.0 | 21.9 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 20.0 | 22.0 | |

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL |
| MV-MegaMainA_00009 | Amount Added: | 4.00 | Units: uL |
| MV-Gas A_00005 | Amount Added: | 4.00 | Units: uL |

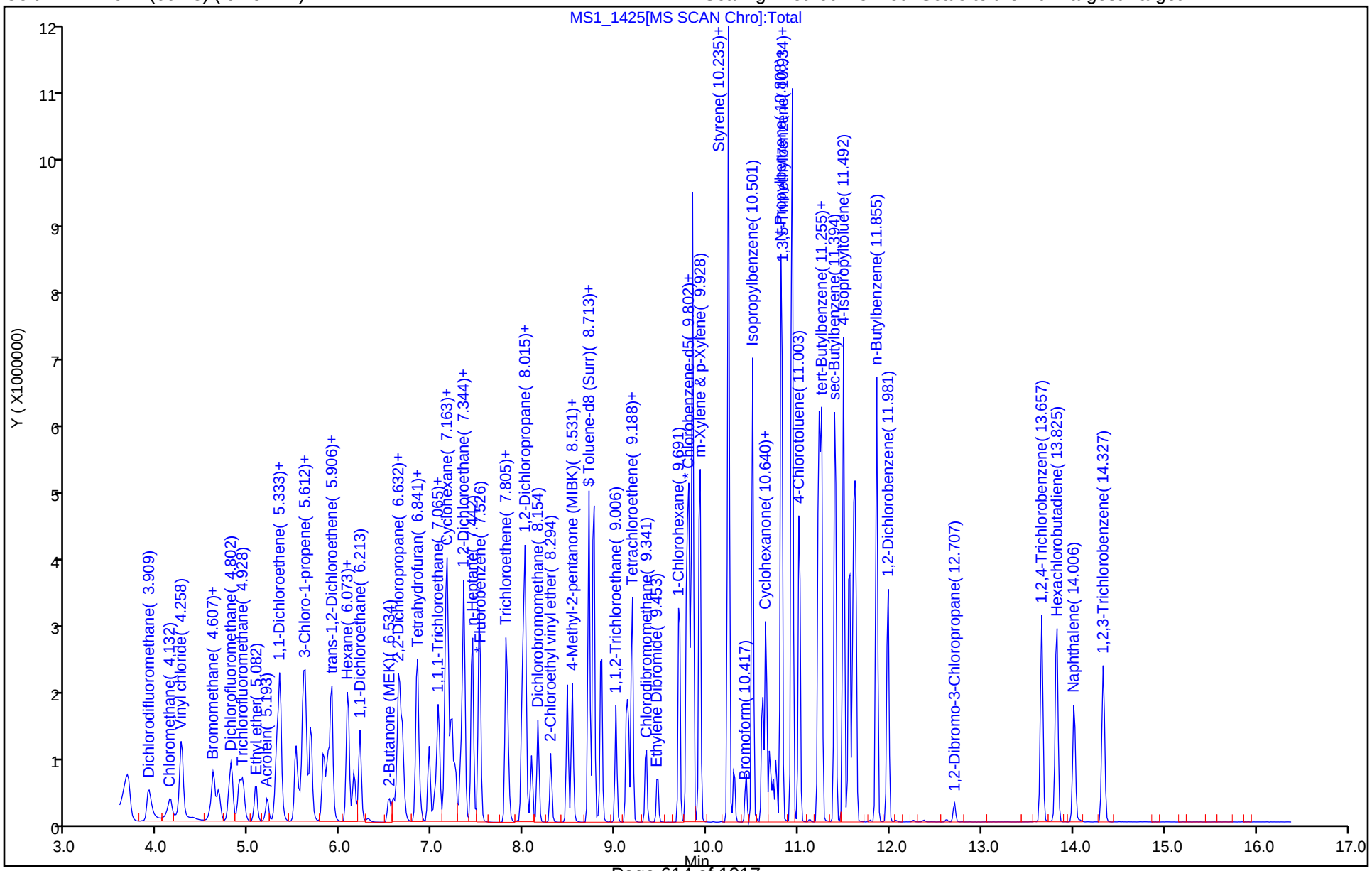
Report Date: 24-Jan-2019 11:47:16 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1425.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 18-Jan-2019 13:10:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | icis | | | Worklist Smp#: | 16 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 7 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1426.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Jan-2019 13:31:30 ALS Bottle#: 8 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub76

Method: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Jan-2019 11:47:25 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0316

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.571 | 5.571 | 0.000 | 86 | 629220 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3684080 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 89 | 836068 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 94 | 1297016 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 2221023 | 30.0 | 28.7 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 96 | 1705149 | 30.0 | 28.2 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 91 | 8532119 | 30.0 | 27.3 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.640 | 0.000 | 0 | 3068055 | 30.0 | 27.6 | |
| 24 Dichlorodifluoromethane | 85 | 3.895 | 3.909 | -0.014 | 99 | 2755734 | 25.0 | 24.5 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 98 | 1524004 | 25.0 | 22.7 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.258 | 0.000 | 89 | 1596019 | 25.0 | 22.8 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 89 | 1968771 | 25.0 | 23.6 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 1536922 | 25.0 | 23.0 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 96 | 3647134 | 25.0 | 23.2 | |
| 33 Trichlorofluoromethane | 101 | 4.914 | 4.928 | -0.014 | 98 | 3214343 | 25.0 | 23.1 | |
| 36 Ethyl ether | 59 | 5.068 | 5.068 | 0.000 | 86 | 1148307 | 25.0 | 24.6 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 99 | 1083086 | 250.0 | 236.9 | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 98 | 724562 | 100.0 | 87.1 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.305 | 5.319 | -0.014 | 93 | 1699288 | 25.0 | 24.2 | |
| 43 1,1-Dichloroethene | 96 | 5.333 | 5.347 | -0.014 | 95 | 2046414 | 25.0 | 24.2 | |
| 45 Iodomethane | 142 | 5.501 | 5.515 | -0.014 | 98 | 3617706 | 25.0 | 24.1 | |
| 46 Methyl acetate | 43 | 5.529 | 5.529 | 0.000 | 95 | 1009810 | 50.0 | 45.6 | |
| 47 3-Chloro-1-propene | 41 | 5.584 | 5.584 | 0.000 | 84 | 2688245 | 25.0 | 23.3 | |
| 48 Carbon disulfide | 76 | 5.612 | 5.612 | 0.000 | 98 | 8287243 | 25.0 | 23.2 | |
| 49 2-Methyl-2-propanol | 59 | 5.626 | 5.640 | -0.014 | 95 | 869689 | 250.0 | 245.9 | |
| 50 Methylene Chloride | 84 | 5.668 | 5.668 | 0.000 | 84 | 2071405 | 25.0 | 22.0 | |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 100 | 2689827 | 250.0 | 239.4 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 92 | 3820736 | 25.0 | 24.0 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.892 | 5.906 | -0.014 | 95 | 2298004 | 25.0 | 24.0 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 86 | 3119695 | 25.0 | 23.4 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 96 | 3306095 | 50.0 | 48.5 | |
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 95 | 3474463 | 25.0 | 23.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 96 | 1418529 | 100.0 | 92.8 | |
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 96 | 1862088 | 750.0 | 742.6 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 74 | 2498241 | 25.0 | 24.1 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 85 | 2898201 | 25.0 | 22.8 | |
| 67 Chlorobromomethane | 128 | 6.827 | 6.827 | 0.000 | 90 | 944402 | 25.0 | 24.3 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 92 | 3484996 | 25.0 | 24.0 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 82 | 407809 | 50.0 | 48.7 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 96 | 572428 | 625.0 | 625.1 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 97 | 3250627 | 25.0 | 23.8 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 85 | 3642411 | 25.0 | 23.5 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 97 | 2923720 | 25.0 | 23.7 | |
| 74 Carbon tetrachloride | 117 | 7.205 | 7.219 | -0.014 | 96 | 2829288 | 25.0 | 24.1 | |
| 75 1,2-Dichloroethane | 62 | 7.316 | 7.316 | 0.000 | 97 | 1772537 | 25.0 | 24.1 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 95 | 8512447 | 25.0 | 23.6 | |
| 9 n-Heptane | 43 | 7.428 | 7.442 | -0.014 | 86 | 2794861 | 25.0 | 23.6 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 97 | 2302650 | 25.0 | 24.1 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 97 | 2027143 | 100.0 | 97.9 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 96 | 1917043 | 25.0 | 23.9 | |
| 83 Methylcyclohexane | 55 | 8.015 | 8.015 | 0.000 | 89 | 2934952 | 25.0 | 23.7 | |
| 84 1,4-Dioxane | 88 | 8.029 | 8.029 | 0.000 | 85 | 179458 | 500.0 | 485.1 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 94 | 873941 | 25.0 | 24.5 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 99 | 2418940 | 25.0 | 24.5 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 90 | 1160995 | 50.0 | 52.9 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.475 | 8.475 | 0.000 | 99 | 2868741 | 25.0 | 24.4 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 91 | 2836911 | 100.0 | 96.0 | |
| 91 Toluene | 91 | 8.769 | 8.769 | 0.000 | 99 | 8886654 | 25.0 | 23.5 | |
| 92 Ethyl methacrylate | 69 | 8.839 | 8.839 | 0.000 | 88 | 1556039 | 25.0 | 23.9 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.853 | 8.853 | 0.000 | 93 | 2246928 | 25.0 | 24.5 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 89 | 1249882 | 25.0 | 24.4 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 90 | 1941952 | 100.0 | 96.5 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 86 | 2143737 | 25.0 | 24.2 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 97 | 1948502 | 25.0 | 24.1 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 90 | 1572542 | 25.0 | 25.2 | |
| 100 Ethylene Dibromide | 107 | 9.453 | 9.467 | -0.014 | 99 | 1193909 | 25.0 | 24.6 | |
| 101 1-Chlorohexane | 91 | 9.705 | 9.705 | 0.000 | 0 | 3241360 | 25.0 | 23.9 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 96 | 5810648 | 25.0 | 23.8 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 97 | 3527761 | 25.0 | 24.4 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 96 | 2027070 | 25.0 | 24.9 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 97 | 4281499 | 25.0 | 24.0 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 86 | 4067594 | 25.0 | 24.0 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 88 | 6431083 | 25.0 | 24.1 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 99 | 845942 | 25.0 | 25.7 | |
| 108 Isopropylbenzene | 105 | 10.501 | 10.501 | 0.000 | 95 | 10027852 | 25.0 | 24.5 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 87 | 2078277 | 1000.0 | 962.1 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.682 | 0.000 | 93 | 1328163 | 25.0 | 24.0 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 91 | 290248 | 25.0 | 24.0 | |
| 114 1,2,3-Trichloropropane | 110 | 10.752 | 10.752 | 0.000 | 83 | 381483 | 25.0 | 24.3 | |
| 116 Bromobenzene | 156 | 10.808 | 10.808 | 0.000 | 91 | 2430041 | 25.0 | 24.4 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 97 | 3100243 | 25.0 | 23.9 | |
| 117 2-Chlorotoluene | 126 | 10.934 | 10.934 | 0.000 | 97 | 2543045 | 25.0 | 23.9 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.934 | 10.934 | 0.000 | 96 | 8526075 | 25.0 | 23.2 | |
| 118 4-Chlorotoluene | 126 | 11.003 | 11.003 | 0.000 | 97 | 2585286 | 25.0 | 24.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 91 | 8869613 | 25.0 | 23.6 | |
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 95 | 8709650 | 25.0 | 23.4 | |
| 122 sec-Butylbenzene | 134 | 11.394 | 11.394 | 0.000 | 94 | 2556477 | 25.0 | 23.9 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.492 | 0.000 | 95 | 9536958 | 25.0 | 24.4 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 98 | 4772169 | 25.0 | 23.6 | |
| 126 1,4-Dichlorobenzene | 146 | 11.618 | 11.618 | 0.000 | 94 | 4736011 | 25.0 | 23.5 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 96 | 8697203 | 25.0 | 23.2 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 99 | 4138624 | 25.0 | 23.8 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 92 | 259331 | 25.0 | 25.5 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.657 | 0.000 | 94 | 3076277 | 25.0 | 24.0 | |
| 131 Hexachlorobutadiene | 225 | 13.825 | 13.825 | 0.000 | 96 | 1935981 | 25.0 | 23.8 | |
| 132 Naphthalene | 128 | 14.006 | 14.006 | 0.000 | 97 | 4627993 | 25.0 | 23.9 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.327 | 14.327 | 0.000 | 96 | 2474963 | 25.0 | 23.8 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 50.0 | 48.1 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 50.0 | 48.1 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 50.0 | 48.1 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 100.0 | 99.4 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 50.0 | 48.1 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 50.0 | 48.9 | |
| S 137 Total BTEX | 1 | | | | 0 | | | 119.5 | |

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-ARCH SS A_00108 | Amount Added: | 2.40 | Units: uL |
| MV-MegaMainA_00009 | Amount Added: | 10.00 | Units: uL |
| MV-Gas A_00005 | Amount Added: | 10.00 | Units: uL |

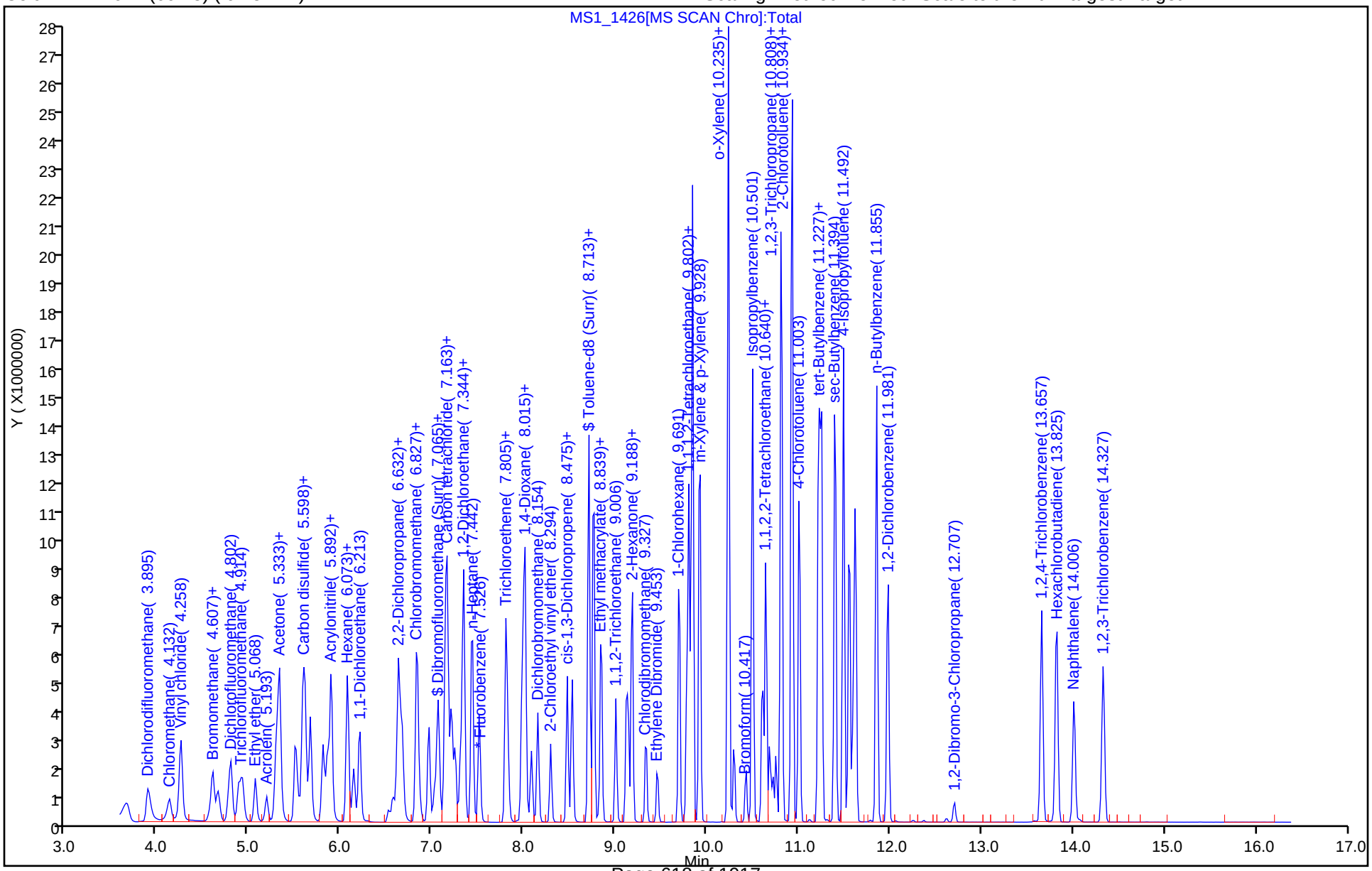
Report Date: 24-Jan-2019 11:47:29 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1426.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 18-Jan-2019 13:31:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 17 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 8 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D
Lims ID: std
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 18-Jan-2019 13:52:30 ALS Bottle#: 9 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: std
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub76

Method: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Jan-2019 11:47:40 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0316

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.571 | 5.571 | 0.001 | 87 | 612511 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3476033 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 92 | 793943 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 94 | 1223177 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 4258269 | 60.0 | 58.2 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 96 | 3276937 | 60.0 | 57.4 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 91 | 14713483 | 60.0 | 49.6 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.640 | 0.000 | 0 | 5769717 | 60.0 | 55.1 | |
| 24 Dichlorodifluoromethane | 85 | 3.895 | 3.909 | -0.014 | 99 | 6166967 | 60.0 | 58.0 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 98 | 3421101 | 60.0 | 53.9 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.258 | 0.000 | 89 | 3472179 | 60.0 | 52.6 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 90 | 3596940 | 60.0 | 45.7 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 2913143 | 60.0 | 46.3 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 96 | 8064893 | 60.0 | 54.4 | |
| 33 Trichlorofluoromethane | 101 | 4.928 | 4.928 | 0.000 | 98 | 7219290 | 60.0 | 55.0 | |
| 36 Ethyl ether | 59 | 5.068 | 5.068 | 0.000 | 86 | 2619692 | 60.0 | 59.4 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 100 | 2424818 | 600.1 | 562.1 | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 97 | 1597385 | 240.0 | 203.5 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.305 | 5.319 | -0.014 | 93 | 3757398 | 60.0 | 56.6 | |
| 43 1,1-Dichloroethene | 96 | 5.333 | 5.347 | -0.014 | 94 | 4500944 | 60.0 | 56.4 | |
| 45 Iodomethane | 142 | 5.515 | 5.515 | 0.000 | 98 | 8061514 | 60.0 | 57.0 | |
| 46 Methyl acetate | 43 | 5.529 | 5.529 | 0.000 | 95 | 2289449 | 120.0 | 109.5 | |
| 47 3-Chloro-1-propene | 41 | 5.584 | 5.584 | 0.000 | 86 | 5664648 | 60.0 | 52.1 | |
| 48 Carbon disulfide | 76 | 5.612 | 5.612 | 0.000 | 98 | 17228126 | 60.0 | 51.1 | |
| 49 2-Methyl-2-propanol | 59 | 5.626 | 5.640 | -0.014 | 93 | 1987739 | 600.0 | 577.3 | |
| 50 Methylene Chloride | 84 | 5.668 | 5.668 | 0.000 | 83 | 4589531 | 60.0 | 51.7 | |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 100 | 6018440 | 600.0 | 567.8 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 92 | 8545378 | 60.0 | 56.8 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.906 | 5.906 | 0.000 | 94 | 5086564 | 60.0 | 56.2 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 86 | 6585828 | 60.0 | 52.1 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 96 | 6958320 | 120.0 | 108.1 | |
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 95 | 7580767 | 60.0 | 55.1 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 96 | 3206890 | 240.0 | 222.4 | |
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 96 | 4162502 | 1800.0 | 1705.3 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 73 | 5552817 | 60.0 | 56.8 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 86 | 6334823 | 60.0 | 52.8 | |
| 67 Chlorobromomethane | 128 | 6.827 | 6.827 | 0.000 | 89 | 2157417 | 60.0 | 58.9 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 92 | 7604455 | 60.0 | 55.6 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 82 | 934688 | 120.0 | 119.1 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 97 | 1304557 | 1500.0 | 1463.5 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 97 | 7173707 | 60.0 | 55.7 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 87 | 7631263 | 60.0 | 52.2 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 96 | 6290244 | 60.0 | 54.1 | |
| 74 Carbon tetrachloride | 117 | 7.219 | 7.219 | 0.000 | 95 | 6220315 | 60.0 | 56.1 | |
| 75 1,2-Dichloroethane | 62 | 7.316 | 7.316 | 0.000 | 97 | 3944821 | 60.0 | 56.8 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 96 | 17377078 | 60.0 | 51.1 | |
| 9 n-Heptane | 43 | 7.442 | 7.442 | 0.000 | 82 | 5714314 | 60.0 | 51.2 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 97 | 5093263 | 60.0 | 56.6 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 96 | 4539381 | 240.0 | 232.3 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 95 | 4230718 | 60.0 | 56.0 | |
| 83 Methylcyclohexane | 55 | 8.015 | 8.015 | 0.000 | 87 | 6142671 | 60.0 | 52.6 | |
| 84 1,4-Dioxane | 88 | 8.029 | 8.029 | 0.000 | 88 | 406440 | 1200.0 | 1164.4 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 96 | 1999575 | 60.0 | 59.3 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 99 | 5420232 | 60.0 | 58.2 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 91 | 2790762 | 120.0 | 134.7 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.475 | 8.475 | 0.000 | 98 | 6340608 | 60.0 | 56.7 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 90 | 6215576 | 240.0 | 223.0 | |
| 91 Toluene | 91 | 8.769 | 8.769 | 0.000 | 95 | 16663360 | 60.0 | 46.6 | e |
| 92 Ethyl methacrylate | 69 | 8.839 | 8.839 | 0.000 | 87 | 3518432 | 60.0 | 57.0 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.853 | 8.853 | 0.000 | 93 | 4991365 | 60.0 | 57.7 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 89 | 2864131 | 60.0 | 59.2 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 89 | 4259574 | 240.0 | 223.0 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 86 | 4773527 | 60.0 | 56.8 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 96 | 4269613 | 60.0 | 55.5 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 90 | 3627417 | 60.0 | 61.1 | |
| 100 Ethylene Dibromide | 107 | 9.453 | 9.467 | -0.014 | 98 | 2766596 | 60.0 | 60.0 | |
| 101 1-Chlorohexane | 91 | 9.705 | 9.705 | 0.000 | 0 | 6873379 | 60.0 | 53.4 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 94 | 12004410 | 60.0 | 51.8 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 92 | 7202198 | 60.0 | 52.4 | e |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 96 | 4404026 | 60.0 | 56.9 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 95 | 8959315 | 60.0 | 53.0 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 81 | 8081245 | 60.0 | 50.3 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 86 | 12336644 | 60.0 | 48.7 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 99 | 2024587 | 60.0 | 64.8 | |
| 108 Isopropylbenzene | 105 | 10.501 | 10.501 | 0.000 | 94 | 16649604 | 60.0 | 60.2 | e |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 86 | 4512595 | 2400.0 | 2199.8 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.682 | 0.000 | 94 | 3047475 | 60.0 | 58.4 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 91 | 669658 | 60.0 | 58.8 | |
| 114 1,2,3-Trichloropropane | 110 | 10.752 | 10.752 | 0.000 | 83 | 895480 | 60.0 | 60.4 | |
| 116 Bromobenzene | 156 | 10.808 | 10.808 | 0.000 | 90 | 5262250 | 60.0 | 55.9 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 90 | 6483693 | 60.0 | 53.1 | |
| 117 2-Chlorotoluene | 126 | 10.934 | 10.934 | 0.000 | 97 | 5186436 | 60.0 | 51.7 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.934 | 10.934 | 0.000 | 97 | 15836029 | 60.0 | 45.8 | |
| 118 4-Chlorotoluene | 126 | 11.017 | 11.003 | 0.014 | 95 | 5581654 | 60.0 | 54.9 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 90 | 17255519 | 60.0 | 48.7 | |
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 95 | 15951842 | 60.0 | 45.5 | e |
| 122 sec-Butylbenzene | 134 | 11.408 | 11.394 | 0.014 | 93 | 5465780 | 60.0 | 54.2 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.492 | 0.000 | 90 | 16280804 | 60.0 | 60.2 | e |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 97 | 10093815 | 60.0 | 52.9 | |
| 126 1,4-Dichlorobenzene | 146 | 11.618 | 11.618 | 0.000 | 94 | 10019669 | 60.0 | 52.8 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 90 | 15710223 | 60.0 | 44.4 | e |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 97 | 8978699 | 60.0 | 54.8 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 92 | 615705 | 60.0 | 64.3 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.657 | 0.000 | 95 | 6965105 | 60.0 | 57.5 | |
| 131 Hexachlorobutadiene | 225 | 13.825 | 13.825 | 0.000 | 97 | 4364826 | 60.0 | 57.0 | |
| 132 Naphthalene | 128 | 14.006 | 14.006 | 0.000 | 97 | 10585375 | 60.0 | 57.9 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.327 | 14.327 | 0.000 | 96 | 5705267 | 60.0 | 58.2 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 120.0 | 113.0 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 120.0 | 103.2 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 240.0 | 239.6 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 120.0 | 103.2 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 120.0 | 113.0 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 120.0 | 114.4 | |
| S 137 Total BTEX | 1 | | | | 0 | | | 253.4 | |

## QC Flag Legend

Processing Flags

e - Potential Peak Saturated

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-ARCH SS A_00108 | Amount Added: | 4.80 | Units: uL |
| MV-MegaMainA_00009 | Amount Added: | 24.00 | Units: uL |
| MV-Gas A_00005 | Amount Added: | 24.00 | Units: uL |

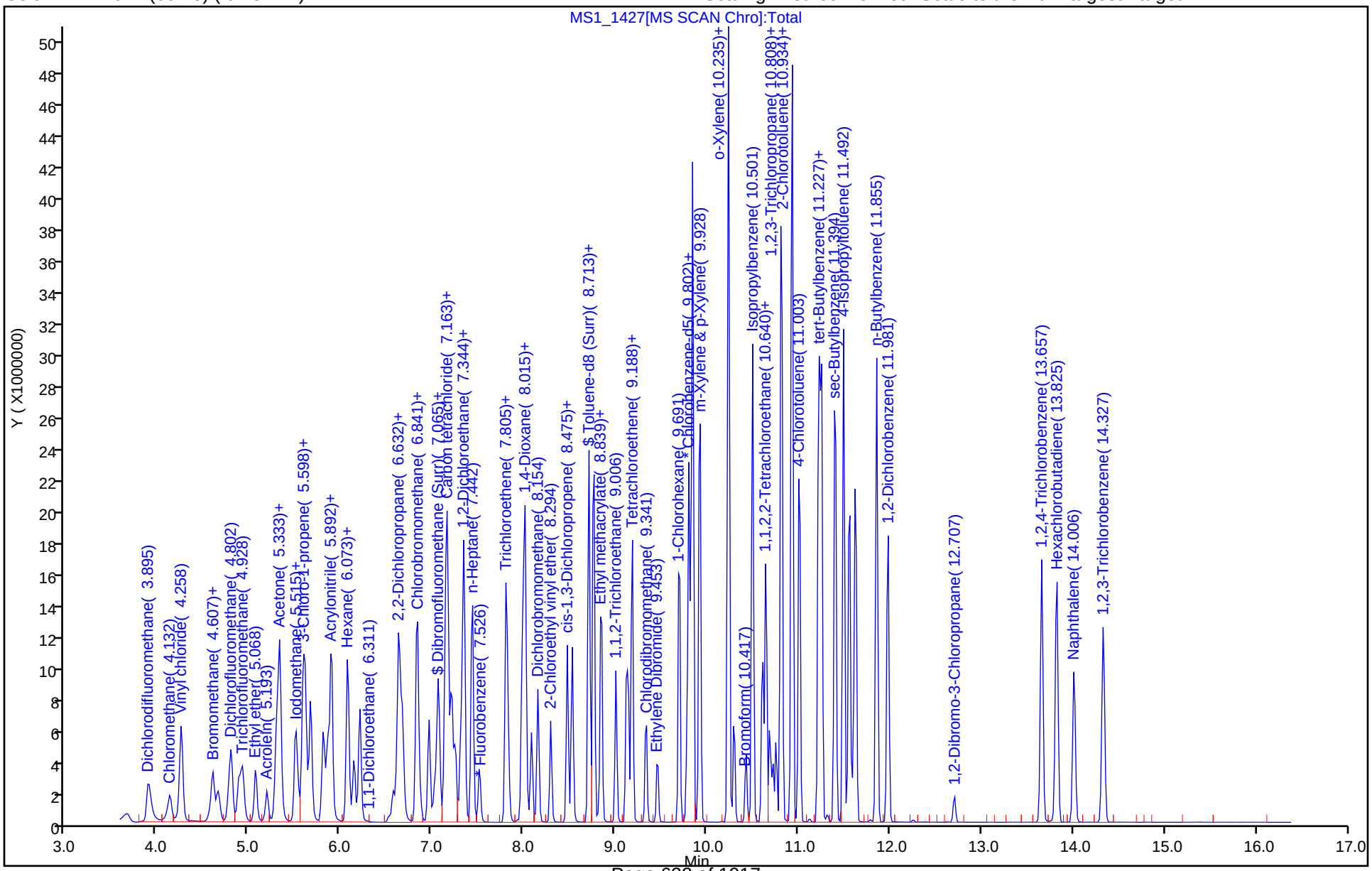
Report Date: 24-Jan-2019 11:47:45 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 18-Jan-2019 13:52:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | std | | | Worklist Smp#: | 18 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 9 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-443512/26 Calibration Date: 01/08/2019 14:55

Instrument ID: VMS_MS1 Calib Start Date: 08/02/2018 11:55

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 08/02/2018 13:37

Lab File ID: MS1_1084.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Tetrahydrothiophene | Ave | 0.0250 | | | 0.600 | 20.0 | | |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1084.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 08-Jan-2019 14:55:30 ALS Bottle#: 19 Worklist Smp#: 26
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist:

Method: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Jan-2019 06:55:22 Calib Date: 08-Jan-2019 14:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1082.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: nwangumaf Date: 08-Jan-2019 18:39:01

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.585 | 5.585 | 0.000 | 71 | 412199 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.526 | 7.526 | 0.000 | 99 | 2484717 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 86 | 500628 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 95 | 685942 | 12.5 | 12.5 | |
| 28 Ethylene oxide | 43 | 4.537 | 4.551 | -0.014 | 98 | 595036 | 1000.0 | 1114.8 | |
| 34 Ethanol | 45 | 4.928 | 4.942 | -0.014 | 97 | 142594 | 600.0 | 604.8 | |
| 38 Propene oxide | 58 | 5.166 | 5.166 | 0.000 | 0 | 3472012 | 1000.0 | 984.4 | |
| 41 Isopropyl alcohol | 45 | 5.319 | 5.333 | -0.014 | 98 | 140734 | 100.0 | 93.0 | |
| 44 Acetonitrile | 41 | 5.515 | 5.529 | -0.014 | 99 | 266504 | 100.0 | 97.4 | |
| 56 Isopropyl ether | 87 | 6.185 | 6.185 | 0.000 | 94 | 463797 | 10.0 | 10.6 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.297 | 6.297 | 0.000 | 89 | 798536 | 10.0 | 11.1 | |
| 59 Tert-butyl ethyl ether | 59 | 6.464 | 6.464 | 0.000 | 97 | 1319185 | 10.0 | 10.4 | |
| 60 Ethyl acetate | 43 | 6.576 | 6.590 | -0.014 | 98 | 380708 | 20.0 | 17.8 | |
| 63 Propionitrile | 54 | 6.632 | 6.632 | 0.000 | 99 | 328706 | 100.0 | 99.2 | |
| 66 Methacrylonitrile | 41 | 6.758 | 6.758 | 0.000 | 88 | 1346316 | 100.0 | 99.8 | |
| 76 Tert-amyl methyl ether | 73 | 7.344 | 7.358 | -0.014 | 97 | 1094986 | 10.0 | 10.4 | |
| 78 n-Butanol | 56 | 7.540 | 7.540 | 0.000 | 84 | 166576 | 250.0 | 240.3 | |
| 81 Methyl methacrylate | 100 | 7.945 | 7.945 | 0.000 | 87 | 139641 | 20.0 | 21.5 | |
| 87 2-Nitropropane | 41 | 8.294 | 8.294 | 0.000 | 98 | 49302 | 20.0 | 14.3 | |
| 99 Tetrahydrothiophene | 60 | | 9.397 | | | | ND | ND | U |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 83 | 71650 | 20.0 | 17.1 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 98 | 2000891 | 10.0 | 10.4 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.931 | 0.000 | 97 | 746798 | 10.0 | 9.52 | |

## QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags
U - Marked Undetected

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-Supp B_00023 | Amount Added: | 4.00 | Units: uL |

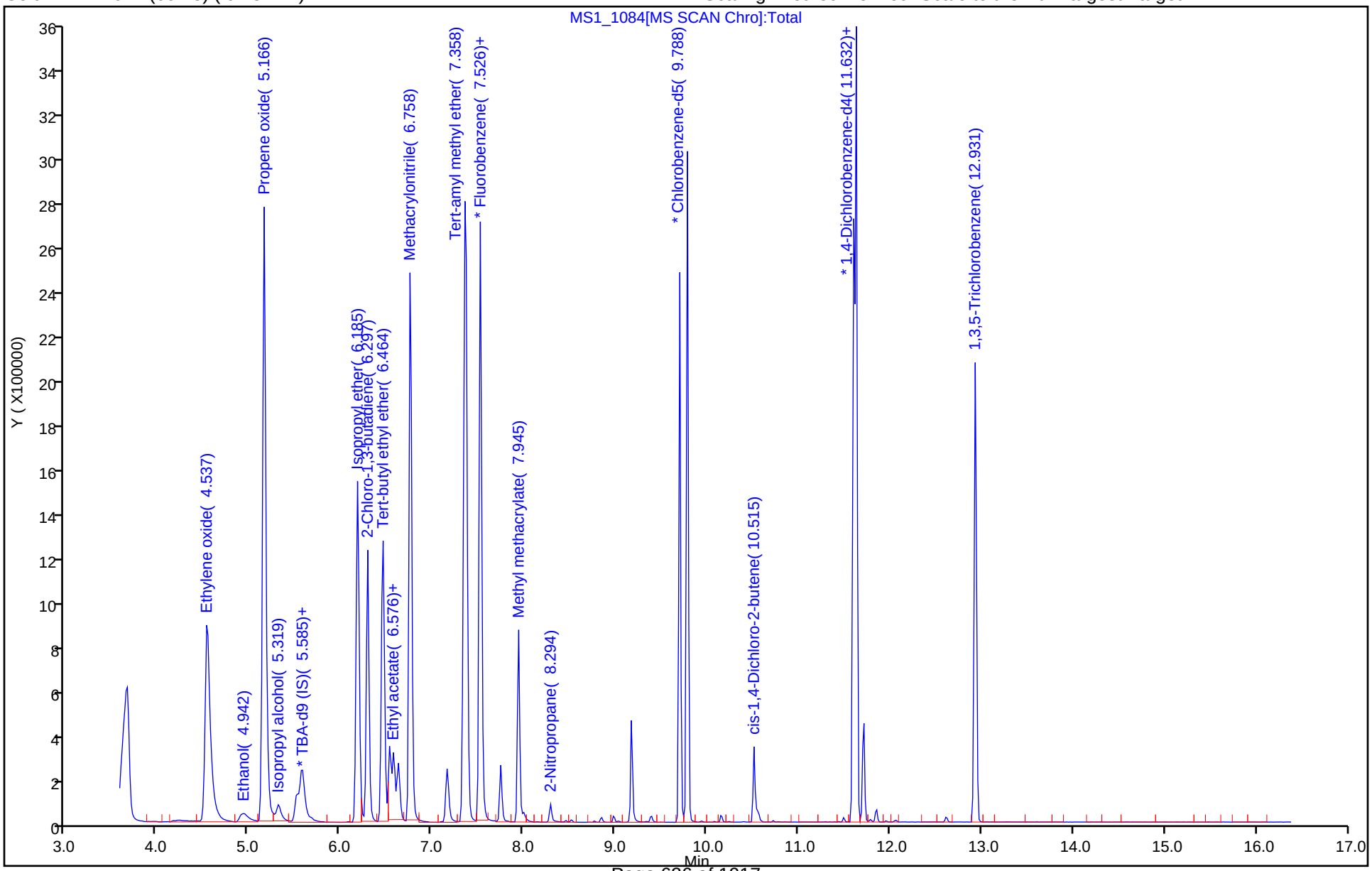
Report Date: 09-Jan-2019 06:55:23 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1084.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 14:55:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | icv | | | Worklist Smp#: | 26 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 19 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



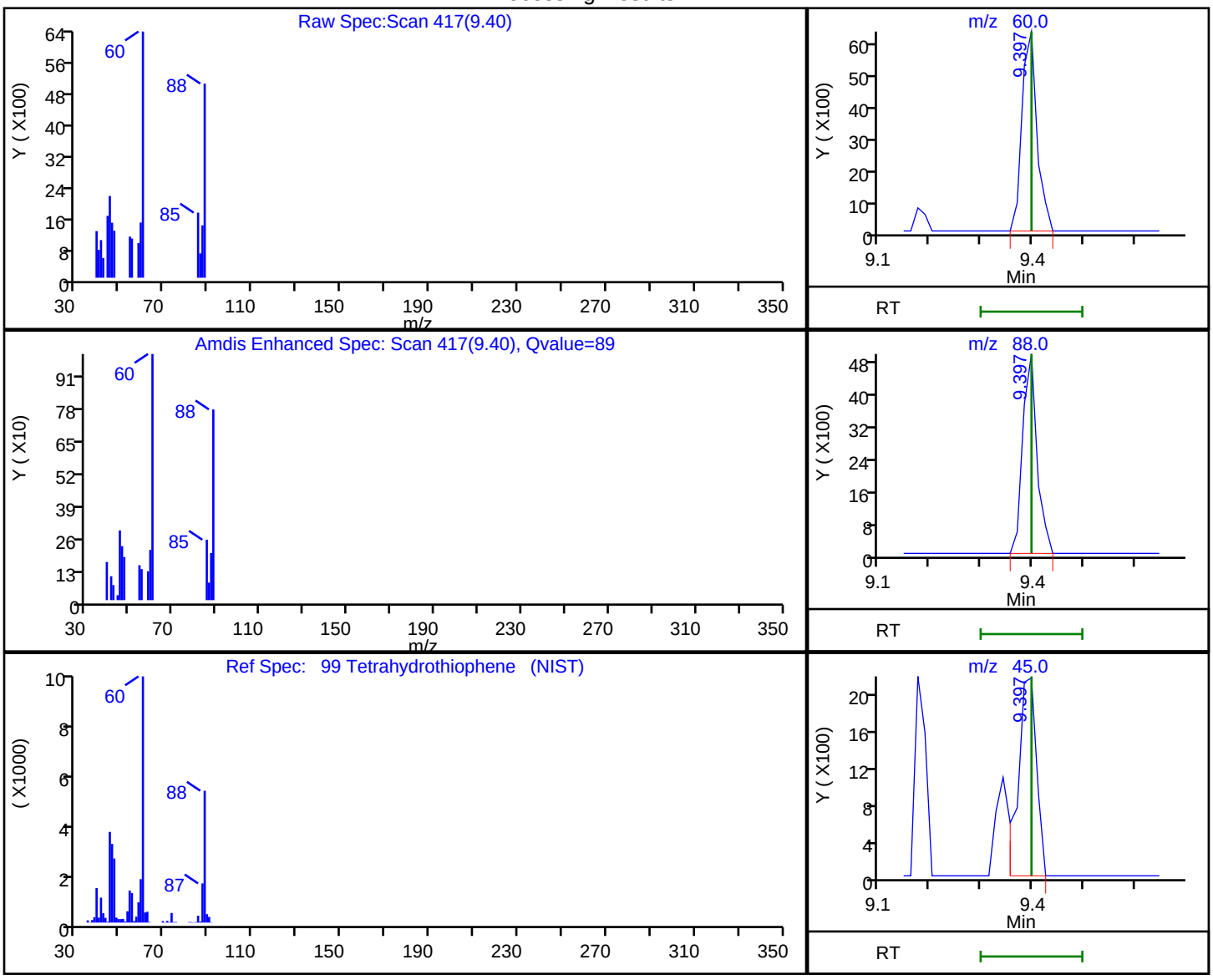
User Disabled Compound Report

TestAmerica Denver

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1084.D | | | | |
| Injection Date: | 08-Jan-2019 14:55:30 | Instrument ID: | VMS_MS1 | | |
| Lims ID: | icv | | | | |
| Client ID: | | | | | |
| Operator ID: | wickhamt | ALS Bottle#: | 19 | Worklist Smp#: | 26 |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |
| Column: | DB-624 (60.25) ( 0.25 mm) | Detector | MS SCAN | | |

## 99 Tetrahydrothiophene, CAS: 110-01-0

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 9.40 | 60.00 | 12931 | |
| 9.40 | 88.00 | 9710 | |
| 9.40 | 45.00 | 5266 | |

Reviewer: wickhamt, 09-Jan-2019 06:36:25

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-443512/26  Calibration Date: 01/08/2019 14:55

Instrument ID: VMS_MS1  Calib Start Date: 01/08/2019 12:31

GC Column: DB-624 (60.25)  ID: 0.25(mm)  Calib End Date: 01/08/2019 14:14

Lab File ID: MS1_1084.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Ethylene oxide | Lin1 | | 0.0030 | | 1110 | 1000 | 11.5 | 55.0 |
| Ethanol | Ave | 0.1430 | 0.1441 | | 605 | 600 | 0.8 | 55.0 |
| Propene oxide | Ave | 0.0177 | 0.0175 | | 984 | 1000 | -1.6 | |
| 2-Propanol | Ave | 0.9175 | 0.8536 | | 93.0 | 100 | -7.0 | 55.0 |
| Acetonitrile | Ave | 0.0138 | 0.0134 | | 97.4 | 100 | -2.6 | 55.0 |
| Di-isopropyl ether (DIPE) | Ave | 0.2211 | 0.2333 | | 10.6 | 10.0 | 5.5 | 35.0 |
| Chloroprene | Ave | 0.3613 | 0.4017 | | 11.1 | 10.0 | 11.2 | 35.0 |
| Tert-butyl ethyl ether | Ave | 0.6410 | 0.6637 | | 10.4 | 10.0 | 3.5 | 35.0 |
| Ethyl acetate | Ave | 0.1075 | 0.0958 | | 17.8 | 20.0 | -10.9 | 55.0 |
| Propionitrile | Ave | 0.0167 | 0.0165 | | 99.2 | 100 | -0.8 | 55.0 |
| Methacrylonitrile | Ave | 0.0679 | 0.0677 | | 99.8 | 100 | -0.2 | 55.0 |
| Tert-amyl methyl ether | Ave | 0.5292 | 0.5509 | | 10.4 | 10.0 | 4.1 | 35.0 |
| n-Butanol | Lin2 | | 0.4041 | | 240 | 250 | -3.9 | 55.0 |
| Methyl methacrylate | Ave | 0.0327 | 0.0351 | | 21.5 | 20.0 | 7.4 | 35.0 |
| 2-Nitropropane | Ave | 0.0174 | 0.0124 | | 14.3 | 20.0 | -28.6 | 55.0 |
| cis-1,4-Dichloro-2-butene | Ave | 0.0764 | 0.0653 | | 17.1 | 20.0 | -14.5 | 55.0 |
| 1,2,3-Trimethylbenzene | Ave | 3.521 | 3.646 | | 10.4 | 10.0 | 3.6 | 35.0 |
| 1,3,5-Trichlorobenzene | Ave | 1.429 | 1.361 | | 9.52 | 10.0 | -4.8 | 50.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1084.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 08-Jan-2019 14:55:30 ALS Bottle#: 19 Worklist Smp#: 26
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist:

Method: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Jan-2019 06:55:22 Calib Date: 08-Jan-2019 14:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1082.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: nwangumaf Date: 08-Jan-2019 18:39:01

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.585 | 5.585 | 0.000 | 71 | 412199 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.526 | 7.526 | 0.000 | 99 | 2484717 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 86 | 500628 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 95 | 685942 | 12.5 | 12.5 | |
| 28 Ethylene oxide | 43 | 4.537 | 4.551 | -0.014 | 98 | 595036 | 1000.0 | 1114.8 | |
| 34 Ethanol | 45 | 4.928 | 4.942 | -0.014 | 97 | 142594 | 600.0 | 604.8 | |
| 38 Propene oxide | 58 | 5.166 | 5.166 | 0.000 | 0 | 3472012 | 1000.0 | 984.4 | |
| 41 Isopropyl alcohol | 45 | 5.319 | 5.333 | -0.014 | 98 | 140734 | 100.0 | 93.0 | |
| 44 Acetonitrile | 41 | 5.515 | 5.529 | -0.014 | 99 | 266504 | 100.0 | 97.4 | |
| 56 Isopropyl ether | 87 | 6.185 | 6.185 | 0.000 | 94 | 463797 | 10.0 | 10.6 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.297 | 6.297 | 0.000 | 89 | 798536 | 10.0 | 11.1 | |
| 59 Tert-butyl ethyl ether | 59 | 6.464 | 6.464 | 0.000 | 97 | 1319185 | 10.0 | 10.4 | |
| 60 Ethyl acetate | 43 | 6.576 | 6.590 | -0.014 | 98 | 380708 | 20.0 | 17.8 | |
| 63 Propionitrile | 54 | 6.632 | 6.632 | 0.000 | 99 | 328706 | 100.0 | 99.2 | |
| 66 Methacrylonitrile | 41 | 6.758 | 6.758 | 0.000 | 88 | 1346316 | 100.0 | 99.8 | |
| 76 Tert-amyl methyl ether | 73 | 7.344 | 7.358 | -0.014 | 97 | 1094986 | 10.0 | 10.4 | |
| 78 n-Butanol | 56 | 7.540 | 7.540 | 0.000 | 84 | 166576 | 250.0 | 240.3 | |
| 81 Methyl methacrylate | 100 | 7.945 | 7.945 | 0.000 | 87 | 139641 | 20.0 | 21.5 | |
| 87 2-Nitropropane | 41 | 8.294 | 8.294 | 0.000 | 98 | 49302 | 20.0 | 14.3 | |
| 99 Tetrahydrothiophene | 60 | | 9.397 | | | | ND | ND | U |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 83 | 71650 | 20.0 | 17.1 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 98 | 2000891 | 10.0 | 10.4 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.931 | 0.000 | 97 | 746798 | 10.0 | 9.52 | |

## QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags
U - Marked Undetected

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-Supp B_00023 | Amount Added: | 4.00 | Units: uL |

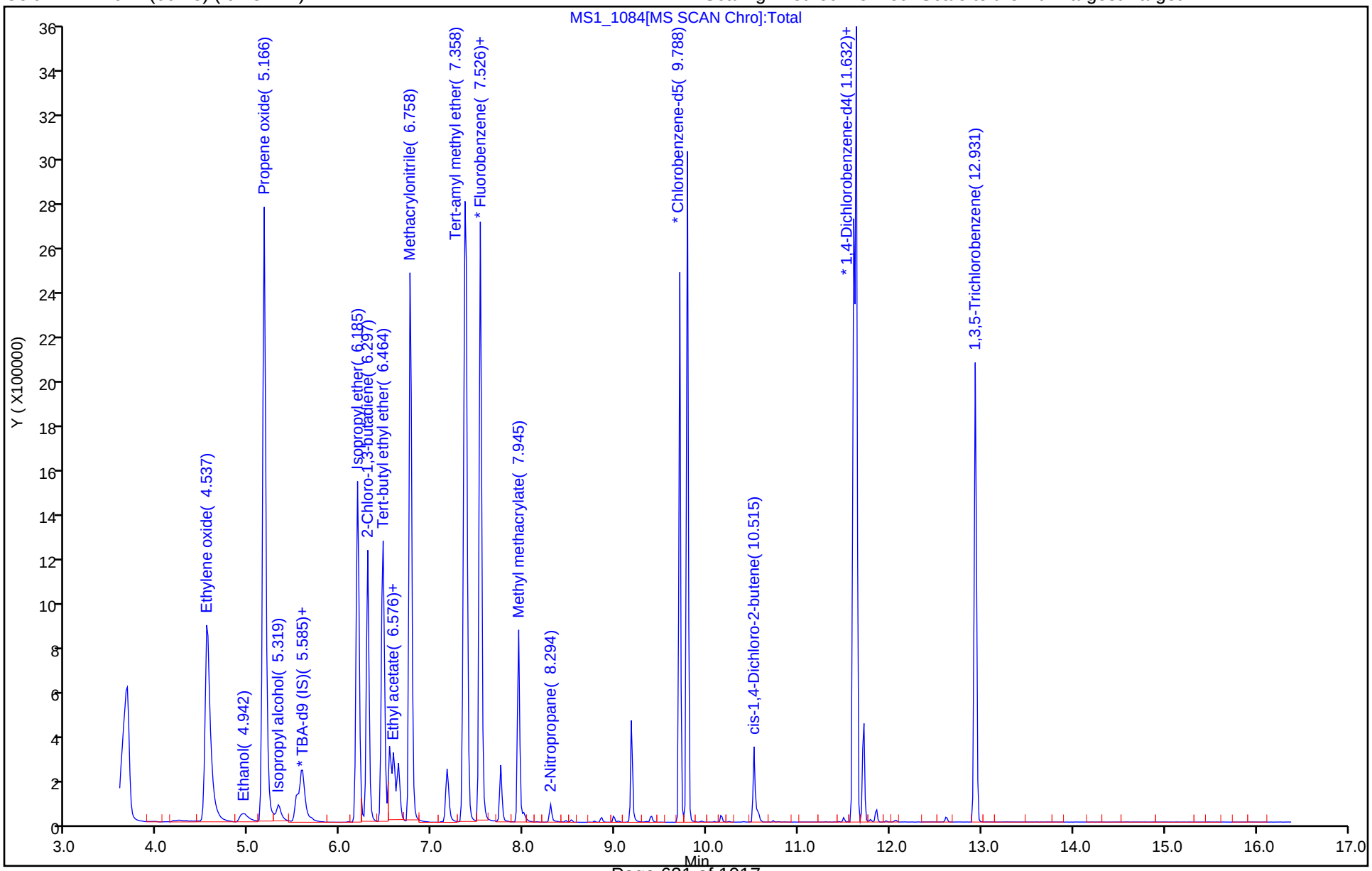
Report Date: 09-Jan-2019 06:55:23 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1084.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 14:55:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | icv | | | Worklist Smp#: | 26 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 19 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-444687/19 Calibration Date: 01/18/2019 14:33

Instrument ID: VMS_MS1 Calib Start Date: 01/18/2019 11:48

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 01/18/2019 13:52

Lab File ID: MS1_1429.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | Lin1 | | 0.3949 | | 10.4 | 10.0 | 4.0 | 55.0 |
| Chloromethane | Ave | 0.2281 | 0.2291 | 0.1000 | 10.0 | 10.0 | 0.4 | 35.0 |
| Vinyl chloride | Ave | 0.2375 | 0.2413 | | 10.2 | 10.0 | 1.6 | 35.0 |
| Bromomethane | Ave | 0.2831 | 0.3056 | | 10.8 | 10.0 | 7.9 | 35.0 |
| Chloroethane | Ave | 0.2263 | 0.2383 | | 10.5 | 10.0 | 5.3 | 35.0 |
| Dichlorofluoromethane | Ave | 0.5328 | 0.5445 | | 10.2 | 10.0 | 2.2 | 55.0 |
| Trichlorofluoromethane | Ave | 0.4722 | 0.4779 | | 10.1 | 10.0 | 1.2 | 50.0 |
| Ethyl ether | Ave | 0.1587 | 0.1697 | | 10.7 | 10.0 | 6.9 | 35.0 |
| Acrolein | Ave | 0.0155 | 0.0152 | | 98.0 | 100 | -2.0 | 55.0 |
| Acetone | Ave | 0.0282 | 0.0258 | | 36.5 | 40.0 | -8.8 | 55.0 |
| 1,1,2-Trichlorotrifluoroethane | Ave | 0.2385 | 0.2313 | | 9.69 | 10.0 | -3.1 | 55.0 |
| 1,1-Dichloroethene | Ave | 0.2870 | 0.2838 | | 9.89 | 10.0 | -1.1 | 35.0 |
| Iodomethane | Ave | 0.5084 | 0.5137 | | 10.1 | 10.0 | 1.0 | 35.0 |
| Methyl acetate | Ave | 0.0752 | 0.0661 | | 17.6 | 20.0 | -12.1 | 55.0 |
| Allyl chloride | Ave | 0.3907 | 0.3902 | | 9.99 | 10.0 | -0.1 | 35.0 |
| Carbon disulfide | Ave | 1.213 | 1.141 | | 9.40 | 10.0 | -6.0 | 55.0 |
| Tert-butyl alcohol (2-methyl-2-propanol) | Ave | 1.405 | 1.414 | | 101 | 100 | 0.6 | 55.0 |
| Methylene Chloride | Ave | 0.3191 | 0.2946 | | 9.23 | 10.0 | -7.7 | 35.0 |
| Acrylonitrile | Ave | 0.0381 | 0.0388 | | 102 | 100 | 1.7 | 55.0 |
| Methyl tert-butyl ether | Ave | 0.5408 | 0.5546 | | 10.3 | 10.0 | 2.6 | 35.0 |
| trans-1,2-Dichloroethene | Ave | 0.3252 | 0.3285 | | 10.1 | 10.0 | 1.0 | 35.0 |
| Hexane | Ave | 1.990 | 1.811 | | 9.10 | 10.0 | -9.0 | 35.0 |
| Vinyl acetate | Ave | 0.2315 | 0.2397 | | 20.7 | 20.0 | 3.6 | 55.0 |
| 1,1-Dichloroethane | Ave | 0.4951 | 0.4940 | 0.1000 | 9.98 | 10.0 | -0.2 | 35.0 |
| 2-Butanone (MEK) | Ave | 0.0519 | 0.0463 | | 35.7 | 40.0 | -10.8 | 55.0 |
| sec-Butyl Alcohol | Ave | 0.996 | 0.9751 | | 147 | 150 | -2.1 | |
| cis-1,2-Dichloroethene | Ave | 0.3518 | 0.3516 | | 10.0 | 10.0 | -0.0 | 35.0 |
| 2,2-Dichloropropane | Ave | 0.4318 | 0.3929 | | 9.10 | 10.0 | -9.0 | 35.0 |
| Chlorobromomethane | Ave | 0.1317 | 0.1326 | | 10.1 | 10.0 | 0.7 | 35.0 |
| Chloroform | Ave | 0.4920 | 0.4944 | | 10.0 | 10.0 | 0.5 | 35.0 |
| Tetrahydrofuran | Lin1 | | 0.0302 | | 20.9 | 20.0 | 4.6 | 55.0 |
| Isobutyl alcohol | Ave | 0.3638 | 0.3559 | | 245 | 250 | -2.2 | 55.0 |
| 1,1,1-Trichloroethane | Ave | 0.4635 | 0.4567 | | 9.85 | 10.0 | -1.5 | 35.0 |
| Cyclohexane | Ave | 0.5262 | 0.4979 | | 9.46 | 10.0 | -5.4 | 35.0 |
| 1,1-Dichloropropene | Ave | 0.4184 | 0.3982 | | 9.52 | 10.0 | -4.8 | 35.0 |
| Carbon tetrachloride | Ave | 0.3990 | 0.3852 | | 9.66 | 10.0 | -3.4 | 35.0 |
| 1,2-Dichloroethane | Ave | 0.2496 | 0.2509 | | 10.1 | 10.0 | 0.5 | 35.0 |
| Benzene | Ave | 1.224 | 1.207 | | 9.86 | 10.0 | -1.4 | 35.0 |
| n-Heptane | Ave | 0.4012 | 0.3815 | | 9.51 | 10.0 | -4.9 | 50.0 |
| Trichloroethene | Ave | 0.3236 | 0.3144 | | 9.72 | 10.0 | -2.8 | 35.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-444687/19 Calibration Date: 01/18/2019 14:33

Instrument ID: VMS_MS1 Calib Start Date: 01/18/2019 11:48

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 01/18/2019 13:52

Lab File ID: MS1_1429.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 2-Pentanone | Ave | 0.0703 | 0.0697 | | 19.8 | 20.0 | -0.8 | 55.0 |
| 1,2-Dichloropropane | Ave | 0.2718 | 0.2750 | | 10.1 | 10.0 | 1.1 | 35.0 |
| Methylcyclohexane | Ave | 0.4198 | 0.3881 | | 9.25 | 10.0 | -7.5 | 35.0 |
| 1,4-Dioxane | Ave | 0.0013 | 0.0013 | | 210 | 200 | 5.0 | 55.0 |
| Dibromomethane | Ave | 0.1212 | 0.1205 | | 9.94 | 10.0 | -0.6 | 35.0 |
| Dichlorobromomethane | Ave | 0.3352 | 0.3368 | | 10.0 | 10.0 | 0.5 | 35.0 |
| 2-Chloroethyl vinyl ether | Ave | 0.0745 | 0.0767 | | 20.6 | 20.0 | 2.9 | 55.0 |
| cis-1,3-Dichloropropene | Ave | 1.760 | 1.802 | | 10.2 | 10.0 | 2.4 | 35.0 |
| 4-Methyl-2-pentanone (MIBK) | Ave | 0.1002 | 0.1011 | | 40.4 | 40.0 | 0.9 | 55.0 |
| Toluene | Ave | 1.285 | 1.279 | | 9.95 | 10.0 | -0.5 | 35.0 |
| Ethyl methacrylate | Ave | 0.9721 | 0.9348 | | 9.62 | 10.0 | -3.8 | 35.0 |
| trans-1,3-Dichloropropene | Ave | 0.3113 | 0.3092 | | 9.93 | 10.0 | -0.7 | 35.0 |
| 1,1,2-Trichloroethane | Ave | 0.1741 | 0.1781 | | 10.2 | 10.0 | 2.3 | 35.0 |
| 2-Hexanone | Ave | 0.3007 | 0.2949 | | 39.2 | 40.0 | -1.9 | 55.0 |
| 1,3-Dichloropropane | Ave | 1.323 | 1.283 | | 9.70 | 10.0 | -3.0 | 35.0 |
| Tetrachloroethene | Ave | 1.211 | 1.130 | | 9.33 | 10.0 | -6.7 | 35.0 |
| Chlorodibromomethane | Ave | 0.9347 | 0.9397 | | 10.1 | 10.0 | 0.5 | 35.0 |
| 1,2-Dibromoethane | Ave | 0.7259 | 0.7145 | | 9.84 | 10.0 | -1.6 | 35.0 |
| 1-Chlorohexane | Ave | 2.026 | 1.801 | | 4.44 | 5.00 | -11.1 | 35.0 |
| Chlorobenzene | Ave | 3.646 | 3.524 | 0.3000 | 9.67 | 10.0 | -3.3 | 35.0 |
| 1,1,1,2-Tetrachloroethane | Ave | 1.218 | 1.214 | | 9.97 | 10.0 | -0.3 | 35.0 |
| Ethylbenzene | Ave | 2.163 | 2.055 | | 9.50 | 10.0 | -5.0 | 35.0 |
| m-Xylene & p-Xylene | Ave | 2.663 | 2.495 | | 9.37 | 10.0 | -6.3 | 35.0 |
| o-Xylene | Ave | 2.531 | 2.444 | | 9.66 | 10.0 | -3.4 | 35.0 |
| Styrene | Ave | 3.989 | 3.762 | | 9.43 | 10.0 | -5.7 | 35.0 |
| Bromoform | Ave | 0.4918 | 0.4944 | 0.1000 | 10.1 | 10.0 | 0.5 | 35.0 |
| Isopropylbenzene | Qua | | 4.083 | | 9.12 | 10.0 | -8.8 | 35.0 |
| Cyclohexanone | Ave | 0.0323 | 0.0245 | | 303 | 400 | -24.2 | 35.0 |
| 1,1,2,2-Tetrachloroethane | Ave | 0.5331 | 0.5241 | 0.3000 | 9.83 | 10.0 | -1.7 | 35.0 |
| trans-1,4-Dichloro-2-butene | Ave | 0.1165 | 0.1172 | | 10.1 | 10.0 | 0.7 | 55.0 |
| 1,2,3-Trichloropropane | Ave | 0.1514 | 0.1575 | | 10.4 | 10.0 | 4.0 | 35.0 |
| Bromobenzene | Ave | 0.9617 | 0.9396 | | 9.77 | 10.0 | -2.3 | 35.0 |
| N-Propylbenzene | Ave | 1.248 | 1.180 | | 9.45 | 10.0 | -5.5 | 35.0 |
| 1,3,5-Trimethylbenzene | Ave | 3.535 | 3.397 | | 9.61 | 10.0 | -3.9 | 35.0 |
| 2-Chlorotoluene | Ave | 1.025 | 0.9880 | | 9.64 | 10.0 | -3.6 | 35.0 |
| 4-Chlorotoluene | Ave | 1.040 | 0.996 | | 9.58 | 10.0 | -4.2 | 35.0 |
| tert-Butylbenzene | Ave | 3.617 | 3.423 | | 9.46 | 10.0 | -5.4 | 35.0 |
| 1,2,4-Trimethylbenzene | Ave | 3.581 | 3.427 | | 9.57 | 10.0 | -4.3 | 35.0 |
| sec-Butylbenzene | Ave | 1.030 | 0.9587 | | 9.31 | 10.0 | -6.9 | 35.0 |
| 4-Isopropyltoluene | Qua | | 3.799 | | 8.99 | 10.0 | -10.1 | 35.0 |
| 1,3-Dichlorobenzene | Ave | 1.951 | 1.863 | | 9.55 | 10.0 | -4.5 | 35.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-444687/19  Calibration Date: 01/18/2019 14:33

Instrument ID: VMS_MS1  Calib Start Date: 01/18/2019 11:48

GC Column: DB-624 (60.25)  ID: 0.25(mm)  Calib End Date: 01/18/2019 13:52

Lab File ID: MS1_1429.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | Ave | 1.941 | 1.841 | | 9.49 | 10.0 | -5.1 | 35.0 |
| n-Butylbenzene | Ave | 3.619 | 3.319 | | 9.17 | 10.0 | -8.3 | 35.0 |
| 1,2-Dichlorobenzene | Ave | 1.675 | 1.637 | | 9.77 | 10.0 | -2.3 | 35.0 |
| 1,2-Dibromo-3-Chloropropane | Ave | 0.0979 | 0.1032 | | 10.5 | 10.0 | 5.5 | 55.0 |
| 1,2,4-Trichlorobenzene | Ave | 1.237 | 1.214 | | 9.82 | 10.0 | -1.8 | 35.0 |
| Hexachlorobutadiene | Ave | 0.7829 | 0.7201 | | 9.20 | 10.0 | -8.0 | 35.0 |
| Naphthalene | Ave | 1.868 | 1.912 | | 10.2 | 10.0 | 2.4 | 35.0 |
| 1,2,3-Trichlorobenzene | Ave | 1.002 | 1.017 | | 10.1 | 10.0 | 1.5 | 35.0 |
| Dibromofluoromethane (Surr) | Ave | 0.2630 | 0.2678 | | 10.2 | 10.0 | 1.8 | 35.0 |
| 1,2-Dichloroethane-d4 (Surr) | Ave | 0.2054 | 0.2093 | | 10.2 | 10.0 | 1.9 | 35.0 |
| Toluene-d8 (Surr) | Ave | 4.675 | 4.627 | | 9.90 | 10.0 | -1.0 | 35.0 |
| 4-Bromofluorobenzene (Surr) | Ave | 1.070 | 1.046 | | 9.77 | 10.0 | -2.3 | 35.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1429.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 18-Jan-2019 14:33:30 ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: icv
Operator ID: wickhamt Instrument ID: VMS_MS1
Sublist:

Method: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Jan-2019 12:00:20 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0315

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.571 | 5.571 | 0.001 | 87 | 646532 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3475339 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 83 | 799224 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 93 | 1204600 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 744483 | 10.0 | 10.2 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 581766 | 10.0 | 10.2 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2958606 | 10.0 | 9.90 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.640 | 0.000 | 0 | 1008164 | 10.0 | 9.77 | |
| 24 Dichlorodifluoromethane | 85 | 3.909 | 3.909 | 0.000 | 99 | 1098027 | 10.0 | 10.4 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 98 | 636961 | 10.0 | 10.0 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.258 | 0.000 | 92 | 670849 | 10.0 | 10.2 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 89 | 849509 | 10.0 | 10.8 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 662521 | 10.0 | 10.5 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 96 | 1513897 | 10.0 | 10.2 | |
| 33 Trichlorofluoromethane | 101 | 4.928 | 4.928 | 0.000 | 98 | 1328569 | 10.0 | 10.1 | |
| 36 Ethyl ether | 59 | 5.082 | 5.068 | 0.014 | 86 | 471744 | 10.0 | 10.7 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 99 | 422853 | 100.0 | 98.0 | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 98 | 286365 | 40.0 | 36.5 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.319 | 5.319 | 0.000 | 92 | 642946 | 10.0 | 9.69 | |
| 43 1,1-Dichloroethene | 96 | 5.347 | 5.347 | 0.000 | 95 | 788963 | 10.0 | 9.89 | |
| 45 Iodomethane | 142 | 5.515 | 5.515 | 0.000 | 97 | 1428171 | 10.0 | 10.1 | |
| 46 Methyl acetate | 43 | 5.529 | 5.529 | 0.000 | 95 | 367565 | 20.0 | 17.6 | |
| 47 3-Chloro-1-propene | 41 | 5.585 | 5.584 | 0.000 | 84 | 1084884 | 10.0 | 9.99 | |
| 48 Carbon disulfide | 76 | 5.612 | 5.612 | 0.000 | 98 | 3171075 | 10.0 | 9.40 | |
| 49 2-Methyl-2-propanol | 59 | 5.626 | 5.640 | -0.014 | 93 | 365800 | 100.0 | 100.6 | |
| 50 Methylene Chloride | 84 | 5.668 | 5.668 | 0.000 | 84 | 819053 | 10.0 | 9.23 | |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 100 | 1077657 | 100.0 | 101.7 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 92 | 1541819 | 10.0 | 10.3 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.906 | 5.906 | 0.000 | 96 | 913169 | 10.0 | 10.1 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 86 | 1157942 | 10.0 | 9.10 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 97 | 1333026 | 20.0 | 20.7 | |
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 95 | 1373314 | 10.0 | 9.98 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 97 | 514329 | 40.0 | 35.7 | |
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 94 | 378243 | 150.0 | 146.8 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 75 | 977620 | 10.0 | 10.0 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 86 | 1092468 | 10.0 | 9.10 | |
| 67 Chlorobromomethane | 128 | 6.827 | 6.827 | 0.000 | 89 | 368719 | 10.0 | 10.1 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 92 | 1374562 | 10.0 | 10.0 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 83 | 167915 | 20.0 | 20.9 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 96 | 230118 | 250.0 | 244.6 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 97 | 1269645 | 10.0 | 9.85 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 86 | 1384328 | 10.0 | 9.46 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 97 | 1107027 | 10.0 | 9.52 | |
| 74 Carbon tetrachloride | 117 | 7.219 | 7.219 | 0.000 | 96 | 1071039 | 10.0 | 9.66 | |
| 75 1,2-Dichloroethane | 62 | 7.316 | 7.316 | 0.000 | 97 | 697618 | 10.0 | 10.1 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 95 | 3354625 | 10.0 | 9.86 | |
| 9 n-Heptane | 43 | 7.442 | 7.442 | 0.000 | 85 | 1060662 | 10.0 | 9.51 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 97 | 874221 | 10.0 | 9.72 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 97 | 387718 | 20.0 | 19.8 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 96 | 764425 | 10.0 | 10.1 | |
| 83 Methylcyclohexane | 55 | 8.015 | 8.015 | 0.000 | 91 | 1079109 | 10.0 | 9.25 | |
| 84 1,4-Dioxane | 88 | 8.043 | 8.029 | 0.014 | 91 | 73276 | 200.0 | 210.0 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 95 | 334985 | 10.0 | 9.94 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 99 | 936284 | 10.0 | 10.0 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 91 | 426562 | 20.0 | 20.6 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.476 | 8.475 | 0.001 | 99 | 1152000 | 10.0 | 10.2 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 91 | 1124582 | 40.0 | 40.4 | |
| 91 Toluene | 91 | 8.769 | 8.769 | 0.000 | 99 | 3554862 | 10.0 | 9.95 | |
| 92 Ethyl methacrylate | 69 | 8.839 | 8.839 | 0.000 | 87 | 597703 | 10.0 | 9.62 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.853 | 8.853 | 0.000 | 95 | 859698 | 10.0 | 9.93 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 89 | 495034 | 10.0 | 10.2 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 91 | 754265 | 40.0 | 39.2 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 87 | 820255 | 10.0 | 9.70 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 97 | 722544 | 10.0 | 9.33 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 89 | 600825 | 10.0 | 10.1 | |
| 100 Ethylene Dibromide | 107 | 9.453 | 9.467 | -0.014 | 99 | 456806 | 10.0 | 9.84 | |
| 101 1-Chlorohexane | 91 | 9.705 | 9.705 | 0.000 | 0 | 575644 | 5.00 | 4.44 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 98 | 2253410 | 10.0 | 9.67 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 97 | 1314125 | 10.0 | 9.50 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 95 | 776351 | 10.0 | 9.97 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 98 | 1595518 | 10.0 | 9.37 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 87 | 1562909 | 10.0 | 9.66 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 88 | 2405114 | 10.0 | 9.43 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 99 | 316133 | 10.0 | 10.1 | |
| 108 Isopropylbenzene | 105 | 10.501 | 10.501 | 0.000 | 95 | 3934262 | 10.0 | 9.12 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 88 | 625699 | 400.0 | 303.0 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.682 | 0.000 | 94 | 505095 | 10.0 | 9.83 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 91 | 112982 | 10.0 | 10.1 | |
| 114 1,2,3-Trichloropropane | 110 | 10.752 | 10.752 | 0.000 | 83 | 151762 | 10.0 | 10.4 | |
| 116 Bromobenzene | 156 | 10.808 | 10.808 | 0.000 | 92 | 905454 | 10.0 | 9.77 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 97 | 1136845 | 10.0 | 9.45 | |
| 117 2-Chlorotoluene | 126 | 10.934 | 10.934 | 0.000 | 96 | 952083 | 10.0 | 9.64 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.934 | 10.934 | 0.000 | 96 | 3273650 | 10.0 | 9.61 | |
| 118 4-Chlorotoluene | 126 | 11.003 | 11.003 | 0.000 | 98 | 960154 | 10.0 | 9.58 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 91 | 3298645 | 10.0 | 9.46 | |
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 96 | 3302411 | 10.0 | 9.57 | |
| 122 sec-Butylbenzene | 134 | 11.394 | 11.394 | 0.000 | 94 | 923920 | 10.0 | 9.31 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.492 | 0.000 | 96 | 3661284 | 10.0 | 8.99 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 97 | 1795148 | 10.0 | 9.55 | |
| 126 1,4-Dichlorobenzene | 146 | 11.618 | 11.618 | 0.000 | 94 | 1774466 | 10.0 | 9.49 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 97 | 3198805 | 10.0 | 9.17 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 99 | 1577844 | 10.0 | 9.77 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 90 | 99473 | 10.0 | 10.5 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.657 | 0.000 | 94 | 1170106 | 10.0 | 9.82 | |
| 131 Hexachlorobutadiene | 225 | 13.825 | 13.825 | 0.000 | 96 | 693948 | 10.0 | 9.20 | |
| 132 Naphthalene | 128 | 14.006 | 14.006 | 0.000 | 97 | 1842298 | 10.0 | 10.2 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.327 | 14.327 | 0.000 | 96 | 979623 | 10.0 | 10.1 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 20.0 | 20.1 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 40.0 | 40.2 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 20.0 | 19.0 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 20.0 | 19.0 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 20.0 | 20.2 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 20.0 | 20.1 | |

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL |
| MV-MegaMain B_00007 | Amount Added: | 4.00 | Units: uL |
| MV-Gas B_00006 | Amount Added: | 4.00 | Units: uL |

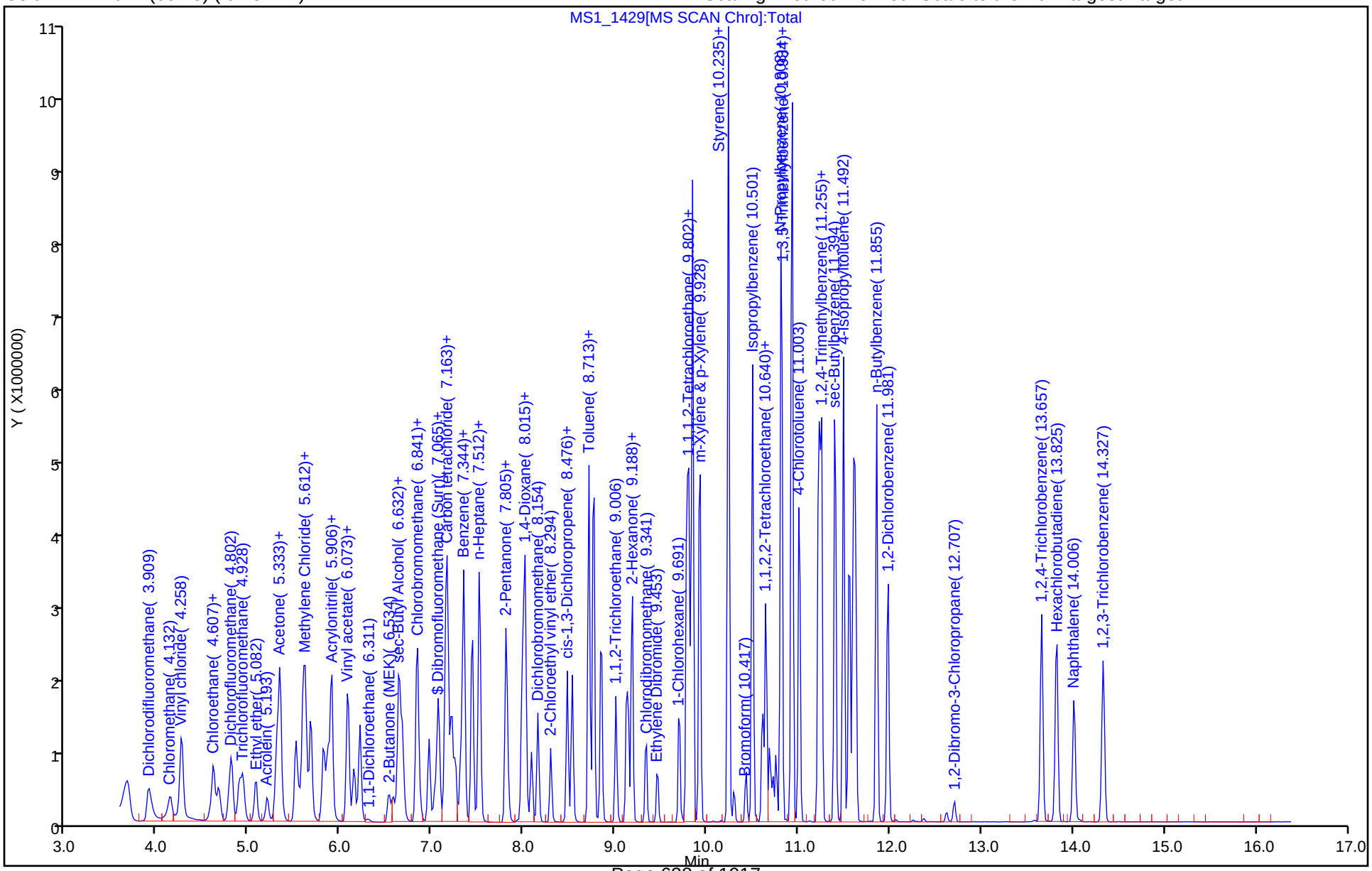
Report Date: 24-Jan-2019 12:00:25 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1429.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 18-Jan-2019 14:33:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | icv | | | Worklist Smp#: | 19 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 11 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445753/2 Calibration Date: 01/28/2019 18:23

Instrument ID: VMS_MS1 Calib Start Date: 01/18/2019 11:48

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 01/18/2019 13:52

Lab File ID: MS1_1905.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | Lin1 | | 0.4106 | | 10.8 | 10.0 | 8.1 | 50.0 |
| Chloromethane | Ave | 0.2281 | 0.2389 | 0.1000 | 10.5 | 10.0 | 4.7 | 35.0 |
| Vinyl chloride | Ave | 0.2375 | 0.2631 | | 11.1 | 10.0 | 10.8 | 20.0 |
| Bromomethane | Ave | 0.2831 | 0.3306 | | 11.7 | 10.0 | 16.8 | 35.0 |
| Chloroethane | Ave | 0.2263 | 0.2887 | | 12.8 | 10.0 | 27.6 | 35.0 |
| Dichlorofluoromethane | Ave | 0.5328 | 0.6979 | | 13.1 | 10.0 | 31.0 | 50.0 |
| Trichlorofluoromethane | Ave | 0.4722 | 0.5946 | | 12.6 | 10.0 | 25.9 | 50.0 |
| Ethyl ether | Ave | 0.1587 | 0.1770 | | 11.2 | 10.0 | 11.5 | 35.0 |
| Acrolein | Ave | 0.0155 | 0.0182 | | 117 | 100 | 17.0 | 50.0 |
| Acetone | Ave | 0.0282 | 0.0336 | | 47.6 | 40.0 | 19.1 | 50.0 |
| 1,1,2-Trichlorotrifluoroethane | Ave | 0.2385 | 0.2497 | | 10.5 | 10.0 | 4.7 | 50.0 |
| 1,1-Dichloroethene | Ave | 0.2870 | 0.2917 | | 10.2 | 10.0 | 1.6 | 20.0 |
| Iodomethane | Ave | 0.5084 | 0.5193 | | 10.2 | 10.0 | 2.1 | 35.0 |
| Methyl acetate | Ave | 0.0752 | 0.0893 | | 23.7 | 20.0 | 18.7 | 50.0 |
| Allyl chloride | Ave | 0.3907 | 0.4706 | | 12.0 | 10.0 | 20.4 | 35.0 |
| Carbon disulfide | Ave | 1.213 | 1.181 | | 9.73 | 10.0 | -2.7 | 50.0 |
| Tert-butyl alcohol (2-methyl-2-propanol) | Ave | 1.405 | 1.461 | | 104 | 100 | 4.0 | 50.0 |
| Methylene Chloride | Ave | 0.3191 | 0.3201 | | 10.0 | 10.0 | 0.3 | 35.0 |
| Acrylonitrile | Ave | 0.0381 | 0.0469 | | 123 | 100 | 23.2 | 50.0 |
| Methyl tert-butyl ether | Ave | 0.5408 | 0.5726 | | 10.6 | 10.0 | 5.9 | 35.0 |
| trans-1,2-Dichloroethene | Ave | 0.3252 | 0.3540 | | 10.9 | 10.0 | 8.8 | 35.0 |
| Hexane | Ave | 1.990 | 1.887 | | 9.49 | 10.0 | -5.1 | 35.0 |
| Vinyl acetate | Ave | 0.2315 | 0.2872 | | 24.8 | 20.0 | 24.1 | 50.0 |
| 1,1-Dichloroethane | Ave | 0.4951 | 0.5786 | 0.1000 | 11.7 | 10.0 | 16.9 | 35.0 |
| 2-Butanone (MEK) | Ave | 0.0519 | 0.0632 | | 48.7 | 40.0 | 21.9 | 50.0 |
| sec-Butyl Alcohol | Ave | 0.996 | 1.051 | | 317 | 300 | 5.5 | 50.0 |
| cis-1,2-Dichloroethene | Ave | 0.3518 | 0.3815 | | 10.8 | 10.0 | 8.4 | 35.0 |
| 2,2-Dichloropropane | Ave | 0.4318 | 0.4915 | | 11.4 | 10.0 | 13.8 | 35.0 |
| Chlorobromomethane | Ave | 0.1317 | 0.1409 | | 10.7 | 10.0 | 7.0 | 35.0 |
| Chloroform | Ave | 0.4920 | 0.5616 | | 11.4 | 10.0 | 14.1 | 20.0 |
| Tetrahydrofuran | Lin1 | | 0.0349 | | 24.3 | 20.0 | 21.3 | 50.0 |
| Isobutyl alcohol | Ave | 0.3638 | 0.4499 | | 309 | 250 | 23.6 | 50.0 |
| 1,1,1-Trichloroethane | Ave | 0.4635 | 0.5333 | | 11.5 | 10.0 | 15.1 | 35.0 |
| Cyclohexane | Ave | 0.5262 | 0.6036 | | 11.5 | 10.0 | 14.7 | 35.0 |
| 1,1-Dichloropropene | Ave | 0.4184 | 0.4872 | | 11.6 | 10.0 | 16.4 | 35.0 |
| Carbon tetrachloride | Ave | 0.3990 | 0.4538 | | 11.4 | 10.0 | 13.7 | 35.0 |
| 1,2-Dichloroethane | Ave | 0.2496 | 0.2946 | | 11.8 | 10.0 | 18.1 | 35.0 |
| Benzene | Ave | 1.224 | 1.380 | | 11.3 | 10.0 | 12.8 | 35.0 |
| n-Heptane | Ave | 0.4012 | 0.4927 | | 12.3 | 10.0 | 22.8 | 50.0 |
| Trichloroethene | Ave | 0.3236 | 0.3530 | | 10.9 | 10.0 | 9.1 | 35.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445753/2  Calibration Date: 01/28/2019 18:23

Instrument ID: VMS_MS1  Calib Start Date: 01/18/2019 11:48

GC Column: DB-624 (60.25)  ID: 0.25(mm)  Calib End Date: 01/18/2019 13:52

Lab File ID: MS1_1905.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 2-Pentanone | Ave | 0.0703 | 0.0819 | | 46.6 | 40.0 | 16.6 | 50.0 |
| 1,2-Dichloropropane | Ave | 0.2718 | 0.3102 | | 11.4 | 10.0 | 14.1 | 20.0 |
| Methylcyclohexane | Ave | 0.4198 | 0.5080 | | 12.1 | 10.0 | 21.0 | 35.0 |
| 1,4-Dioxane | Ave | 0.0013 | 0.0014 | | 225 | 200 | 12.5 | 50.0 |
| Dibromomethane | Ave | 0.1212 | 0.1351 | | 11.1 | 10.0 | 11.4 | 35.0 |
| Dichlorobromomethane | Ave | 0.3352 | 0.3696 | | 11.0 | 10.0 | 10.3 | 35.0 |
| 2-Chloroethyl vinyl ether | Ave | 0.0745 | 0.0970 | | 26.0 | 20.0 | 30.2 | 50.0 |
| cis-1,3-Dichloropropene | Ave | 1.760 | 1.815 | | 10.3 | 10.0 | 3.2 | 35.0 |
| 4-Methyl-2-pentanone (MIBK) | Ave | 0.1002 | 0.1229 | | 49.0 | 40.0 | 22.6 | 50.0 |
| Toluene | Ave | 1.285 | 1.447 | | 11.3 | 10.0 | 12.6 | 20.0 |
| Ethyl methacrylate | Ave | 0.9721 | 0.9519 | | 9.79 | 10.0 | -2.1 | 35.0 |
| trans-1,3-Dichloropropene | Ave | 0.3113 | 0.3428 | | 11.0 | 10.0 | 10.1 | 35.0 |
| 1,1,2-Trichloroethane | Ave | 0.1741 | 0.1912 | | 11.0 | 10.0 | 9.8 | 35.0 |
| 2-Hexanone | Ave | 0.3007 | 0.3482 | | 46.3 | 40.0 | 15.8 | 50.0 |
| 1,3-Dichloropropane | Ave | 1.323 | 1.476 | | 11.2 | 10.0 | 11.6 | 35.0 |
| Tetrachloroethene | Ave | 1.211 | 1.316 | | 10.9 | 10.0 | 8.7 | 35.0 |
| Chlorodibromomethane | Ave | 0.9347 | 0.9218 | | 9.86 | 10.0 | -1.4 | 35.0 |
| 1,2-Dibromoethane | Ave | 0.7259 | 0.7417 | | 10.2 | 10.0 | 2.2 | 35.0 |
| 1-Chlorohexane | Ave | 2.026 | 2.171 | | 10.7 | 10.0 | 7.2 | 35.0 |
| Chlorobenzene | Ave | 3.646 | 3.913 | 0.3000 | 10.7 | 10.0 | 7.3 | 35.0 |
| 1,1,1,2-Tetrachloroethane | Ave | 1.218 | 1.307 | | 10.7 | 10.0 | 7.4 | 35.0 |
| Ethylbenzene | Ave | 2.163 | 2.366 | | 10.9 | 10.0 | 9.4 | 20.0 |
| m-Xylene & p-Xylene | Ave | 2.663 | 2.865 | | 10.8 | 10.0 | 7.6 | 35.0 |
| o-Xylene | Ave | 2.531 | 2.765 | | 10.9 | 10.0 | 9.2 | 35.0 |
| Styrene | Ave | 3.989 | 4.228 | | 10.6 | 10.0 | 6.0 | 35.0 |
| Bromoform | Ave | 0.4918 | 0.4613 | 0.1000 | 9.38 | 10.0 | -6.2 | 35.0 |
| Isopropylbenzene | Qua | | 4.620 | | 10.4 | 10.0 | 4.5 | 35.0 |
| Cyclohexanone | Ave | 0.0323 | 0.0576 | | 714 | 400 | 78.4* | 50.0 |
| 1,1,2,2-Tetrachloroethane | Ave | 0.5331 | 0.5728 | 0.3000 | 10.7 | 10.0 | 7.5 | 35.0 |
| trans-1,4-Dichloro-2-butene | Ave | 0.1165 | 0.1172 | | 10.1 | 10.0 | 0.6 | 50.0 |
| 1,2,3-Trichloropropane | Ave | 0.1514 | 0.1604 | | 10.6 | 10.0 | 6.0 | 35.0 |
| Bromobenzene | Ave | 0.9617 | 0.9850 | | 10.2 | 10.0 | 2.4 | 35.0 |
| N-Propylbenzene | Ave | 1.248 | 1.340 | | 10.7 | 10.0 | 7.4 | 35.0 |
| 1,3,5-Trimethylbenzene | Ave | 3.535 | 3.841 | | 10.9 | 10.0 | 8.7 | 35.0 |
| 2-Chlorotoluene | Ave | 1.025 | 1.096 | | 10.7 | 10.0 | 6.9 | 35.0 |
| 4-Chlorotoluene | Ave | 1.040 | 1.084 | | 10.4 | 10.0 | 4.2 | 35.0 |
| tert-Butylbenzene | Ave | 3.617 | 3.910 | | 10.8 | 10.0 | 8.1 | 35.0 |
| 1,2,4-Trimethylbenzene | Ave | 3.581 | 3.874 | | 10.8 | 10.0 | 8.2 | 35.0 |
| sec-Butylbenzene | Ave | 1.030 | 1.094 | | 10.6 | 10.0 | 6.2 | 35.0 |
| 4-Isopropyltoluene | Qua | | 4.413 | | 10.6 | 10.0 | 5.7 | 35.0 |
| 1,3-Dichlorobenzene | Ave | 1.951 | 2.026 | | 10.4 | 10.0 | 3.8 | 35.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445753/2  Calibration Date: 01/28/2019 18:23

Instrument ID: VMS_MS1  Calib Start Date: 01/18/2019 11:48

GC Column: DB-624 (60.25)  ID: 0.25(mm)  Calib End Date: 01/18/2019 13:52

Lab File ID: MS1_1905.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | Ave | 1.941 | 2.056 | | 10.6 | 10.0 | 6.0 | 35.0 |
| n-Butylbenzene | Ave | 3.619 | 4.159 | | 11.5 | 10.0 | 14.9 | 35.0 |
| 1,2-Dichlorobenzene | Ave | 1.675 | 1.735 | | 10.4 | 10.0 | 3.6 | 35.0 |
| 1,2-Dibromo-3-Chloropropane | Ave | 0.0979 | 0.0921 | | 9.41 | 10.0 | -5.9 | 50.0 |
| 1,2,4-Trichlorobenzene | Ave | 1.237 | 1.351 | | 10.9 | 10.0 | 9.2 | 35.0 |
| Hexachlorobutadiene | Ave | 0.7829 | 0.8971 | | 11.5 | 10.0 | 14.6 | 35.0 |
| Naphthalene | Ave | 1.868 | 1.916 | | 10.3 | 10.0 | 2.6 | 35.0 |
| 1,2,3-Trichlorobenzene | Ave | 1.002 | 1.113 | | 11.1 | 10.0 | 11.1 | 35.0 |
| Dibromofluoromethane (Surr) | Ave | 0.2630 | 0.2984 | | 11.3 | 10.0 | 13.5 | 35.0 |
| 1,2-Dichloroethane-d4 (Surr) | Ave | 0.2054 | 0.2513 | | 12.2 | 10.0 | 22.4 | 35.0 |
| Toluene-d8 (Surr) | Ave | 4.675 | 5.135 | | 11.0 | 10.0 | 9.8 | 35.0 |
| 4-Bromofluorobenzene (Surr) | Ave | 1.070 | 1.160 | | 10.8 | 10.0 | 8.3 | 35.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1905.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 28-Jan-2019 18:23:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: nwangumaf Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub76

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:53:50 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 19:13:22

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.570 | 5.570 | 0.000 | 88 | 536780 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3067525 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 84 | 716789 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 95 | 1139766 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 732291 | 10.0 | 11.3 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 616740 | 10.0 | 12.2 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2944750 | 10.0 | 11.0 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.654 | 10.654 | 0.000 | 0 | 1057513 | 10.0 | 10.8 | |
| 24 Dichlorodifluoromethane | 85 | 3.894 | 3.894 | 0.000 | 99 | 1007507 | 10.0 | 10.8 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 99 | 586253 | 10.0 | 10.5 | |
| 27 Vinyl chloride | 62 | 4.244 | 4.244 | 0.000 | 93 | 645692 | 10.0 | 11.1 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 90 | 811312 | 10.0 | 11.7 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 708453 | 10.0 | 12.8 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 97 | 1712705 | 10.0 | 13.1 | |
| 33 Trichlorofluoromethane | 101 | 4.914 | 4.914 | 0.000 | 98 | 1459178 | 10.0 | 12.6 | |
| 36 Ethyl ether | 59 | 5.068 | 5.068 | 0.000 | 90 | 434291 | 10.0 | 11.2 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 99 | 445359 | 100.0 | 117.0 | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 99 | 329925 | 40.0 | 47.6 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.305 | 5.305 | 0.000 | 94 | 612761 | 10.0 | 10.5 | |
| 43 1,1-Dichloroethene | 96 | 5.333 | 5.333 | 0.000 | 98 | 715806 | 10.0 | 10.2 | |
| 45 Iodomethane | 142 | 5.501 | 5.501 | 0.000 | 98 | 1274252 | 10.0 | 10.2 | |
| 46 Methyl acetate | 43 | 5.528 | 5.528 | 0.000 | 96 | 438034 | 20.0 | 23.7 | |
| 47 3-Chloro-1-propene | 41 | 5.584 | 5.584 | 0.000 | 84 | 1154901 | 10.0 | 12.0 | |
| 48 Carbon disulfide | 76 | 5.598 | 5.598 | 0.000 | 98 | 2897715 | 10.0 | 9.73 | |
| 49 2-Methyl-2-propanol | 59 | 5.626 | 5.626 | 0.000 | 93 | 313745 | 100.0 | 104.0 | |
| 50 Methylene Chloride | 84 | 5.668 | 5.668 | 0.000 | 89 | 785634 | 10.0 | 10.0 | |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 100 | 1151964 | 100.0 | 123.2 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 94 | 1405047 | 10.0 | 10.6 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.892 | 5.892 | 0.000 | 98 | 868589 | 10.0 | 10.9 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 89 | 1082300 | 10.0 | 9.49 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 97 | 1409688 | 20.0 | 24.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 96 | 1419819 | 10.0 | 11.7 | |
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 98 | 620347 | 40.0 | 48.7 | |
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 94 | 677263 | 300.0 | 316.6 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 78 | 936096 | 10.0 | 10.8 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 88 | 1206161 | 10.0 | 11.4 | |
| 67 Chlorobromomethane | 128 | 6.827 | 6.827 | 0.000 | 93 | 345830 | 10.0 | 10.7 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 93 | 1378182 | 10.0 | 11.4 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 86 | 171171 | 20.0 | 24.3 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 94 | 241468 | 250.0 | 309.1 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 98 | 1308823 | 10.0 | 11.5 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 0 | 1481149 | 10.0 | 11.5 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 98 | 1195536 | 10.0 | 11.6 | |
| 74 Carbon tetrachloride | 117 | 7.204 | 7.204 | 0.000 | 97 | 1113512 | 10.0 | 11.4 | |
| 75 1,2-Dichloroethane | 62 | 7.302 | 7.302 | 0.000 | 97 | 723036 | 10.0 | 11.8 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 96 | 3386901 | 10.0 | 11.3 | |
| 9 n-Heptane | 43 | 7.442 | 7.442 | 0.000 | 88 | 1208961 | 10.0 | 12.3 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 98 | 866278 | 10.0 | 10.9 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 98 | 804214 | 40.0 | 46.6 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 97 | 761337 | 10.0 | 11.4 | |
| 83 Methylcyclohexane | 55 | 8.014 | 8.014 | 0.000 | 0 | 1246676 | 10.0 | 12.1 | |
| 84 1,4-Dioxane | 88 | 8.028 | 8.028 | 0.000 | 88 | 69283 | 200.0 | 224.9 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 96 | 331467 | 10.0 | 11.1 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 99 | 906990 | 10.0 | 11.0 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 91 | 476115 | 20.0 | 26.0 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.475 | 8.475 | 0.000 | 98 | 1040870 | 10.0 | 10.3 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 94 | 1206186 | 40.0 | 49.0 | |
| 91 Toluene | 91 | 8.769 | 8.769 | 0.000 | 99 | 3550075 | 10.0 | 11.3 | |
| 92 Ethyl methacrylate | 69 | 8.838 | 8.838 | 0.000 | 87 | 545874 | 10.0 | 9.79 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.852 | 8.852 | 0.000 | 95 | 841276 | 10.0 | 11.0 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 90 | 469246 | 10.0 | 11.0 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 94 | 798694 | 40.0 | 46.3 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 88 | 846599 | 10.0 | 11.2 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 98 | 754791 | 10.0 | 10.9 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 90 | 528573 | 10.0 | 9.86 | |
| 100 Ethylene Dibromide | 107 | 9.467 | 9.467 | 0.000 | 98 | 425283 | 10.0 | 10.2 | |
| 101 1-Chlorohexane | 91 | 9.704 | 9.704 | 0.000 | 0 | 1245157 | 10.0 | 10.7 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 98 | 2244101 | 10.0 | 10.7 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 98 | 1356799 | 10.0 | 10.9 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 95 | 749747 | 10.0 | 10.7 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 98 | 1642627 | 10.0 | 10.8 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 88 | 2424681 | 10.0 | 10.6 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 87 | 1585752 | 10.0 | 10.9 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 98 | 264521 | 10.0 | 9.38 | |
| 108 Isopropylbenzene | 105 | 10.500 | 10.500 | 0.000 | 96 | 4213024 | 10.0 | 10.4 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 89 | 1321645 | 400.0 | 713.6 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.696 | 10.696 | 0.000 | 95 | 522303 | 10.0 | 10.7 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 94 | 106853 | 10.0 | 10.1 | |
| 114 1,2,3-Trichloropropane | 110 | 10.766 | 10.766 | 0.000 | 83 | 146279 | 10.0 | 10.6 | |
| 116 Bromobenzene | 156 | 10.822 | 10.822 | 0.000 | 96 | 898111 | 10.0 | 10.2 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 98 | 1221779 | 10.0 | 10.7 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.933 | 10.933 | 0.000 | 96 | 3502724 | 10.0 | 10.9 | |
| 117 2-Chlorotoluene | 126 | 10.933 | 10.933 | 0.000 | 96 | 999729 | 10.0 | 10.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 118 4-Chlorotoluene | 126 | 11.017 | 11.017 | 0.000 | 97 | 988056 | 10.0 | 10.4 | |
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 92 | 3565217 | 10.0 | 10.8 | |
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 97 | 3532714 | 10.0 | 10.8 | |
| 122 sec-Butylbenzene | 134 | 11.408 | 11.408 | 0.000 | 94 | 997298 | 10.0 | 10.6 | |
| 123 4-Isopropyltoluene | 119 | 11.506 | 11.506 | 0.000 | 96 | 4023954 | 10.0 | 10.6 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 97 | 1847408 | 10.0 | 10.4 | |
| 126 1,4-Dichlorobenzene | 146 | 11.632 | 11.632 | 0.000 | 96 | 1874831 | 10.0 | 10.6 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 97 | 3791953 | 10.0 | 11.5 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 98 | 1581774 | 10.0 | 10.4 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 86 | 83958 | 10.0 | 9.41 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.671 | 13.671 | 0.000 | 94 | 1231928 | 10.0 | 10.9 | |
| 131 Hexachlorobutadiene | 225 | 13.824 | 13.824 | 0.000 | 97 | 817973 | 10.0 | 11.5 | |
| 132 Naphthalene | 128 | 14.020 | 14.020 | 0.000 | 97 | 1746953 | 10.0 | 10.3 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.341 | 14.341 | 0.000 | 96 | 1014714 | 10.0 | 11.1 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 20.0 | 21.7 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 40.0 | 41.7 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 20.0 | 21.7 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 20.0 | 21.7 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 20.0 | 21.3 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 20.0 | 21.7 | |

## Reagents:

| | | | | | |
|---|---|---|---|---|---|
| MV-MegaMainA_00009 | Amount Added: | 4.00 | Units: uL | | |
| MV-Gas A_00006 | Amount Added: | 4.00 | Units: uL | | |
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent | |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent | |

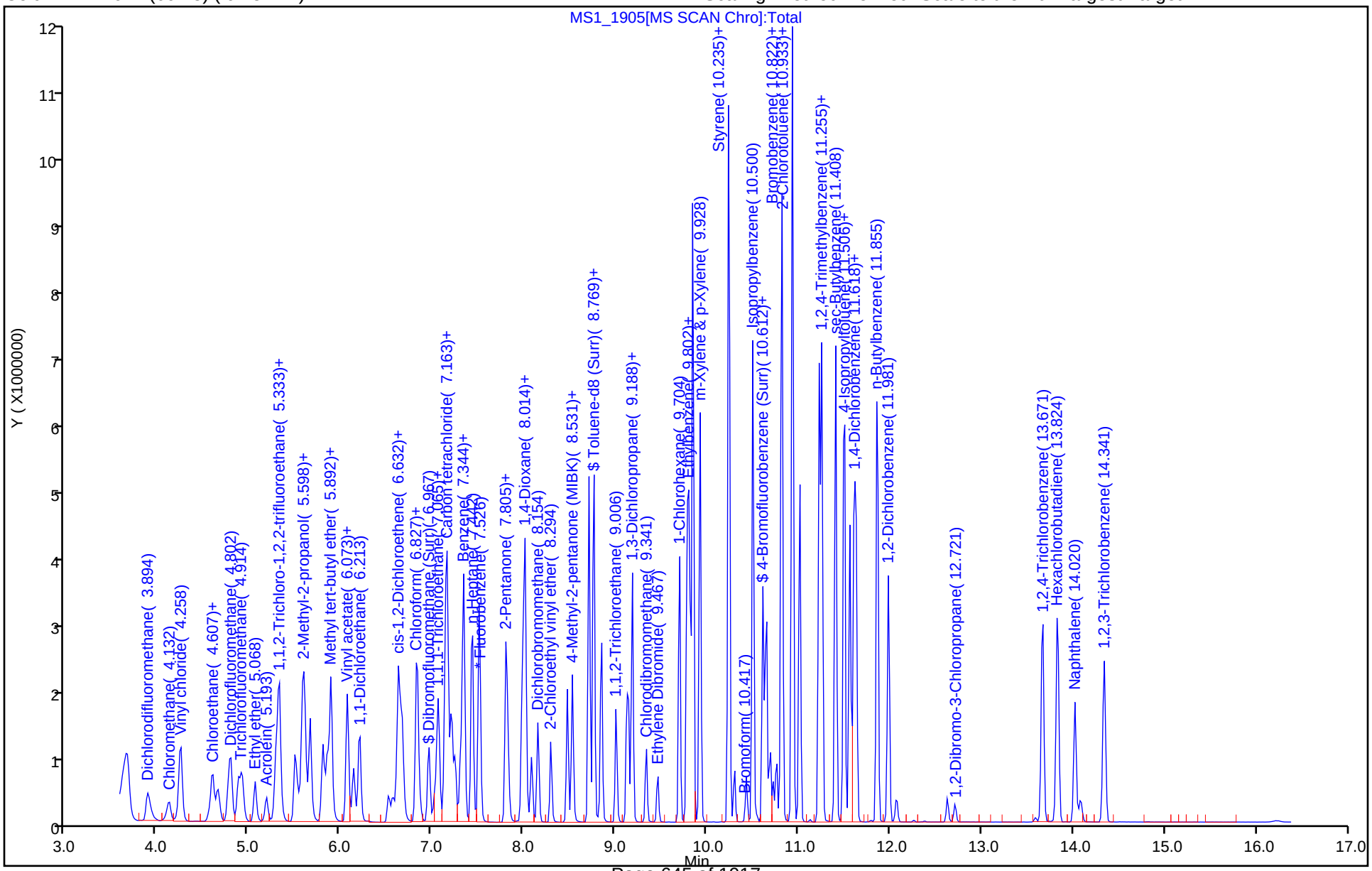
Report Date: 29-Jan-2019 17:53:53 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1905.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 18:23:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | CCV | | | Worklist Smp#: | 2 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 1 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445753/3 Calibration Date: 01/28/2019 18:48

Instrument ID: VMS_MS1 Calib Start Date: 08/02/2018 11:55

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 08/02/2018 13:37

Lab File ID: MS1_1906.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Tetrahydrothiophene | Ave | 0.0250 | 0.0149 | | | 20.0 | -40.5 | 50.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1906.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 28-Jan-2019 18:48:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: nwangumaf Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub109

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:53:57 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.557 | 5.557 | 0.000 | 67 | 536940 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3012871 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 85 | 701328 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 95 | 1072362 | 12.5 | 12.5 | |
| 28 Ethylene oxide | 43 | 4.523 | 4.523 | 0.000 | 99 | 636582 | 1000.0 | 973.9 | |
| 34 Ethanol | 45 | 4.900 | 4.900 | 0.000 | 100 | 157431 | 600.0 | 512.6 | |
| 38 Propene oxide | 58 | 5.152 | 5.152 | 0.000 | 0 | 4071254 | 1000.0 | 951.9 | |
| 41 Isopropyl alcohol | 45 | 5.305 | 5.305 | 0.000 | 98 | 163721 | 100.0 | 83.1 | |
| 44 Acetonitrile | 41 | 5.501 | 5.501 | 0.000 | 99 | 290064 | 100.0 | 87.5 | |
| 56 Isopropyl ether | 87 | 6.171 | 6.171 | 0.000 | 93 | 545284 | 10.0 | 10.2 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.283 | 6.283 | 0.000 | 89 | 1051956 | 10.0 | 12.1 | |
| 59 Tert-butyl ethyl ether | 59 | 6.450 | 6.450 | 0.000 | 97 | 1610362 | 10.0 | 10.4 | |
| 60 Ethyl acetate | 43 | 6.562 | 6.562 | 0.000 | 98 | 478516 | 20.0 | 18.5 | |
| 63 Propionitrile | 54 | 6.618 | 6.618 | 0.000 | 99 | 370215 | 100.0 | 92.1 | |
| 66 Methacrylonitrile | 41 | 6.744 | 6.744 | 0.000 | 89 | 1561776 | 100.0 | 95.5 | |
| 76 Tert-amyl methyl ether | 73 | 7.330 | 7.330 | 0.000 | 98 | 1366201 | 10.0 | 10.7 | |
| 78 n-Butanol | 56 | 7.526 | 7.526 | 0.000 | 87 | 188175 | 250.0 | 206.9 | |
| 81 Methyl methacrylate | 100 | 7.931 | 7.931 | 0.000 | 87 | 183390 | 20.0 | 23.3 | |
| 87 2-Nitropropane | 41 | 8.280 | 8.280 | 0.000 | 97 | 99076 | 20.0 | 23.7 | |
| 99 Tetrahydrothiophene | 60 | 9.383 | 9.383 | 0.000 | 89 | 16692 | NC | NC | |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 78 | 107438 | 20.0 | 16.4 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 98 | 2841995 | 10.0 | 9.41 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.945 | 12.945 | 0.000 | 98 | 1284608 | 10.0 | 10.5 | |

## QC Flag Legend

Processing Flags
NC - Not Calibrated

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-Supp A_00033 | Amount Added: | 4.00 | Units: uL |

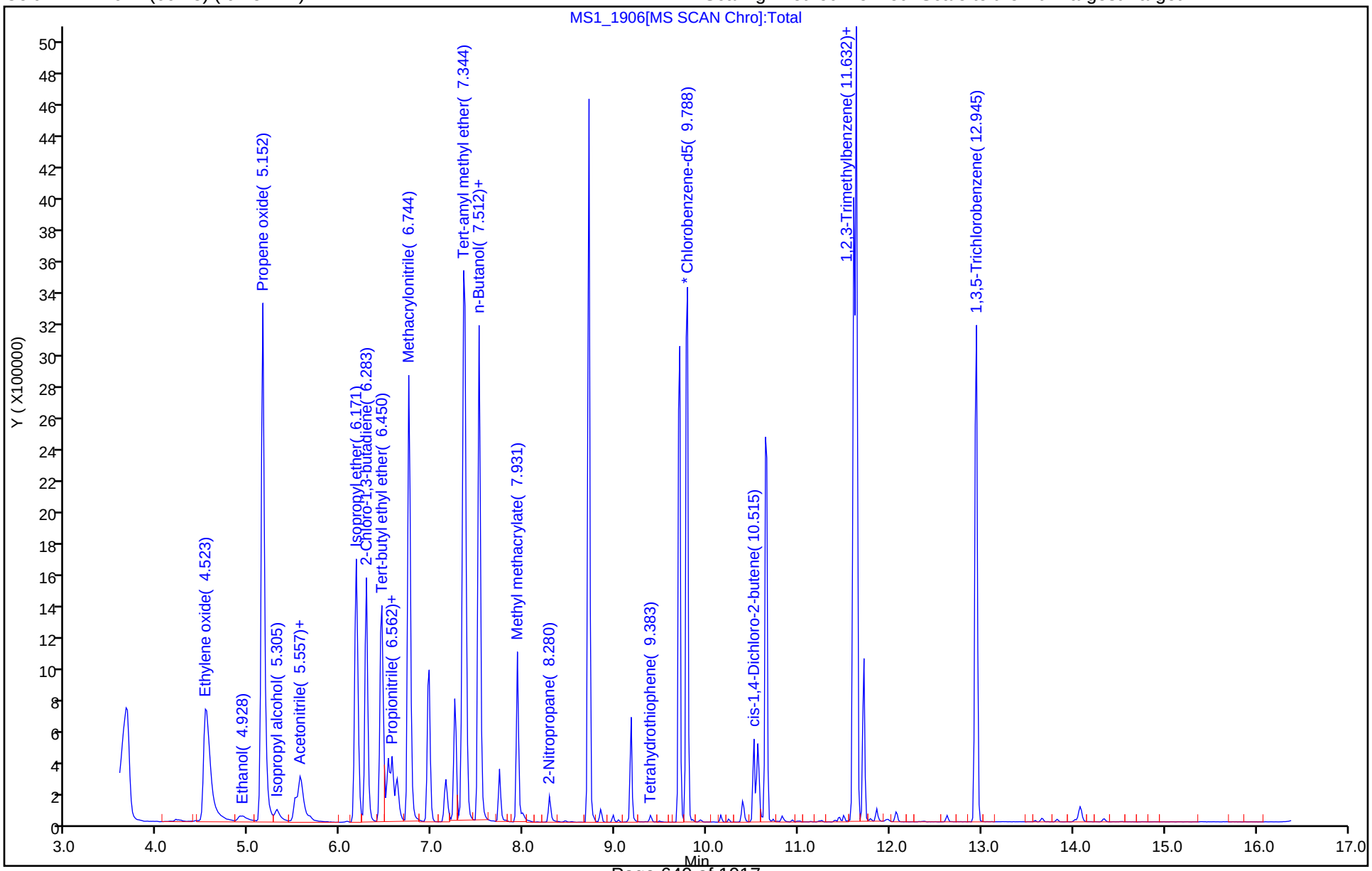
Report Date: 29-Jan-2019 17:53:58 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1906.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 18:48:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | CCV | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445753/3  Calibration Date: 01/28/2019 18:48

Instrument ID: VMS_MS1  Calib Start Date: 01/08/2019 12:31

GC Column: DB-624 (60.25)  ID: 0.25(mm)  Calib End Date: 01/08/2019 14:14

Lab File ID: MS1_1906.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Ethylene oxide | Lin1 | | 0.0026 | | 974 | 1000 | -2.6 | 50.0 |
| Ethanol | Ave | 0.1430 | 0.1222 | | 513 | 600 | -14.6 | 50.0 |
| Propene oxide | Ave | 0.0177 | 0.0169 | | 952 | 1000 | -4.8 | 50.0 |
| 2-Propanol | Ave | 0.9175 | 0.7623 | | 83.1 | 100 | -16.9 | 50.0 |
| Acetonitrile | Ave | 0.0138 | 0.0120 | | 87.5 | 100 | -12.5 | 50.0 |
| Di-isopropyl ether (DIPE) | Ave | 0.2211 | 0.2262 | | 10.2 | 10.0 | 2.3 | 35.0 |
| Chloroprene | Ave | 0.3613 | 0.4364 | | 12.1 | 10.0 | 20.8 | 35.0 |
| Tert-butyl ethyl ether | Ave | 0.6410 | 0.6681 | | 10.4 | 10.0 | 4.2 | 35.0 |
| Ethyl acetate | Ave | 0.1075 | 0.0993 | | 18.5 | 20.0 | -7.7 | 50.0 |
| Propionitrile | Ave | 0.0167 | 0.0154 | | 92.1 | 100 | -7.9 | 50.0 |
| Methacrylonitrile | Ave | 0.0679 | 0.0648 | | 95.5 | 100 | -4.5 | 50.0 |
| Tert-amyl methyl ether | Ave | 0.5292 | 0.5668 | | 10.7 | 10.0 | 7.1 | 35.0 |
| n-Butanol | Lin2 | | 0.3505 | | 207 | 250 | -17.2 | 50.0 |
| Methyl methacrylate | Ave | 0.0327 | 0.0380 | | 23.3 | 20.0 | 16.3 | 35.0 |
| 2-Nitropropane | Ave | 0.0174 | 0.0206 | | 23.7 | 20.0 | 18.4 | 50.0 |
| cis-1,4-Dichloro-2-butene | Ave | 0.0764 | 0.0626 | | 16.4 | 20.0 | -18.0 | 50.0 |
| 1,2,3-Trimethylbenzene | Ave | 3.521 | 3.313 | | 9.41 | 10.0 | -5.9 | 35.0 |
| 1,3,5-Trichlorobenzene | Ave | 1.429 | 1.497 | | 10.5 | 10.0 | 4.8 | 50.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1906.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 28-Jan-2019 18:48:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: nwangumaf Instrument ID: VMS_MS1
Sublist: chrom-AQ_VMS1_8260*sub109

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:53:57 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.557 | 5.557 | 0.000 | 67 | 536940 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3012871 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 85 | 701328 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 95 | 1072362 | 12.5 | 12.5 | |
| 28 Ethylene oxide | 43 | 4.523 | 4.523 | 0.000 | 99 | 636582 | 1000.0 | 973.9 | |
| 34 Ethanol | 45 | 4.900 | 4.900 | 0.000 | 100 | 157431 | 600.0 | 512.6 | |
| 38 Propene oxide | 58 | 5.152 | 5.152 | 0.000 | 0 | 4071254 | 1000.0 | 951.9 | |
| 41 Isopropyl alcohol | 45 | 5.305 | 5.305 | 0.000 | 98 | 163721 | 100.0 | 83.1 | |
| 44 Acetonitrile | 41 | 5.501 | 5.501 | 0.000 | 99 | 290064 | 100.0 | 87.5 | |
| 56 Isopropyl ether | 87 | 6.171 | 6.171 | 0.000 | 93 | 545284 | 10.0 | 10.2 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.283 | 6.283 | 0.000 | 89 | 1051956 | 10.0 | 12.1 | |
| 59 Tert-butyl ethyl ether | 59 | 6.450 | 6.450 | 0.000 | 97 | 1610362 | 10.0 | 10.4 | |
| 60 Ethyl acetate | 43 | 6.562 | 6.562 | 0.000 | 98 | 478516 | 20.0 | 18.5 | |
| 63 Propionitrile | 54 | 6.618 | 6.618 | 0.000 | 99 | 370215 | 100.0 | 92.1 | |
| 66 Methacrylonitrile | 41 | 6.744 | 6.744 | 0.000 | 89 | 1561776 | 100.0 | 95.5 | |
| 76 Tert-amyl methyl ether | 73 | 7.330 | 7.330 | 0.000 | 98 | 1366201 | 10.0 | 10.7 | |
| 78 n-Butanol | 56 | 7.526 | 7.526 | 0.000 | 87 | 188175 | 250.0 | 206.9 | |
| 81 Methyl methacrylate | 100 | 7.931 | 7.931 | 0.000 | 87 | 183390 | 20.0 | 23.3 | |
| 87 2-Nitropropane | 41 | 8.280 | 8.280 | 0.000 | 97 | 99076 | 20.0 | 23.7 | |
| 99 Tetrahydrothiophene | 60 | 9.383 | 9.383 | 0.000 | 89 | 16692 | NC | NC | |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 78 | 107438 | 20.0 | 16.4 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 98 | 2841995 | 10.0 | 9.41 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.945 | 12.945 | 0.000 | 98 | 1284608 | 10.0 | 10.5 | |

## QC Flag Legend

Processing Flags
NC - Not Calibrated

## Reagents:

| | | | |
|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL |
| MV-Supp A_00033 | Amount Added: | 4.00 | Units: uL |

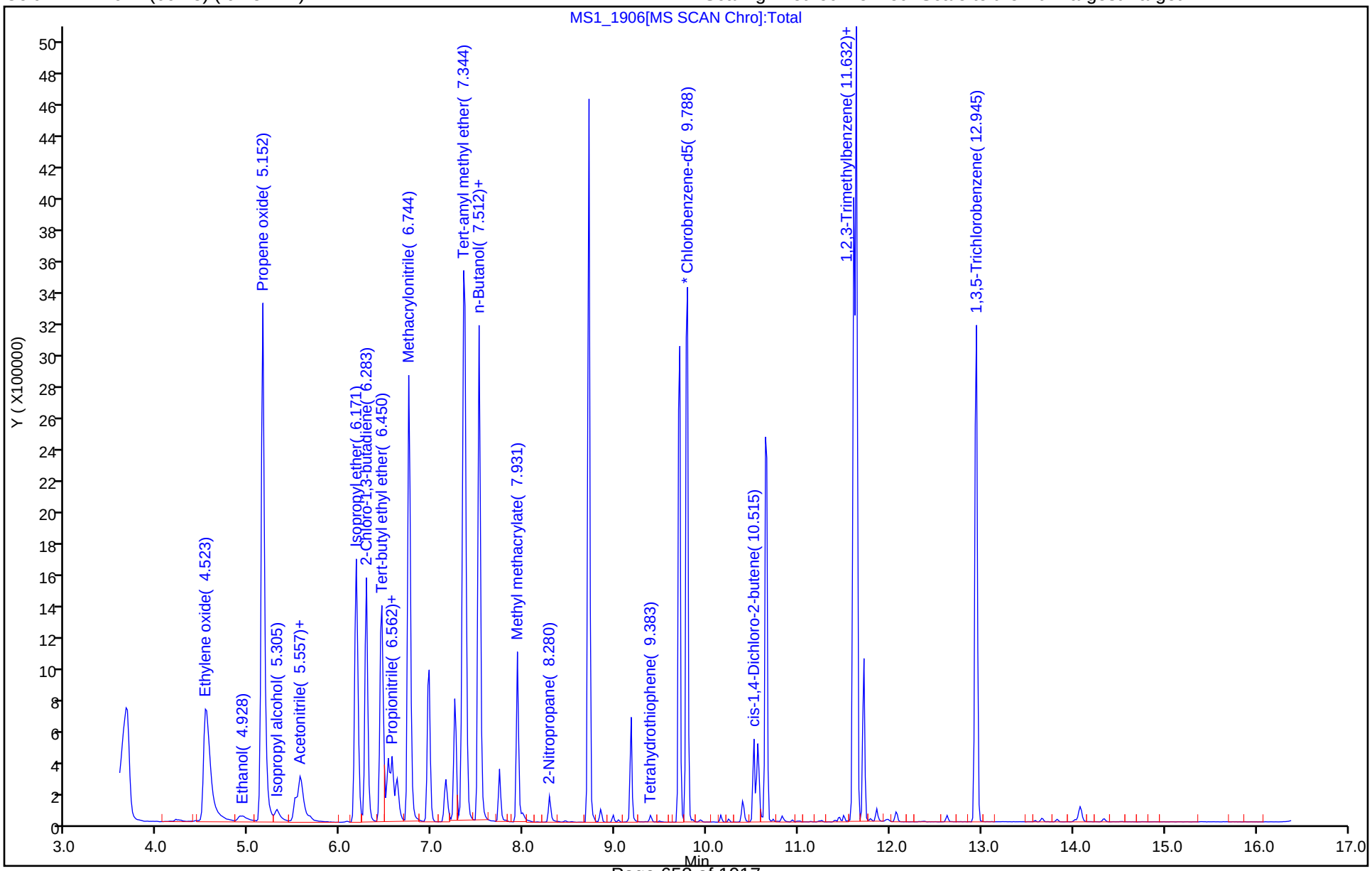
Report Date: 29-Jan-2019 17:53:58 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1906.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 18:48:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | CCV | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1065.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 08-Jan-2019 08:17:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: wickhamt Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Jan-2019 06:42:17 Calib Date: 08-Jan-2019 14:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1082.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0314

First Level Reviewer: wickhamt Date: 08-Jan-2019 08:28:49

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 4 BFB | 95 | 4.597 | 4.597 | 0.000 | 93 | 53796 | NR | NR | |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard

## Reagents:

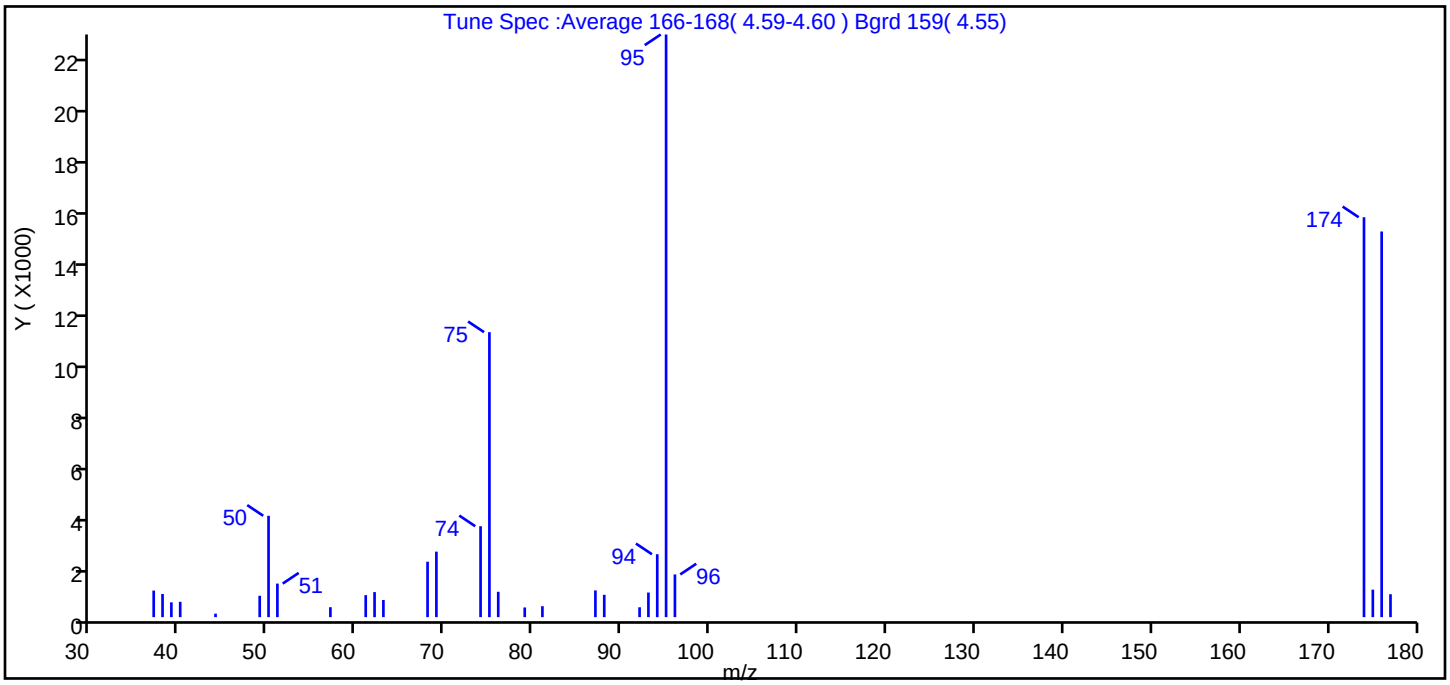
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1065.D
Injection Date: 08-Jan-2019 08:17:30 Instrument ID: VMS_MS1
Lims ID: BFB
Client ID:
Operator ID: wickhamt ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 95 | Base peak, 100% relative abundance | 100.0 |
| 50 | 15 to 40% of m/z 95 | 17.4 |
| 75 | 30 to 60% of m/z 95 | 48.9 |
| 96 | 5 to 9% of m/z 95 | 7.3 |
| 173 | Less than 2% of m/z 174 | 0.0 (0.0) |
| 174 | 50 to 120% of m/z 95 | 68.6 |
| 175 | 5 to 9% of m/z 174 | 4.7 (6.9) |
| 176 | Greater than 95% but less than 101% of m/z 174 | 66.2 (96.4) |
| 177 | 5 to 9% of m/z 176 | 3.9 (5.9) |

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1065.D\AQ_VMS1_8260.rslt\spectra.d
Injection Date: 08-Jan-2019 08:17:30
Spectrum: Tune Spec :Average 166-168( 4.59-4.60 ) Bgrd 159( 4.55)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 30

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 37.00 | 1008 | 57.00 | 377 | 76.00 | 962 | 95.00 | 22096 |
| 38.00 | 878 | 61.00 | 835 | 79.00 | 367 | 96.00 | 1620 |
| 39.00 | 562 | 62.00 | 950 | 81.00 | 415 | 174.00 | 15165 |
| 40.00 | 581 | 63.00 | 650 | 87.00 | 1014 | 175.00 | 1043 |
| 44.00 | 132 | 68.00 | 2102 | 88.00 | 847 | 176.00 | 14625 |
| 49.00 | 811 | 69.00 | 2484 | 92.00 | 374 | 177.00 | 869 |
| 50.00 | 3844 | 74.00 | 3448 | 93.00 | 933 | | |
| 51.00 | 1273 | 75.00 | 10807 | 94.00 | 2386 | | |

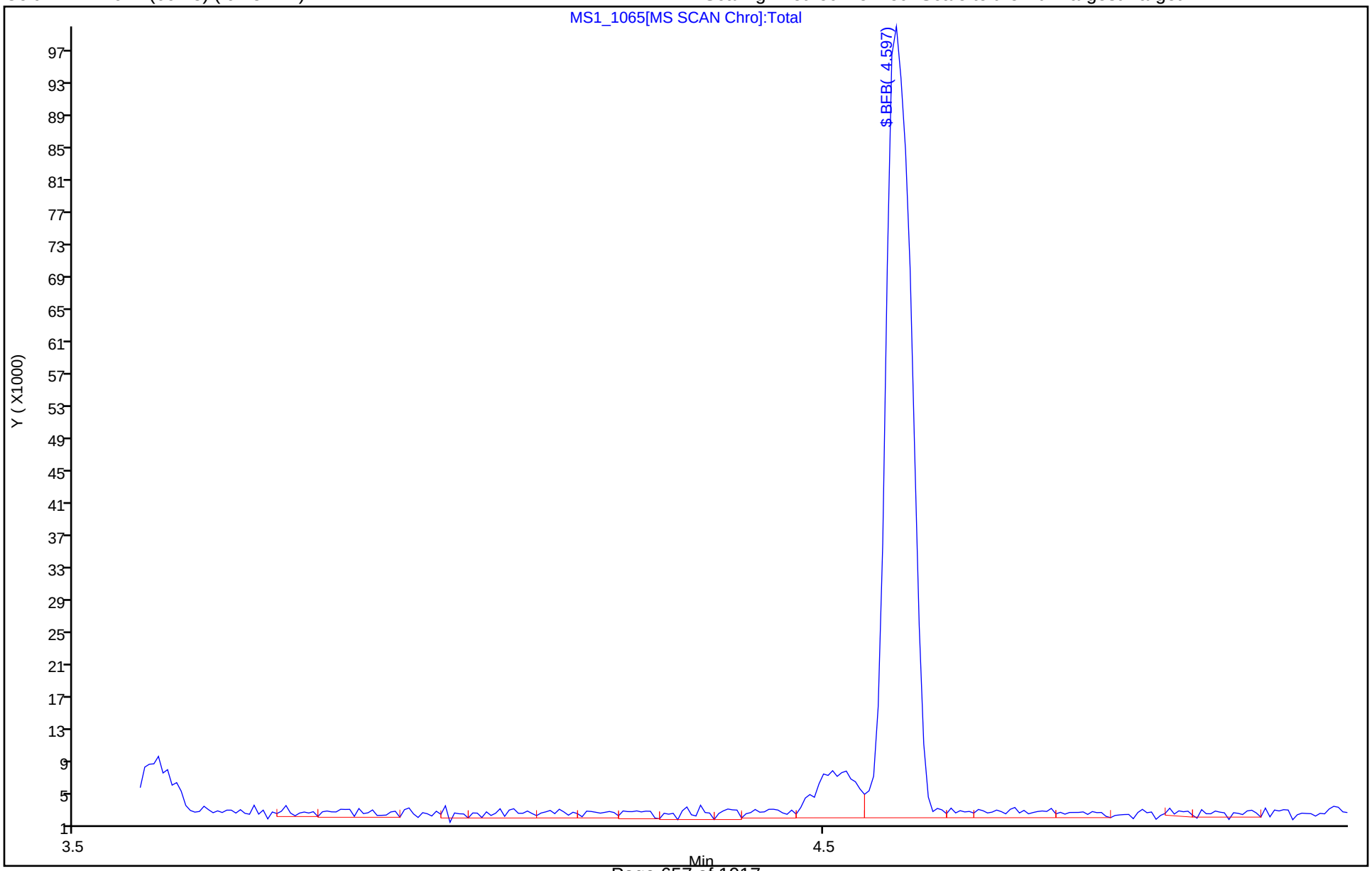
Report Date: 09-Jan-2019 06:42:18 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b\MS1_1065.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 08:17:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | BFB | | | Worklist Smp#: | 1 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 uL | Dil. Factor: | 1.0000 | ALS Bottle#: | 100 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1418.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 18-Jan-2019 09:52:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: wickhamt Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 22-Jan-2019 17:28:05 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0304

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 4 BFB | 95 | 4.609 | 4.609 | 0.000 | 95 | 148866 | NR | NR | |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard

## Reagents:

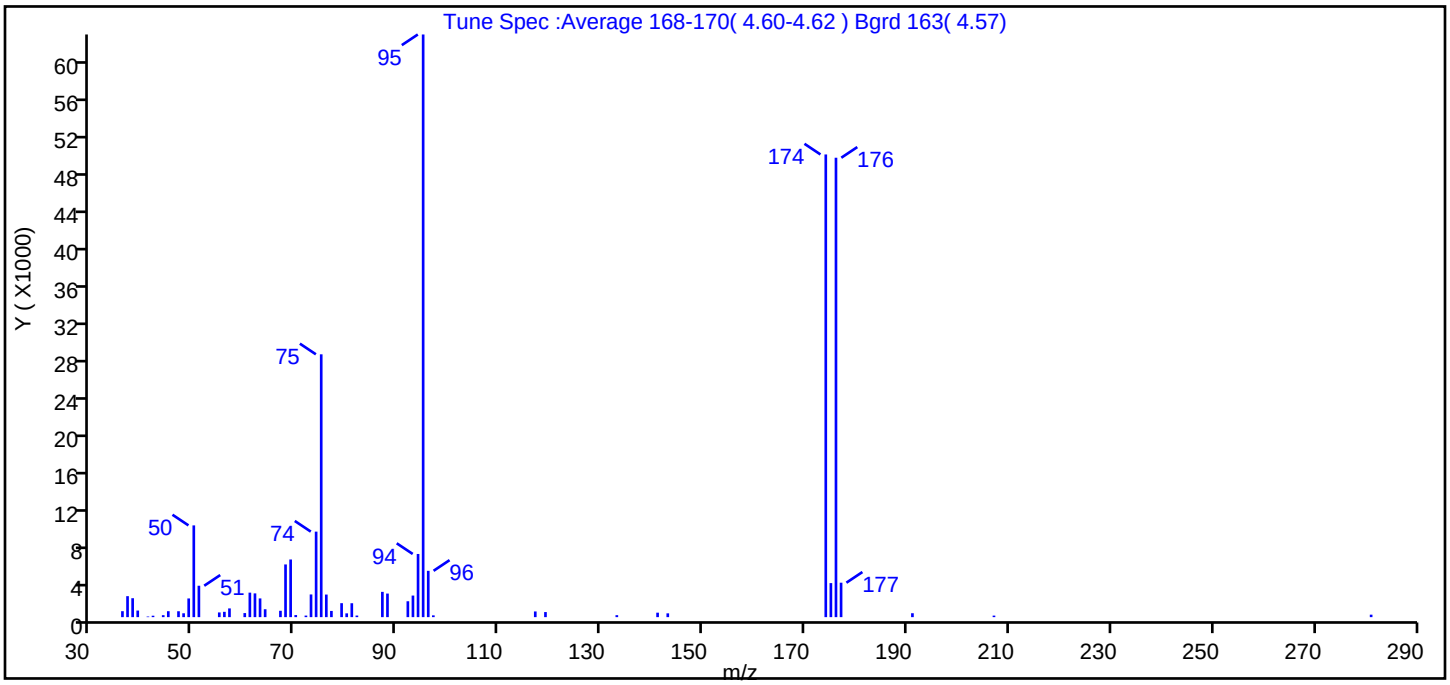
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1418.D
Injection Date: 18-Jan-2019 09:52:30 Instrument ID: VMS_MS1
Lims ID: BFB
Client ID:
Operator ID: wickhamt ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 95 | Base peak, 100% relative abundance | 100.0 |
| 50 | 15 to 40% of m/z 95 | 15.7 |
| 75 | 30 to 60% of m/z 95 | 45.1 |
| 96 | 5 to 9% of m/z 95 | 8.0 |
| 173 | Less than 2% of m/z 174 | 0.0 (0.0) |
| 174 | 50 to 120% of m/z 95 | 79.4 |
| 175 | 5 to 9% of m/z 174 | 5.8 (7.4) |
| 176 | Greater than 95% but less than 101% of m/z 174 | 78.8 (99.3) |
| 177 | 5 to 9% of m/z 176 | 5.9 (7.5) |

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1418.D\AQ_VMS1_8260.rslt\spectra.d
Injection Date: 18-Jan-2019 09:52:30
Spectrum: Tune Spec :Average 168-170( 4.60-4.62 ) Bgrd 163( 4.57)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 55

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 640 | 56.00 | 571 | 75.00 | 28216 | 97.00 | 192 |
| 37.00 | 2253 | 57.00 | 938 | 76.00 | 2425 | 117.00 | 611 |
| 38.00 | 2033 | 60.00 | 437 | 77.00 | 667 | 119.00 | 546 |
| 39.00 | 708 | 61.00 | 2630 | 79.00 | 1500 | 133.00 | 212 |
| 41.00 | 65 | 62.00 | 2550 | 80.00 | 406 | 141.00 | 479 |
| 42.00 | 153 | 63.00 | 2010 | 81.00 | 1493 | 143.00 | 409 |
| 44.00 | 211 | 64.00 | 849 | 82.00 | 171 | 174.00 | 49672 |
| 45.00 | 637 | 67.00 | 682 | 87.00 | 2714 | 175.00 | 3655 |
| 47.00 | 633 | 68.00 | 5658 | 88.00 | 2532 | 176.00 | 49320 |
| 48.00 | 415 | 69.00 | 6190 | 92.00 | 1706 | 177.00 | 3698 |
| 49.00 | 2007 | 70.00 | 222 | 93.00 | 2317 | 191.00 | 421 |
| 50.00 | 9850 | 72.00 | 168 | 94.00 | 6782 | 207.00 | 165 |
| 51.00 | 3372 | 73.00 | 2436 | 95.00 | 62552 | 281.00 | 266 |
| 55.00 | 505 | 74.00 | 9181 | 96.00 | 4974 | | |

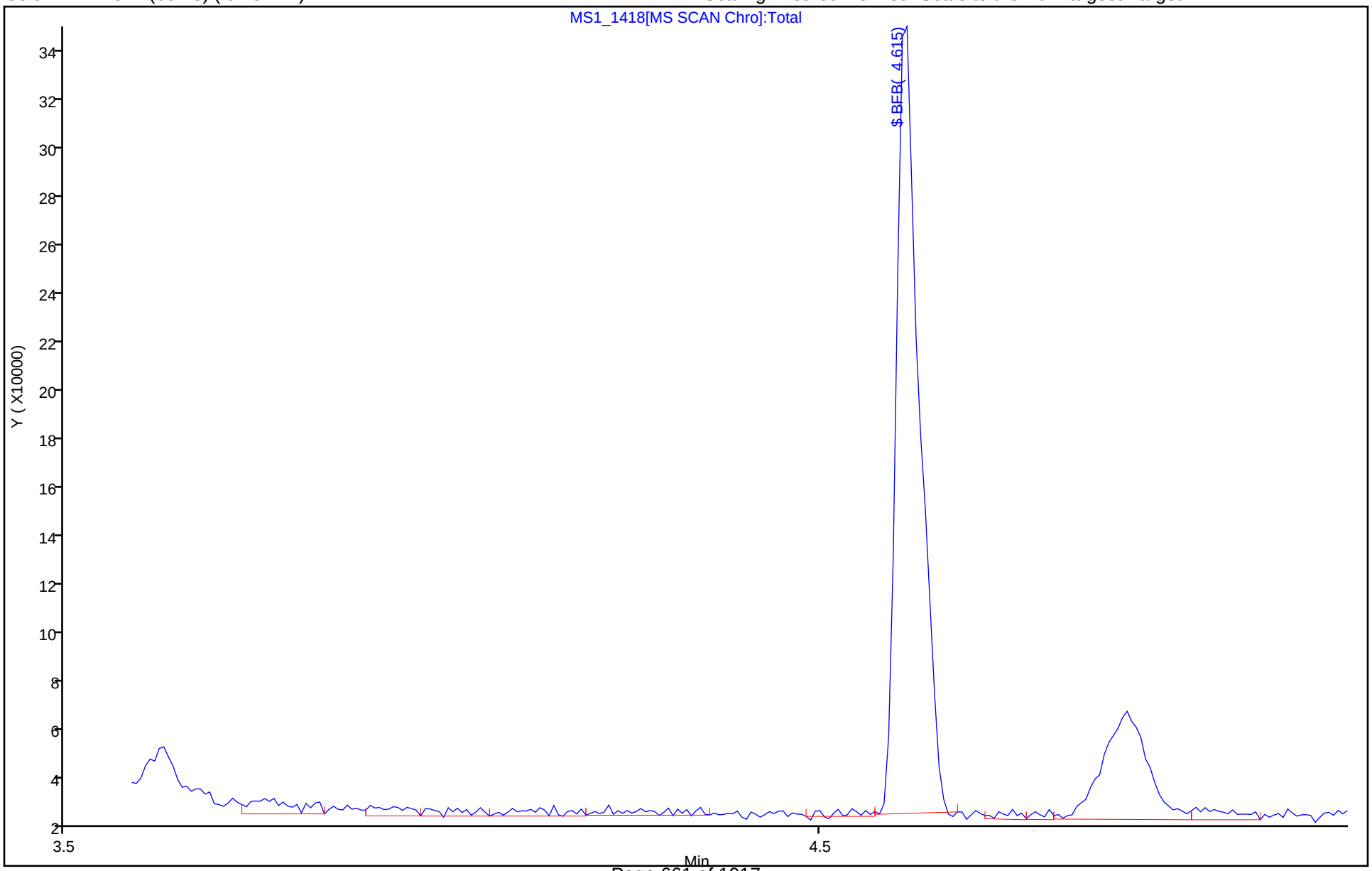
Report Date: 22-Jan-2019 17:28:06 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1418.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 18-Jan-2019 09:52:30 | Instrument ID: | VMS_MS1 | Operator ID: | wickhamt |
| Lims ID: | BFB | | | Worklist Smp#: | 1 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 uL | Dil. Factor: | 1.0000 | ALS Bottle#: | 100 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1904.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 28-Jan-2019 17:51:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:53:46 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 18:13:11

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 4 BFB | 95 | 4.585 | 4.585 | 0.000 | 92 | 200839 | NR | NR | |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard

## Reagents:

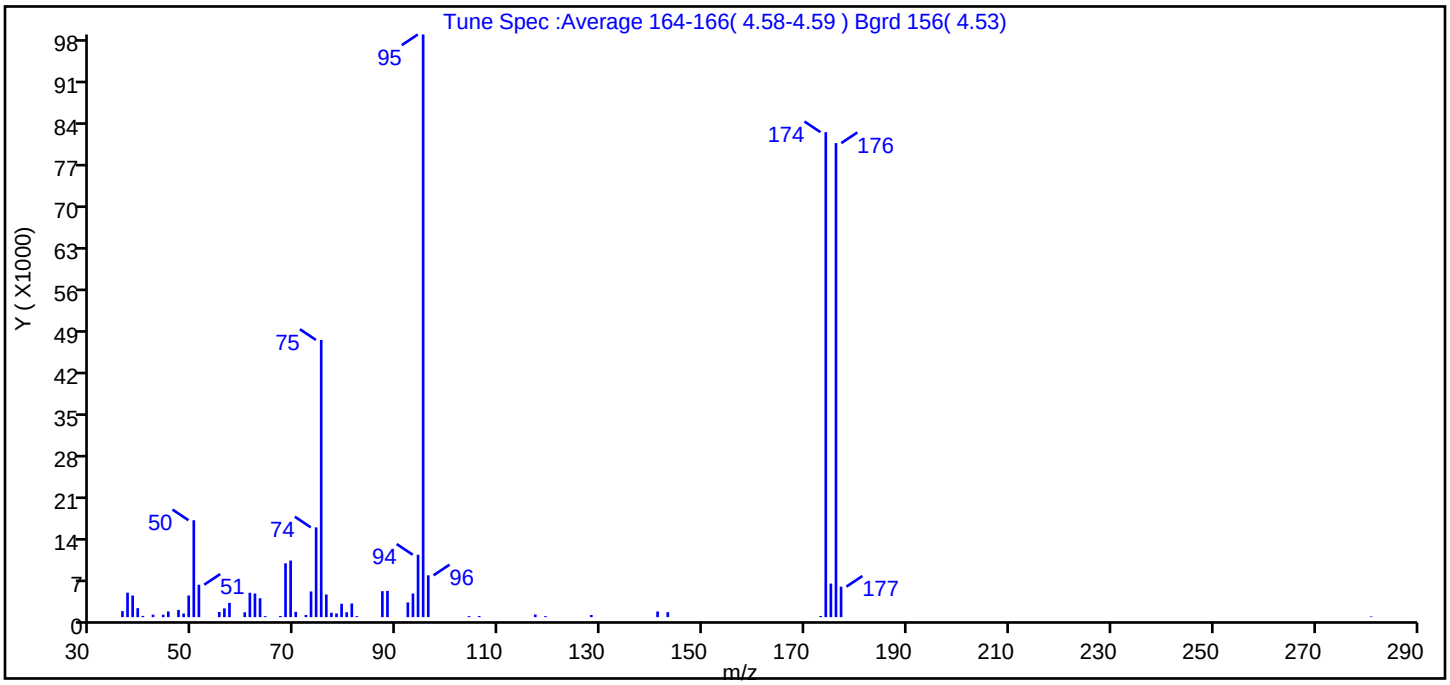
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1904.D
Injection Date: 28-Jan-2019 17:51:30 Instrument ID: VMS_MS1
Lims ID: BFB
Client ID:
Operator ID: nwangumaf ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 95 | Base peak, 100% relative abundance | 100.0 |
| 50 | 15 to 40% of m/z 95 | 16.6 |
| 75 | 30 to 60% of m/z 95 | 47.6 |
| 96 | 5 to 9% of m/z 95 | 7.2 |
| 173 | Less than 2% of m/z 174 | 0.2 (0.2) |
| 174 | 50 to 120% of m/z 95 | 83.2 |
| 175 | 5 to 9% of m/z 174 | 5.8 (6.9) |
| 176 | Greater than 95% but less than 101% of m/z 174 | 81.4 (97.7) |
| 177 | 5 to 9% of m/z 176 | 5.2 (6.4) |

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1904.D\AQ_VMS1_8260.rslt\spectra.d
Injection Date: 28-Jan-2019 17:51:30
Spectrum: Tune Spec :Average 164-166( 4.58-4.59 ) Bgrd 156( 4.53)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 56

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 1019 | 56.00 | 1482 | 75.00 | 46840 | 96.00 | 7065 |
| 37.00 | 4133 | 57.00 | 2407 | 76.00 | 3829 | 104.00 | 168 |
| 38.00 | 3646 | 60.00 | 818 | 77.00 | 743 | 106.00 | 186 |
| 39.00 | 1521 | 61.00 | 4124 | 78.00 | 619 | 117.00 | 449 |
| 40.00 | 206 | 62.00 | 3987 | 79.00 | 2257 | 119.00 | 167 |
| 42.00 | 425 | 63.00 | 3190 | 80.00 | 826 | 128.00 | 363 |
| 44.00 | 410 | 64.00 | 170 | 81.00 | 2311 | 141.00 | 960 |
| 45.00 | 965 | 67.00 | 199 | 82.00 | 169 | 143.00 | 844 |
| 47.00 | 1226 | 68.00 | 9090 | 87.00 | 4385 | 173.00 | 200 |
| 48.00 | 612 | 69.00 | 9560 | 88.00 | 4438 | 174.00 | 81936 |
| 49.00 | 3662 | 70.00 | 898 | 92.00 | 2482 | 175.00 | 5672 |
| 50.00 | 16374 | 72.00 | 369 | 93.00 | 3996 | 176.00 | 80088 |
| 51.00 | 5479 | 73.00 | 4344 | 94.00 | 10544 | 177.00 | 5149 |
| 55.00 | 869 | 74.00 | 15170 | 95.00 | 98440 | 281.00 | 111 |

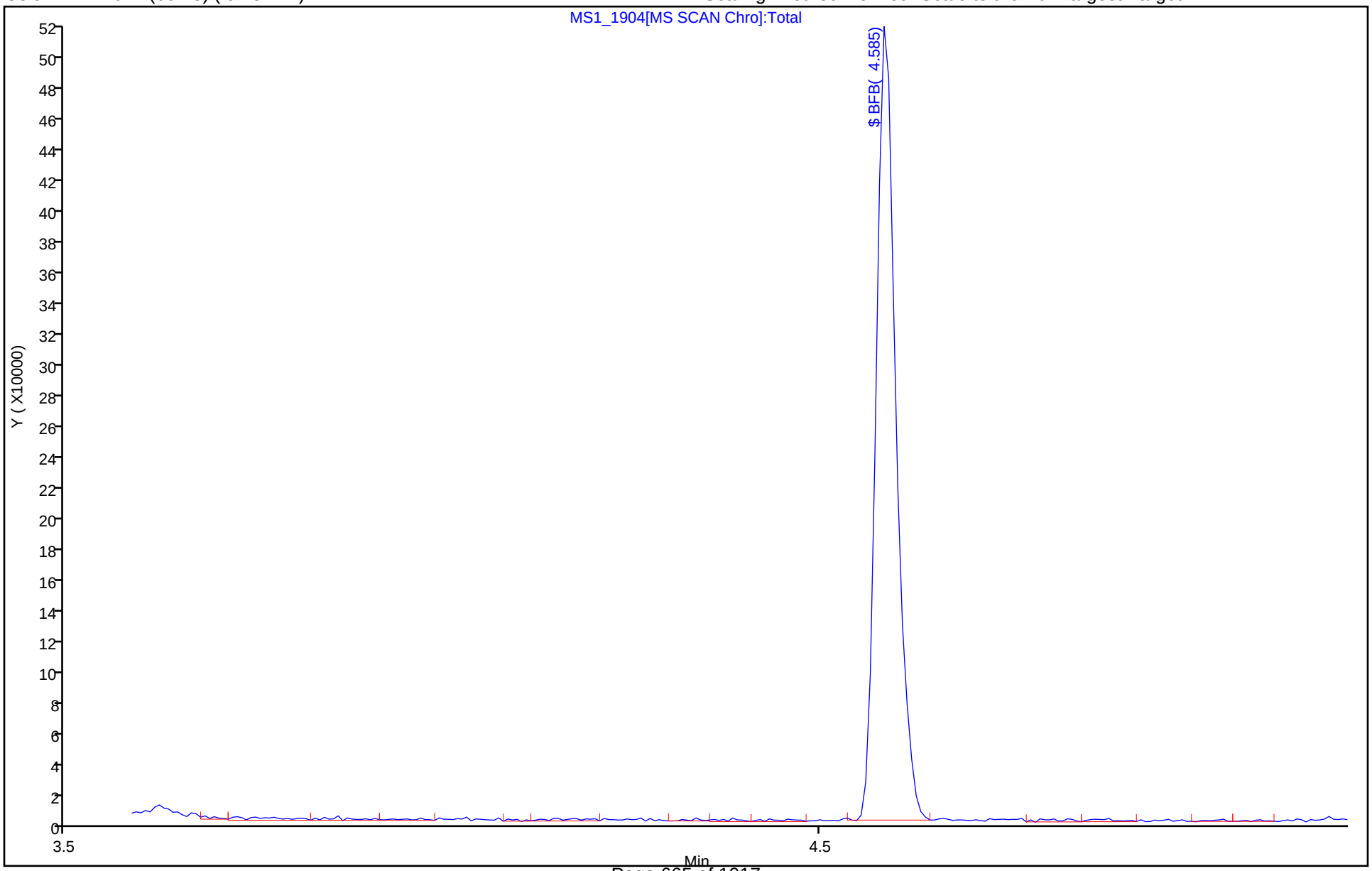
Report Date: 29-Jan-2019 17:53:47 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1904.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 17:51:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | BFB | | | Worklist Smp#: | 1 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 uL | Dil. Factor: | 1.0000 | ALS Bottle#: | 100 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-445753/8

Matrix: Water | Lab File ID: MS1_1907.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 19:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.16 | U | 1.0 | 0.16 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.21 | U | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.27 | U | 1.0 | 0.27 |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.42 | U | 3.0 | 0.42 |
| 75-34-3 | 1,1-Dichloroethane | 0.22 | U | 1.0 | 0.22 |
| 75-35-4 | 1,1-Dichloroethene | 0.23 | U | 1.0 | 0.23 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.21 | U | 1.0 | 0.21 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.21 | U | 1.0 | 0.21 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.47 | U | 5.0 | 0.47 |
| 106-93-4 | 1,2-Dibromoethane | 0.18 | U | 1.0 | 0.18 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.15 | U | 1.0 | 0.15 |
| 107-06-2 | 1,2-Dichloroethane | 0.13 | U | 1.0 | 0.13 |
| 78-87-5 | 1,2-Dichloropropane | 0.18 | U | 1.0 | 0.18 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.16 | U | 1.0 | 0.16 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.13 | U | 1.0 | 0.13 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.16 | U | 1.0 | 0.16 |
| 123-91-1 | 1,4-Dioxane | 57 | U | 200 | 57 |
| 78-93-3 | 2-Butanone (MEK) | 2.0 | U | 6.0 | 2.0 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 0.69 | U | 3.0 | 0.69 |
| 591-78-6 | 2-Hexanone | 1.7 | U | 5.0 | 1.7 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 0.98 | U | 5.0 | 0.98 |
| 67-64-1 | Acetone | 1.9 | U | 10 | 1.9 |
| 75-05-8 | Acetonitrile | 9.6 | U | 30 | 9.6 |
| 107-02-8 | Acrolein | 2.8 | U | 20 | 2.8 |
| 107-13-1 | Acrylonitrile | 1.4 | U | 20 | 1.4 |
| 71-43-2 | Benzene | 0.16 | U | 1.0 | 0.16 |
| 75-25-2 | Bromoform | 0.19 | U | 1.0 | 0.19 |
| 74-83-9 | Bromomethane | 0.21 | U | 2.0 | 0.21 |
| 75-15-0 | Carbon disulfide | 0.45 | U | 2.0 | 0.45 |
| 56-23-5 | Carbon tetrachloride | 0.19 | U | 1.0 | 0.19 |
| 108-90-7 | Chlorobenzene | 0.17 | U | 1.0 | 0.17 |
| 74-97-5 | Chlorobromomethane | 0.10 | U | 1.0 | 0.10 |
| 124-48-1 | Chlorodibromomethane | 0.17 | U | 1.0 | 0.17 |
| 75-00-3 | Chloroethane | 0.41 | U | 2.0 | 0.41 |
| 67-66-3 | Chloroform | 0.16 | U | 1.0 | 0.16 |
| 74-87-3 | Chloromethane | 0.30 | U | 2.0 | 0.30 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-445753/8

Matrix: Water | Lab File ID: MS1_1907.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 19:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 0.15 | U | 1.0 | 0.15 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.16 | U | 1.0 | 0.16 |
| 110-82-7 | Cyclohexane | 0.28 | U | 2.0 | 0.28 |
| 75-27-4 | Dichlorobromomethane | 0.17 | U | 1.0 | 0.17 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 2.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.16 | U | 1.0 | 0.16 |
| 98-82-8 | Isopropylbenzene | 0.19 | U | 1.0 | 0.19 |
| 79-20-9 | Methyl acetate | 1.6 | U | 5.0 | 1.6 |
| 1634-04-4 | Methyl tert-butyl ether | 0.25 | U | 5.0 | 0.25 |
| 108-87-2 | Methylcyclohexane | 0.36 | U | 1.0 | 0.36 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 2.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.34 | U | 2.0 | 0.34 |
| 95-47-6 | o-Xylene | 0.19 | U | 1.0 | 0.19 |
| 100-42-5 | Styrene | 0.17 | U | 1.0 | 0.17 |
| 127-18-4 | Tetrachloroethene | 0.20 | U | 1.0 | 0.20 |
| 108-88-3 | Toluene | 0.17 | U | 1.0 | 0.17 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.15 | U | 1.0 | 0.15 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.19 | U | 3.0 | 0.19 |
| 79-01-6 | Trichloroethene | 0.16 | U | 1.0 | 0.16 |
| 75-69-4 | Trichlorofluoromethane | 0.29 | U | 2.0 | 0.29 |
| 75-01-4 | Vinyl chloride | 0.10 | U | 1.0 | 0.10 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 113 | | 70-127 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 102 | | 78-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 109 | | 77-120 |
| 2037-26-5 | Toluene-d8 (Surr) | 110 | | 80-125 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-445753/8

Matrix: Water | Lab File ID: MS1_1907.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 19:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 0.39

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |
| 74-88-4 | Iodomethane | 5.52 | 0.390 | J | 98% |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1907.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 28-Jan-2019 19:09:30 ALS Bottle#: 3 Worklist Smp#: 8
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 19:30:06

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.571 | 5.557 | 0.014 | 34 | 507284 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3010287 | 12.5 | 12.5 | |
| * 149 1,4-Dioxane-d8 | 96 | 8.713 | 8.727 | -0.014 | 0 | 26347 | | 0 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 85 | 687321 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 94 | 1059066 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 689844 | 10.0 | 10.9 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.247 | 7.246 | 0.001 | 97 | 560792 | 10.0 | 11.3 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2820442 | 10.0 | 11.0 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.654 | -0.014 | 0 | 925935 | 10.0 | 10.2 | |
| $ 152 Trifluorotoluene (Surr) | 1 | | 0.000 | | | | | ND | |
| $ 4 BFB | 95 | | 4.585 | | | | | ND | |
| 24 Dichlorodifluoromethane | 85 | | 3.894 | | | | | ND | |
| 26 Chloromethane | 50 | | 4.132 | | | | | ND | |
| 27 Vinyl chloride | 62 | | 4.244 | | | | | ND | |
| 22 Chlorotrifluoroethene | 116 | | 4.248 | | | | | ND | |
| 25 1,2-Dichloro-1,1,2,2-tetra | 85 | | 4.472 | | | | | ND | |
| 28 Ethylene oxide | 43 | | 4.523 | | | | | ND | |
| 29 Bromomethane | 94 | | 4.607 | | | | | ND | |
| 31 Chloroethane | 64 | | 4.663 | | | | | ND | |
| 23 2-Chloro-1,1,1-Trifluoroet | 118 | | 4.737 | | | | | ND | |
| 32 Dichlorofluoromethane | 67 | | 4.802 | | | | | ND | |
| 34 Ethanol | 45 | | 4.900 | | | | | ND | |
| 33 Trichlorofluoromethane | 101 | | 4.914 | | | | | ND | |
| 36 Ethyl ether | 59 | | 5.068 | | | | | ND | |
| 38 Propene oxide | 58 | | 5.152 | | | | | ND | U |
| 39 Acrolein | 56 | | 5.193 | | | | | ND | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 99 | 12736 | | 1.87 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | | 5.305 | | | | | ND | |
| 41 Isopropyl alcohol | 45 | | 5.305 | | | | | ND | U |
| 43 1,1-Dichloroethene | 96 | | 5.333 | | | | | ND | |
| 45 Iodomethane | 142 | 5.515 | 5.501 | 0.014 | 98 | 47748 | | 0.3900 | |
| 44 Acetonitrile | 41 | | 5.501 | | | | | ND | U |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 35 1,2-Dichloro-1,1,2-trifluo | 117 | | 5.505 | | | | | ND | |
| 46 Methyl acetate | 43 | | 5.528 | | | | | ND | |
| 37 1,1,1-Trifluoro-2,2-dichlo | 83 | | 5.533 | | | | | ND | |
| 47 3-Chloro-1-propene | 41 | | 5.584 | | | | | ND | |
| 48 Carbon disulfide | 76 | | 5.598 | | | | | ND | |
| 49 2-Methyl-2-propanol | 59 | | 5.626 | | | | | ND | |
| 50 Methylene Chloride | 84 | | 5.668 | | | | | ND | |
| 51 Acrylonitrile | 53 | | 5.808 | | | | | ND | |
| 52 Methyl tert-butyl ether | 73 | | 5.864 | | | | | ND | |
| 53 trans-1,2-Dichloroethene | 96 | | 5.892 | | | | | ND | |
| 54 Hexane | 57 | | 6.073 | | | | | ND | |
| 55 Vinyl acetate | 43 | | 6.143 | | | | | ND | |
| 56 Isopropyl ether | 87 | | 6.171 | | | | | ND | |
| 57 1,1-Dichloroethane | 63 | | 6.213 | | | | | ND | |
| 58 2-Chloro-1,3-butadiene | 53 | | 6.283 | | | | | ND | |
| 59 Tert-butyl ethyl ether | 59 | | 6.450 | | | | | ND | |
| 60 Ethyl acetate | 43 | | 6.562 | | | | | ND | U |
| 61 2-Butanone (MEK) | 43 | | 6.576 | | | | | ND | |
| 62 sec-Butyl Alcohol | 45 | | 6.618 | | | | | ND | U |
| 63 Propionitrile | 54 | | 6.618 | | | | | ND | U |
| 64 cis-1,2-Dichloroethene | 96 | | 6.632 | | | | | ND | |
| 65 2,2-Dichloropropane | 77 | | 6.674 | | | | | ND | |
| 66 Methacrylonitrile | 41 | | 6.744 | | | | | ND | |
| 67 Chlorobromomethane | 128 | | 6.827 | | | | | ND | |
| 68 Chloroform | 83 | | 6.841 | | | | | ND | |
| 69 Tetrahydrofuran | 42 | | 6.869 | | | | | ND | |
| 70 Isobutyl alcohol | 41 | | 7.023 | | | | | ND | |
| 71 1,1,1-Trichloroethane | 97 | | 7.065 | | | | | ND | |
| 72 Cyclohexane | 56 | | 7.149 | | | | | ND | |
| 73 1,1-Dichloropropene | 75 | | 7.163 | | | | | ND | |
| 74 Carbon tetrachloride | 117 | | 7.204 | | | | | ND | |
| 19 2,2-Dimethylpentane | 57 | | 7.251 | | | | | ND | |
| 17 2,4-Dimethylpentane | 43 | 7.344 | 7.293 | 0.051 | 19 | 923 | | | NC |
| 75 1,2-Dichloroethane | 62 | | 7.302 | | | | | ND | |
| 76 Tert-amyl methyl ether | 73 | | 7.330 | | | | | ND | |
| 77 Benzene | 78 | | 7.344 | | | | | ND | |
| 9 n-Heptane | 43 | | 7.442 | | | | | ND | |
| 10 2,2,3-Trimethylbutane | 57 | | 7.502 | | | | | ND | |
| 78 n-Butanol | 56 | | 7.526 | | | | | ND | U |
| 12 3,3-Dimethylpentane | 43 | | 7.768 | | | | | ND | |
| 79 Trichloroethene | 95 | | 7.805 | | | | | ND | |
| 18 2-Methylhexane | 43 | | 7.810 | | | | | ND | |
| 80 2-Pentanone | 43 | | 7.833 | | | | | ND | |
| 81 Methyl methacrylate | 100 | | 7.931 | | | | | ND | |
| 15 3-Methylhexane | 43 | | 7.949 | | | | | ND | |
| 11 2,3-Dimethylpentane | 56 | | 7.949 | | | | | ND | |
| 82 1,2-Dichloropropane | 63 | | 7.987 | | | | | ND | |
| 83 Methylcyclohexane | 55 | | 8.014 | | | | | ND | |
| 84 1,4-Dioxane | 88 | | 8.028 | | | | | ND | |
| 85 Dibromomethane | 93 | | 8.084 | | | | | ND | |
| 86 Dichlorobromomethane | 83 | | 8.154 | | | | | ND | |
| 20 3-Ethylpentane | 43 | | 8.214 | | | | | ND | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 87 2-Nitropropane | 41 | | 8.280 | | | | | ND | |
| 88 2-Chloroethyl vinyl ether | 63 | | 8.294 | | | | | ND | |
| 89 cis-1,3-Dichloropropene | 75 | | 8.475 | | | | | ND | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | | 8.531 | | | | | ND | |
| 91 Toluene | 91 | | 8.769 | | | | | ND | |
| 92 Ethyl methacrylate | 69 | | 8.838 | | | | | ND | |
| 93 trans-1,3-Dichloropropene | 75 | | 8.852 | | | | | ND | |
| 94 1,1,2-Trichloroethane | 97 | | 9.006 | | | | | ND | |
| 95 2-Hexanone | 43 | | 9.118 | | | | | ND | |
| 96 1,3-Dichloropropane | 76 | | 9.146 | | | | | ND | |
| 97 Tetrachloroethene | 164 | | 9.188 | | | | | ND | |
| 98 Chlorodibromomethane | 129 | | 9.341 | | | | | ND | |
| 99 Tetrahydrothiophene | 60 | | 9.383 | | | | | ND | |
| 13 Dimethyl disulfide | 94 | | 9.388 | | | | | ND | |
| 100 Ethylene Dibromide | 107 | | 9.467 | | | | | ND | |
| 101 1-Chlorohexane | 91 | | 9.704 | | | | | ND | |
| 102 Chlorobenzene | 112 | | 9.802 | | | | | ND | |
| 104 Ethylbenzene | 106 | | 9.844 | | | | | ND | |
| 103 1,1,1,2-Tetrachloroethane | 131 | | 9.844 | | | | | ND | |
| 105 m-Xylene & p-Xylene | 106 | | 9.928 | | | | | ND | |
| 106 Styrene | 104 | | 10.235 | | | | | ND | |
| 109 o-Xylene | 106 | | 10.235 | | | | | ND | |
| 107 Bromoform | 173 | | 10.431 | | | | | ND | |
| 108 Isopropylbenzene | 105 | | 10.500 | | | | | ND | |
| 110 cis-1,4-Dichloro-2-butene | 53 | | 10.515 | | | | | ND | |
| 111 Cyclohexanone | 55 | | 10.612 | | | | | ND | U |
| 112 1,1,2,2-Tetrachloroethane | 83 | | 10.696 | | | | | ND | |
| 113 trans-1,4-Dichloro-2-buten | 53 | | 10.724 | | | | | ND | |
| 114 1,2,3-Trichloropropane | 110 | | 10.766 | | | | | ND | |
| 116 Bromobenzene | 156 | | 10.822 | | | | | ND | |
| 115 N-Propylbenzene | 120 | | 10.822 | | | | | ND | |
| 120 1,3,5-Trimethylbenzene | 105 | | 10.933 | | | | | ND | |
| 117 2-Chlorotoluene | 126 | | 10.933 | | | | | ND | |
| 118 4-Chlorotoluene | 126 | | 11.017 | | | | | ND | |
| 119 tert-Butylbenzene | 119 | | 11.227 | | | | | ND | |
| 121 1,2,4-Trimethylbenzene | 105 | | 11.255 | | | | | ND | |
| 143 Pentachloroethane | 167 | | 11.283 | | | | | ND | |
| 122 sec-Butylbenzene | 134 | | 11.408 | | | | | ND | |
| 123 4-Isopropyltoluene | 119 | | 11.506 | | | | | ND | |
| 124 1,3-Dichlorobenzene | 146 | | 11.562 | | | | | ND | |
| 126 1,4-Dichlorobenzene | 146 | | 11.632 | | | | | ND | |
| 125 1,2,3-Trimethylbenzene | 105 | | 11.632 | | | | | ND | |
| 127 n-Butylbenzene | 91 | | 11.855 | | | | | ND | |
| 128 1,2-Dichlorobenzene | 146 | | 11.981 | | | | | ND | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | | 12.707 | | | | | ND | |
| 21 1,3,5-Trichlorobenzene | 180 | | 12.945 | | | | | ND | |
| 14 n-Nonyl Aldehyde | 57 | | 13.340 | | | | | ND | |
| 130 1,2,4-Trichlorobenzene | 180 | | 13.671 | | | | | ND | |
| 131 Hexachlorobutadiene | 225 | | 13.824 | | | | | ND | |
| 132 Naphthalene | 128 | | 14.020 | | | | | ND | |
| 133 1,2,3-Trichlorobenzene | 180 | | 14.341 | | | | | ND | |
| 158 1-Chlorohexane TIC | 1 | | 0.000 | | | | | ND | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 160 Cyclohexane TIC | 1 | | 0.000 | | | | ND | | |
| 161 n-Nonane TIC | 1 | | 0.000 | | | | ND | | |
| 159 Methyl cyclohexane TIC | 1 | | 0.000 | | | | ND | | |
| S 140 1,2-Dichloroethene, Total | 96 | | 2.000 | | | | ND | | |
| S 134 Trihalomethanes, Total | 1 | | 0.000 | | | | ND | | |
| S 138 Xylenes, Total | 106 | | 0.000 | | | | ND | | |
| S 139 Xylenes, Total (URS) | 1 | | 0.000 | | | | ND | | |
| S 135 1,3-Dichloropropene, Total | 1 | | 0.000 | | | | ND | | |
| S 137 Total BTEX | 1 | | 0.000 | | | | ND | | |
| S 153 TAH | 1 | | | | 0 | | | 0 | |
| S 136 1,2-Dichloroethene, Total | 1 | | 0.000 | | | | ND | | |

## QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

## Reagents:

| | | | | |
|---|---|---|---|---|
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent |

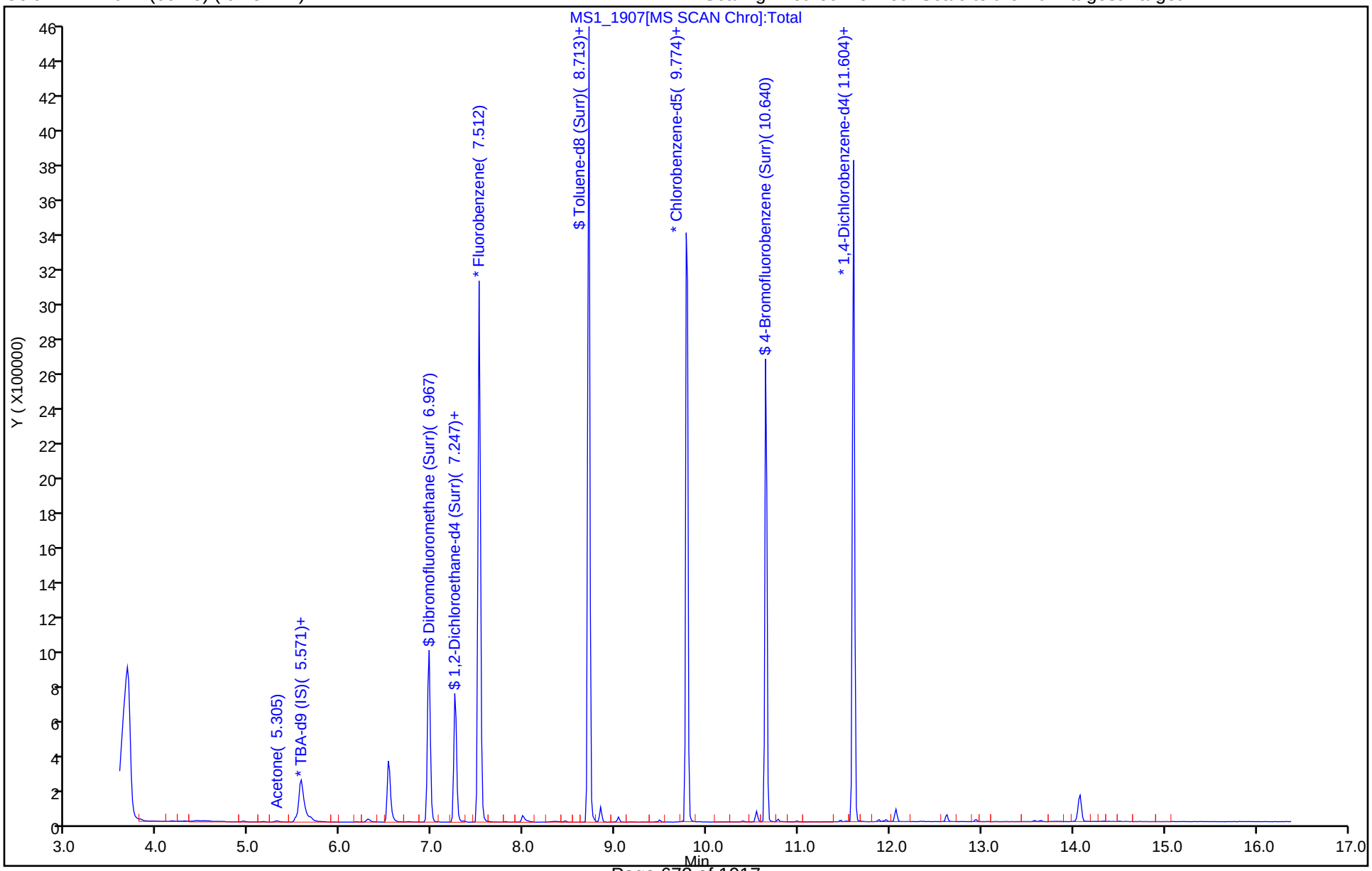
Report Date: 29-Jan-2019 17:54:20 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1907.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 19:09:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | MB | | | Worklist Smp#: | 8 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 3 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1907.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 28-Jan-2019 19:09:30 ALS Bottle#: 3 Worklist Smp#: 8
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 19:30:06

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 5 Dibromofluoromethane (Surr) | 10.0 | 10.9 | 108.91 |
| $ 6 1,2-Dichloroethane-d4 (Surr) | 10.0 | 11.3 | 113.39 |
| $ 7 Toluene-d8 (Surr) | 10.0 | 11.0 | 109.72 |
| $ 8 4-Bromofluorobenzene (Surr) | 10.0 | 10.2 | 102.09 |

Report Date: 29-Jan-2019 17:54:21 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1907.D

Injection Date: 28-Jan-2019 19:09:30 Instrument ID: VMS_MS1

Lims ID: MB

Client ID:

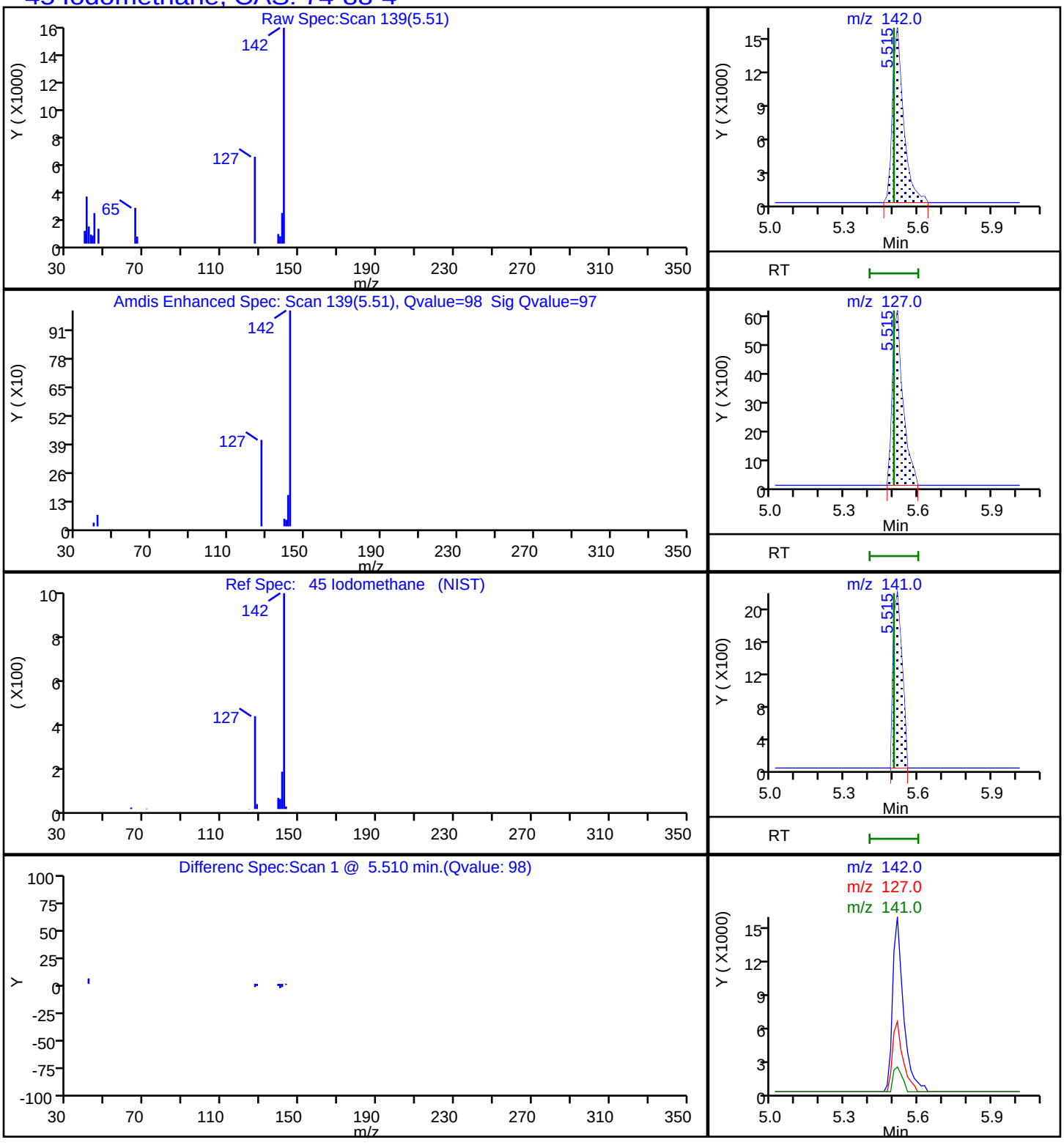
Operator ID: nwangumaf ALS Bottle#: 3 Worklist Smp#: 8

Purge Vol: 20.000 mL Dil. Factor: 1.0000

Method: AQ_VMS1_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) ( 0.25 mm) Detector MS SCAN

## 45 Iodomethane, CAS: 74-88-4



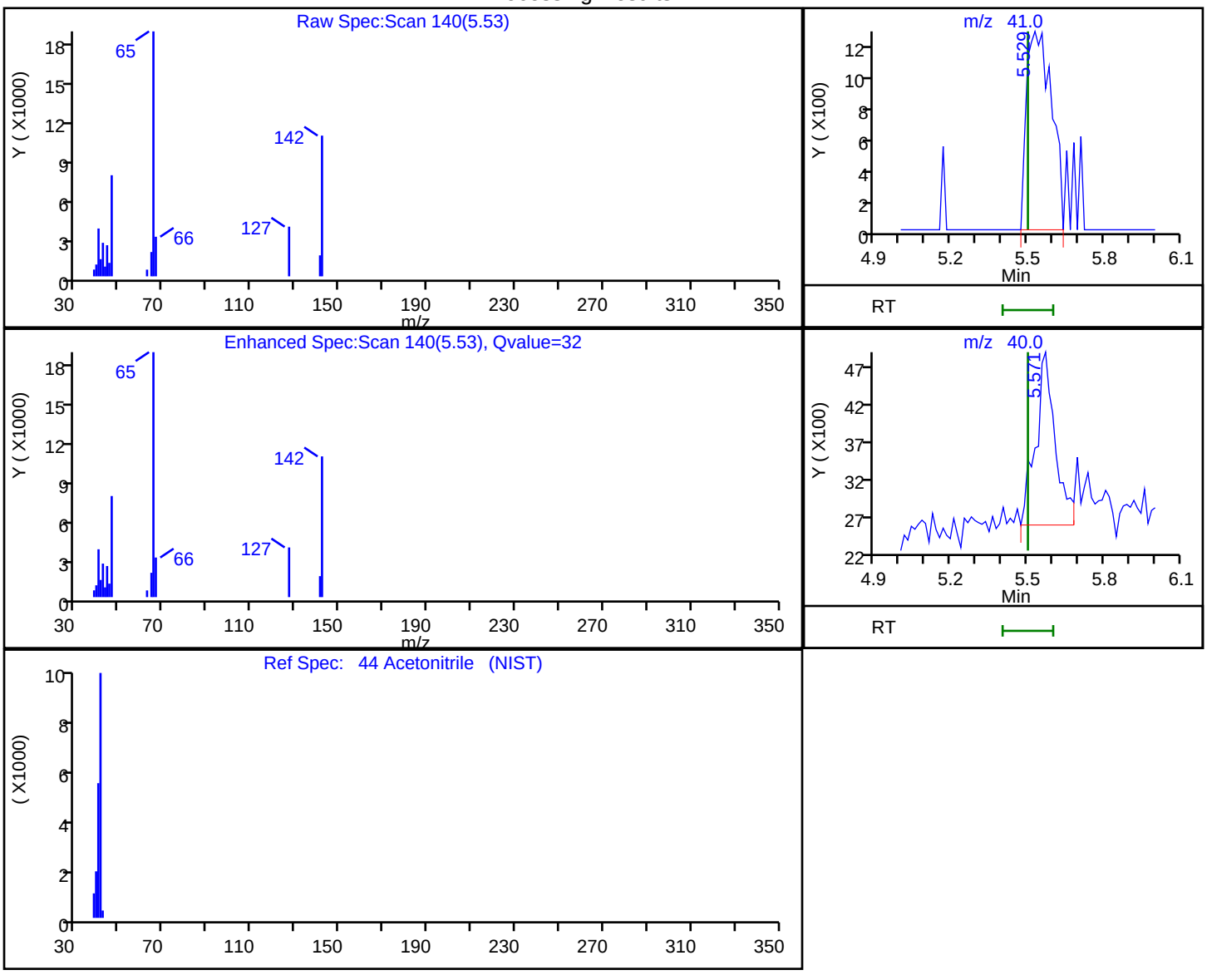
User Disabled Compound Report

TestAmerica Denver

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1907.D | | | | |
| Injection Date: | 28-Jan-2019 19:09:30 | Instrument ID: | VMS_MS1 | | |
| Lims ID: | MB | | | | |
| Client ID: | | | | | |
| Operator ID: | nwangumaf | ALS Bottle#: | 3 | Worklist Smp#: | 8 |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |
| Column: | DB-624 (60.25) ( 0.25 mm) | Detector | MS SCAN | | |

## 44 Acetonitrile, CAS: 75-05-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 5.53 | 41.00 | 8863 | 2.674898 |
| 5.57 | 40.00 | 12071 | |

Reviewer: nwangumaf, 28-Jan-2019 19:29:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-445753/4

Matrix: Water | Lab File ID: MS1_1908.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 19:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 5.71 | | 1.0 | 0.16 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.12 | | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | 5.20 | | 1.0 | 0.27 |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 5.61 | | 3.0 | 0.42 |
| 75-34-3 | 1,1-Dichloroethane | 5.75 | | 1.0 | 0.22 |
| 75-35-4 | 1,1-Dichloroethene | 5.39 | | 1.0 | 0.23 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.20 | | 1.0 | 0.21 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.09 | | 1.0 | 0.21 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 4.16 | J | 5.0 | 0.47 |
| 106-93-4 | 1,2-Dibromoethane | 4.71 | | 1.0 | 0.18 |
| 95-50-1 | 1,2-Dichlorobenzene | 5.04 | | 1.0 | 0.15 |
| 107-06-2 | 1,2-Dichloroethane | 5.58 | | 1.0 | 0.13 |
| 78-87-5 | 1,2-Dichloropropane | 5.58 | | 1.0 | 0.18 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.32 | | 1.0 | 0.16 |
| 541-73-1 | 1,3-Dichlorobenzene | 5.10 | | 1.0 | 0.13 |
| 106-46-7 | 1,4-Dichlorobenzene | 5.12 | | 1.0 | 0.16 |
| 123-91-1 | 1,4-Dioxane | 106 | J | 200 | 57 |
| 78-93-3 | 2-Butanone (MEK) | 20.6 | | 6.0 | 2.0 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 11.3 | | 3.0 | 0.69 |
| 591-78-6 | 2-Hexanone | 20.4 | | 5.0 | 1.7 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 21.9 | | 5.0 | 0.98 |
| 67-64-1 | Acetone | 22.6 | | 10 | 1.9 |
| 107-02-8 | Acrolein | 54.3 | | 20 | 2.8 |
| 107-13-1 | Acrylonitrile | 56.8 | | 20 | 1.4 |
| 71-43-2 | Benzene | 5.57 | | 1.0 | 0.16 |
| 75-25-2 | Bromoform | 4.20 | | 1.0 | 0.19 |
| 74-83-9 | Bromomethane | 6.61 | | 2.0 | 0.21 |
| 75-15-0 | Carbon disulfide | 5.33 | | 2.0 | 0.45 |
| 56-23-5 | Carbon tetrachloride | 5.62 | | 1.0 | 0.19 |
| 108-90-7 | Chlorobenzene | 5.27 | | 1.0 | 0.17 |
| 74-97-5 | Chlorobromomethane | 5.01 | | 1.0 | 0.10 |
| 124-48-1 | Chlorodibromomethane | 4.62 | | 1.0 | 0.17 |
| 75-00-3 | Chloroethane | 7.01 | | 2.0 | 0.41 |
| 67-66-3 | Chloroform | 5.54 | | 1.0 | 0.16 |
| 74-87-3 | Chloromethane | 6.53 | | 2.0 | 0.30 |
| 156-59-2 | cis-1,2-Dichloroethene | 5.23 | | 1.0 | 0.15 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-445753/4

Matrix: Water | Lab File ID: MS1_1908.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 19:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 10061-01-5 | cis-1,3-Dichloropropene | 5.01 | | 1.0 | 0.16 |
| 110-82-7 | Cyclohexane | 5.93 | | 2.0 | 0.28 |
| 75-27-4 | Dichlorobromomethane | 5.17 | | 1.0 | 0.17 |
| 75-71-8 | Dichlorodifluoromethane | 7.28 | | 2.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 5.23 | | 1.0 | 0.16 |
| 98-82-8 | Isopropylbenzene | 4.84 | | 1.0 | 0.19 |
| 79-20-9 | Methyl acetate | 10.2 | | 5.0 | 1.6 |
| 1634-04-4 | Methyl tert-butyl ether | 4.89 | J | 5.0 | 0.25 |
| 108-87-2 | Methylcyclohexane | 5.98 | | 1.0 | 0.36 |
| 75-09-2 | Methylene Chloride | 4.94 | | 2.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 5.21 | | 2.0 | 0.34 |
| 95-47-6 | o-Xylene | 5.26 | | 1.0 | 0.19 |
| 100-42-5 | Styrene | 4.79 | | 1.0 | 0.17 |
| 127-18-4 | Tetrachloroethene | 5.44 | | 1.0 | 0.20 |
| 108-88-3 | Toluene | 5.59 | | 1.0 | 0.17 |
| 156-60-5 | trans-1,2-Dichloroethene | 5.60 | | 1.0 | 0.15 |
| 10061-02-6 | trans-1,3-Dichloropropene | 5.00 | | 3.0 | 0.19 |
| 79-01-6 | Trichloroethene | 5.33 | | 1.0 | 0.16 |
| 75-69-4 | Trichlorofluoromethane | 6.81 | | 2.0 | 0.29 |
| 75-01-4 | Vinyl chloride | 6.50 | | 1.0 | 0.10 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 114 | | 70-127 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 105 | | 78-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 109 | | 77-120 |
| 2037-26-5 | Toluene-d8 (Surr) | 111 | | 80-125 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1908.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 28-Jan-2019 19:36:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 19:58:43

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.570 | 5.570 | 0.000 | 87 | 503449 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3001882 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 85 | 693912 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 95 | 1093147 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 691250 | 10.0 | 10.9 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 564228 | 10.0 | 11.4 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2873354 | 10.0 | 11.1 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.640 | 0.000 | 0 | 985145 | 10.0 | 10.5 | |
| 24 Dichlorodifluoromethane | 85 | 3.894 | 3.894 | 0.000 | 99 | 661657 | 5.00 | 7.28 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 99 | 357961 | 5.00 | 6.53 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.258 | 0.000 | 92 | 370788 | 5.00 | 6.50 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 89 | 449709 | 5.00 | 6.61 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 381239 | 5.00 | 7.01 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 97 | 863764 | 5.00 | 6.75 | |
| 33 Trichlorofluoromethane | 101 | 4.914 | 4.914 | 0.000 | 98 | 772057 | 5.00 | 6.81 | |
| 36 Ethyl ether | 59 | 5.068 | 5.068 | 0.000 | 90 | 204293 | 5.00 | 5.36 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 98 | 202246 | 50.0 | 54.3 | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 99 | 153239 | 20.0 | 22.6 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.305 | 5.305 | 0.000 | 94 | 321586 | 5.00 | 5.61 | |
| 43 1,1-Dichloroethene | 96 | 5.333 | 5.333 | 0.000 | 98 | 371784 | 5.00 | 5.39 | |
| 45 Iodomethane | 142 | 5.501 | 5.501 | 0.000 | 98 | 651431 | 5.00 | 5.34 | |
| 46 Methyl acetate | 43 | 5.529 | 5.529 | 0.000 | 95 | 184019 | 10.0 | 10.2 | |
| 47 3-Chloro-1-propene | 41 | 5.584 | 5.584 | 0.000 | 85 | 571391 | 5.00 | 6.09 | |
| 48 Carbon disulfide | 76 | 5.598 | 5.598 | 0.000 | 98 | 1552119 | 5.00 | 5.33 | |
| 49 2-Methyl-2-propanol | 59 | 5.626 | 5.626 | 0.000 | 94 | 140858 | 50.0 | 49.8 | |
| 50 Methylene Chloride | 84 | 5.668 | 5.668 | 0.000 | 88 | 378696 | 5.00 | 4.94 | |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 100 | 520211 | 50.0 | 56.8 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 94 | 635130 | 5.00 | 4.89 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.892 | 5.892 | 0.000 | 99 | 436956 | 5.00 | 5.60 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 89 | 575921 | 5.00 | 5.21 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 97 | 709174 | 10.0 | 12.8 | |
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 96 | 683523 | 5.00 | 5.75 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 98 | 256432 | 20.0 | 20.6 | |
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 95 | 140404 | 75.0 | 70.0 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 80 | 442044 | 5.00 | 5.23 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 89 | 587527 | 5.00 | 5.67 | |
| 67 Chlorobromomethane | 128 | 6.827 | 6.827 | 0.000 | 95 | 158470 | 5.00 | 5.01 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 93 | 654644 | 5.00 | 5.54 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 86 | 77674 | 10.0 | 10.9 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 93 | 102702 | 125.0 | 140.2 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 98 | 636022 | 5.00 | 5.71 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 0 | 749391 | 5.00 | 5.93 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 98 | 574510 | 5.00 | 5.72 | |
| 74 Carbon tetrachloride | 117 | 7.204 | 7.204 | 0.000 | 96 | 538838 | 5.00 | 5.62 | |
| 75 1,2-Dichloroethane | 62 | 7.302 | 7.302 | 0.000 | 97 | 334194 | 5.00 | 5.58 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 95 | 1637716 | 5.00 | 5.57 | |
| 9 n-Heptane | 43 | 7.428 | 7.428 | 0.000 | 90 | 604791 | 5.00 | 6.28 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 98 | 413863 | 5.00 | 5.33 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 98 | 166408 | 10.0 | 9.86 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 97 | 364282 | 5.00 | 5.58 | |
| 83 Methylcyclohexane | 55 | 8.015 | 8.015 | 0.000 | 0 | 602732 | 5.00 | 5.98 | |
| 84 1,4-Dioxane | 88 | 8.028 | 8.028 | 0.000 | 92 | 31903 | 100.0 | 105.8 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 97 | 152234 | 5.00 | 5.23 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 99 | 416188 | 5.00 | 5.17 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 91 | 201628 | 10.0 | 11.3 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.475 | 8.475 | 0.000 | 98 | 489137 | 5.00 | 5.01 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 94 | 526536 | 20.0 | 21.9 | |
| 91 Toluene | 91 | 8.769 | 8.769 | 0.000 | 99 | 1723092 | 5.00 | 5.59 | |
| 92 Ethyl methacrylate | 69 | 8.839 | 8.839 | 0.000 | 89 | 227349 | 5.00 | 4.21 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.852 | 8.852 | 0.000 | 95 | 373539 | 5.00 | 5.00 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 90 | 217343 | 5.00 | 5.20 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 94 | 341237 | 20.0 | 20.4 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 97 | 384049 | 5.00 | 5.23 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 97 | 365350 | 5.00 | 5.44 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 90 | 239830 | 5.00 | 4.62 | |
| 100 Ethylene Dibromide | 107 | 9.467 | 9.467 | 0.000 | 99 | 189849 | 5.00 | 4.71 | |
| 101 1-Chlorohexane | 91 | 9.704 | 9.704 | 0.000 | 0 | 270258 | 2.50 | 2.40 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 95 | 1066042 | 5.00 | 5.27 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 98 | 627518 | 5.00 | 5.23 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 93 | 348434 | 5.00 | 5.15 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 98 | 770422 | 5.00 | 5.21 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 88 | 1059959 | 5.00 | 4.79 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 88 | 739507 | 5.00 | 5.26 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 97 | 114579 | 5.00 | 4.20 | |
| 108 Isopropylbenzene | 105 | 10.501 | 10.501 | 0.000 | 95 | 1984787 | 5.00 | 4.84 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 89 | 341180 | 200.0 | 190.3 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.682 | 0.000 | 92 | 238553 | 5.00 | 5.12 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 93 | 49543 | 5.00 | 4.86 | |
| 114 1,2,3-Trichloropropane | 110 | 10.766 | 10.766 | 0.000 | 84 | 65164 | 5.00 | 4.92 | |
| 116 Bromobenzene | 156 | 10.808 | 10.808 | 0.000 | 96 | 416515 | 5.00 | 4.95 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 98 | 570919 | 5.00 | 5.23 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.933 | 10.933 | 0.000 | 96 | 1645694 | 5.00 | 5.32 | |
| 117 2-Chlorotoluene | 126 | 10.933 | 10.933 | 0.000 | 95 | 465460 | 5.00 | 5.19 | |
| 118 4-Chlorotoluene | 126 | 11.017 | 11.017 | 0.000 | 97 | 461503 | 5.00 | 5.08 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 91 | 1661984 | 5.00 | 5.25 | |
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 97 | 1649481 | 5.00 | 5.27 | |
| 122 sec-Butylbenzene | 134 | 11.408 | 11.408 | 0.000 | 93 | 465760 | 5.00 | 5.17 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.492 | 0.000 | 97 | 1924708 | 5.00 | 5.03 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 97 | 869778 | 5.00 | 5.10 | |
| 126 1,4-Dichlorobenzene | 146 | 11.632 | 11.632 | 0.000 | 96 | 869585 | 5.00 | 5.12 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 97 | 1768618 | 5.00 | 5.59 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 98 | 739006 | 5.00 | 5.04 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 86 | 35633 | 5.00 | 4.16 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.657 | 0.000 | 94 | 550885 | 5.00 | 5.09 | |
| 131 Hexachlorobutadiene | 225 | 13.824 | 13.824 | 0.000 | 97 | 386902 | 5.00 | 5.65 | |
| 132 Naphthalene | 128 | 14.020 | 14.020 | 0.000 | 97 | 727055 | 5.00 | 4.45 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.341 | 14.341 | 0.000 | 95 | 455322 | 5.00 | 5.20 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 10.0 | 10.8 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 20.0 | 19.5 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 10.0 | 10.5 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 10.0 | 10.5 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 10.0 | 10.0 | |
| S 137 Total BTEX | 1 | | | | 0 | | | 26.9 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 10.0 | 10.8 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| MV-MegaMain B_00007 | Amount Added: | 2.00 | Units: uL | |
| MV-Gas B_00007 | Amount Added: | 2.00 | Units: uL | |
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent |

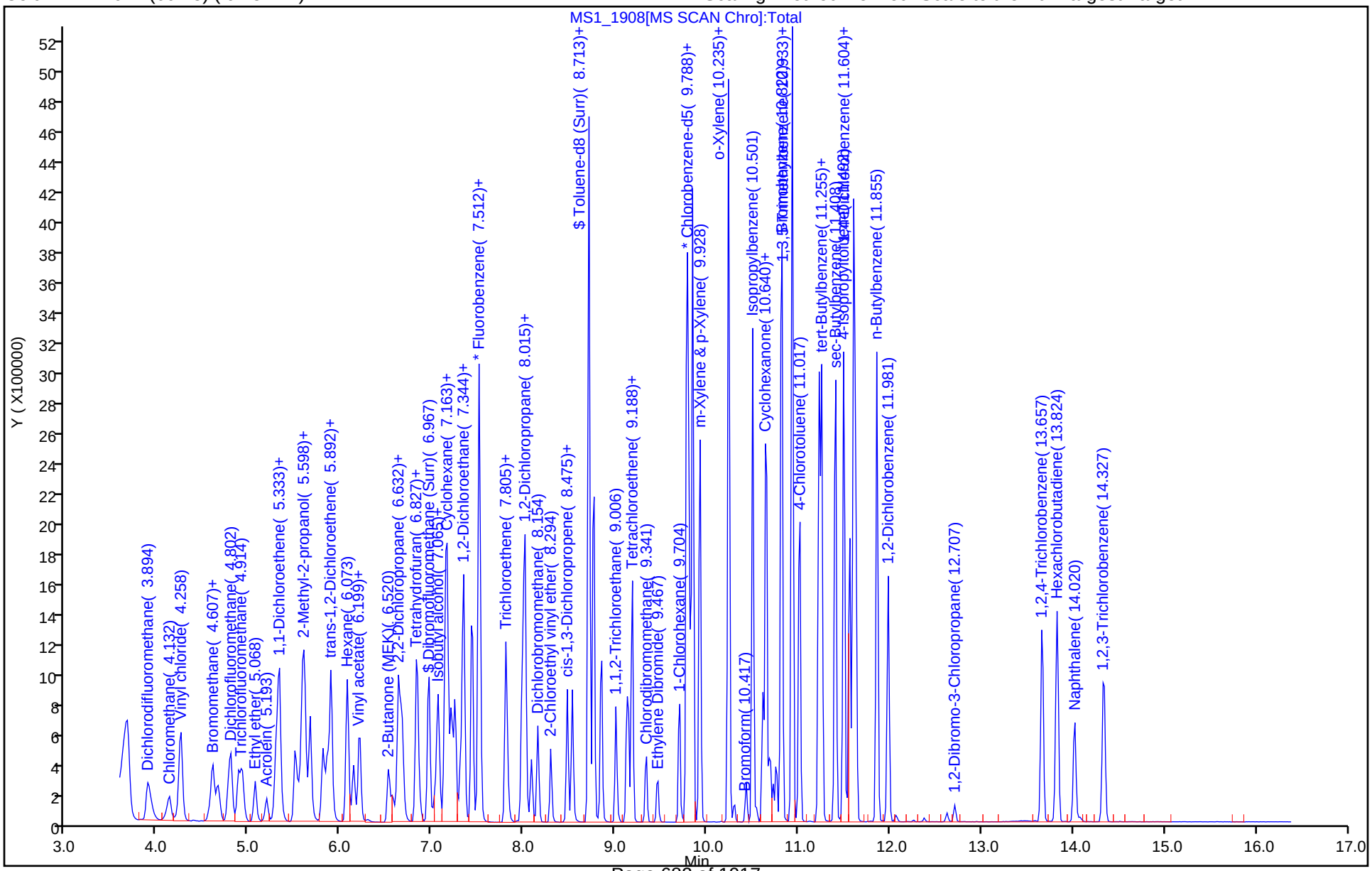
Report Date: 29-Jan-2019 17:54:03 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1908.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 19:36:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | LCS | | | Worklist Smp#: | 4 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 4 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1908.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 28-Jan-2019 19:36:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 19:58:43

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 5 Dibromofluoromethane (Surr) | 10.0 | 10.9 | 109.44 |
| $ 6 1,2-Dichloroethane-d4 (Surr) | 10.0 | 11.4 | 114.40 |
| $ 7 Toluene-d8 (Surr) | 10.0 | 11.1 | 110.72 |
| $ 8 4-Bromofluorobenzene (Surr) | 10.0 | 10.5 | 105.24 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-445753/6

Matrix: Water | Lab File ID: MS1_1910.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 20:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 75-05-8 | Acetonitrile | 52.8 | | 30 | 9.6 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 114 | | 70-127 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 106 | | 78-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 110 | | 77-120 |
| 2037-26-5 | Toluene-d8 (Surr) | 111 | | 80-125 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1910.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 28-Jan-2019 20:16:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS s
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 20:44:32

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.570 | 5.557 | 0.013 | 73 | 530072 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3162407 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 85 | 710409 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 94 | 1087064 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 732384 | 10.0 | 11.0 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 594255 | 10.0 | 11.4 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2946146 | 10.0 | 11.1 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.654 | -0.014 | 0 | 987231 | 10.0 | 10.6 | |
| 28 Ethylene oxide | 43 | 4.537 | 4.523 | 0.014 | 98 | 299085 | 500.0 | 390.5 | |
| 34 Ethanol | 45 | 4.914 | 4.900 | 0.014 | 97 | 88900 | 300.0 | 293.2 | |
| 38 Propene oxide | 58 | 5.151 | 5.152 | -0.001 | 0 | 2109321 | 500.0 | 469.9 | |
| 41 Isopropyl alcohol | 45 | 5.319 | 5.305 | 0.014 | 96 | 90801 | 50.0 | 46.7 | |
| 44 Acetonitrile | 41 | 5.515 | 5.501 | 0.014 | 99 | 183768 | 50.0 | 52.8 | |
| 56 Isopropyl ether | 87 | 6.171 | 6.171 | 0.000 | 93 | 314327 | 5.00 | 5.62 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.283 | 6.283 | 0.000 | 89 | 594104 | 5.00 | 6.50 | |
| 59 Tert-butyl ethyl ether | 59 | 6.450 | 6.450 | 0.000 | 97 | 872976 | 5.00 | 5.38 | |
| 60 Ethyl acetate | 43 | 6.562 | 6.562 | 0.000 | 98 | 242252 | 10.0 | 8.91 | |
| 63 Propionitrile | 54 | 6.618 | 6.618 | 0.000 | 99 | 208184 | 50.0 | 49.4 | |
| 66 Methacrylonitrile | 41 | 6.744 | 6.744 | 0.000 | 89 | 886661 | 50.0 | 51.6 | |
| 76 Tert-amyl methyl ether | 73 | 7.344 | 7.330 | 0.014 | 98 | 757865 | 5.00 | 5.66 | |
| 78 n-Butanol | 56 | 7.526 | 7.526 | 0.000 | 83 | 110108 | 125.0 | 118.0 | |
| 81 Methyl methacrylate | 100 | 7.931 | 7.931 | 0.000 | 87 | 100206 | 10.0 | 12.1 | |
| 87 2-Nitropropane | 41 | 8.280 | 8.280 | 0.000 | 98 | 44846 | 10.0 | 10.2 | |
| 99 Tetrahydrothiophene | 60 | 9.383 | 9.383 | 0.000 | 89 | 9105 | NC | NC | |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 81 | 52797 | 10.0 | 7.95 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 98 | 1587535 | 5.00 | 5.18 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.945 | -0.014 | 98 | 699616 | 5.00 | 5.63 | |

## QC Flag Legend

Processing Flags

NC - Not Calibrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| MV-Supp B_00023 | Amount Added: | 2.00 | Units: uL | |
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent |

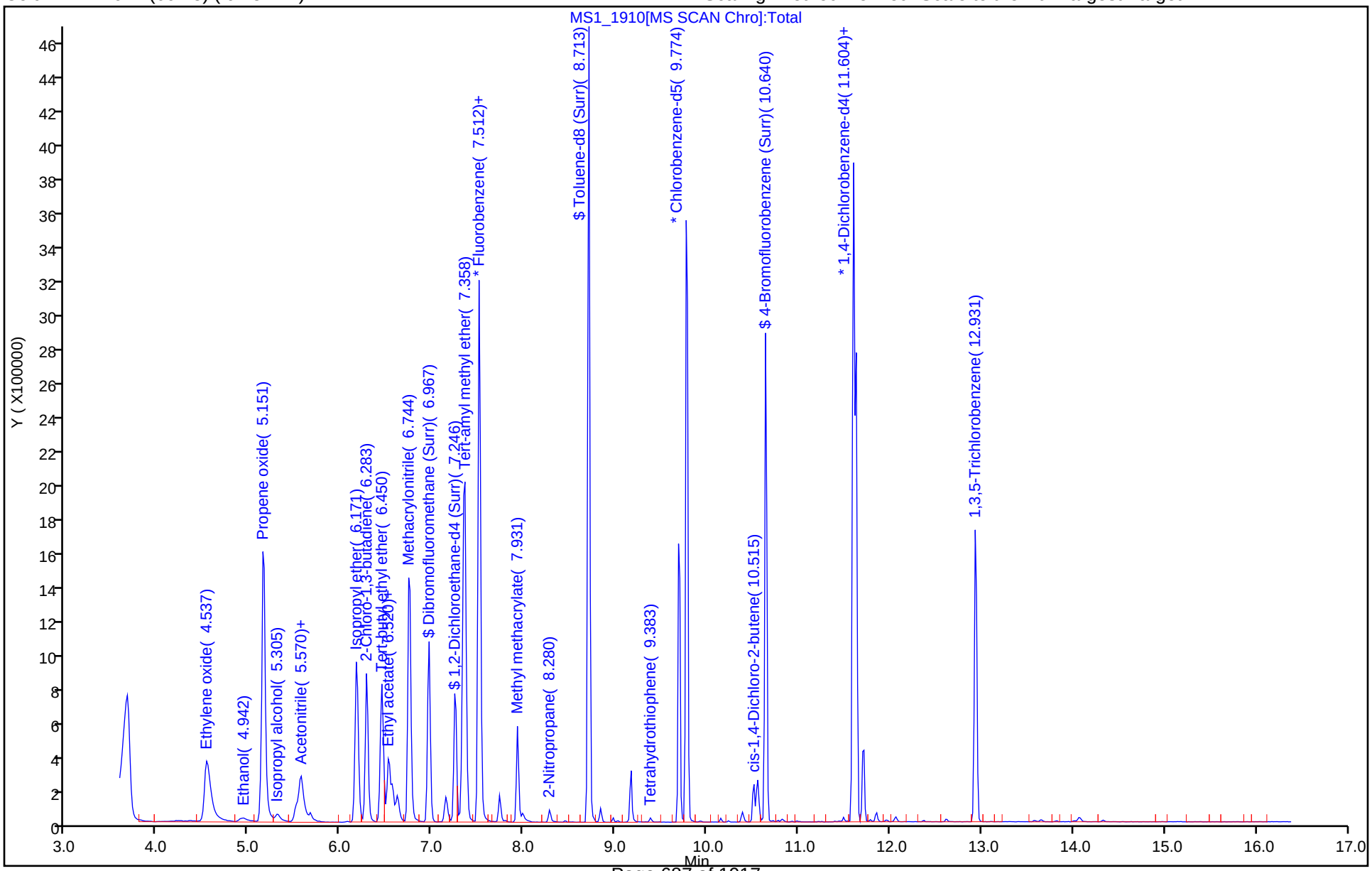
Report Date: 29-Jan-2019 17:54:17 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1910.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 20:16:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | lcs | | | Worklist Smp#: | 6 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 6 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1910.D | | | | |
| Lims ID: | lcs | | | | |
| Client ID: | | | | | |
| Sample Type: | LCS | | | | |
| Inject. Date: | 28-Jan-2019 20:16:30 | ALS Bottle#: | 6 | Worklist Smp#: | 6 |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | | |
| Sample Info: | LCS s | | | | |
| Operator ID: | nwangumaf | Instrument ID: | VMS_MS1 | | |
| Method: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m | | | | |
| Limit Group: | MSV - 8260B Water and Solid | | | | |
| Last Update: | 29-Jan-2019 17:54:01 | Calib Date: | 18-Jan-2019 13:52:30 | | |
| Integrator: | RTE | ID Type: | Deconvolution ID | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D | | | | |
| Column 1 : | DB-624 (60.25) ( 0.25 mm) | | Det: MS SCAN | | |
| Process Host: | CTX0327 | | | | |

First Level Reviewer: nwangumaf Date: 28-Jan-2019 20:44:32

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 5 Dibromofluoromethane (Surr) | 10.0 | 11.0 | 110.07 |
| $ 6 1,2-Dichloroethane-d4 (Surr) | 10.0 | 11.4 | 114.37 |
| $ 7 Toluene-d8 (Surr) | 10.0 | 11.1 | 110.89 |
| $ 8 4-Bromofluorobenzene (Surr) | 10.0 | 10.6 | 106.05 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-445753/5

Matrix: Water | Lab File ID: MS1_1909.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 19:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 5.42 | | 1.0 | 0.16 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 4.94 | | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | 5.10 | | 1.0 | 0.27 |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 5.24 | | 3.0 | 0.42 |
| 75-34-3 | 1,1-Dichloroethane | 5.53 | | 1.0 | 0.22 |
| 75-35-4 | 1,1-Dichloroethene | 5.18 | | 1.0 | 0.23 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.15 | | 1.0 | 0.21 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 4.92 | | 1.0 | 0.21 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 4.08 | J | 5.0 | 0.47 |
| 106-93-4 | 1,2-Dibromoethane | 4.60 | | 1.0 | 0.18 |
| 95-50-1 | 1,2-Dichlorobenzene | 4.86 | | 1.0 | 0.15 |
| 107-06-2 | 1,2-Dichloroethane | 5.42 | | 1.0 | 0.13 |
| 78-87-5 | 1,2-Dichloropropane | 5.41 | | 1.0 | 0.18 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.07 | | 1.0 | 0.16 |
| 541-73-1 | 1,3-Dichlorobenzene | 4.86 | | 1.0 | 0.13 |
| 106-46-7 | 1,4-Dichlorobenzene | 4.85 | | 1.0 | 0.16 |
| 123-91-1 | 1,4-Dioxane | 104 | J | 200 | 57 |
| 78-93-3 | 2-Butanone (MEK) | 20.7 | | 6.0 | 2.0 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 11.2 | | 3.0 | 0.69 |
| 591-78-6 | 2-Hexanone | 20.1 | | 5.0 | 1.7 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 21.7 | | 5.0 | 0.98 |
| 67-64-1 | Acetone | 22.0 | | 10 | 1.9 |
| 107-02-8 | Acrolein | 52.2 | | 20 | 2.8 |
| 107-13-1 | Acrylonitrile | 56.0 | | 20 | 1.4 |
| 71-43-2 | Benzene | 5.33 | | 1.0 | 0.16 |
| 75-25-2 | Bromoform | 4.07 | | 1.0 | 0.19 |
| 74-83-9 | Bromomethane | 6.28 | | 2.0 | 0.21 |
| 75-15-0 | Carbon disulfide | 5.00 | | 2.0 | 0.45 |
| 56-23-5 | Carbon tetrachloride | 5.31 | | 1.0 | 0.19 |
| 108-90-7 | Chlorobenzene | 5.01 | | 1.0 | 0.17 |
| 74-97-5 | Chlorobromomethane | 4.88 | | 1.0 | 0.10 |
| 124-48-1 | Chlorodibromomethane | 4.48 | | 1.0 | 0.17 |
| 75-00-3 | Chloroethane | 6.65 | | 2.0 | 0.41 |
| 67-66-3 | Chloroform | 5.35 | | 1.0 | 0.16 |
| 74-87-3 | Chloromethane | 6.11 | | 2.0 | 0.30 |
| 156-59-2 | cis-1,2-Dichloroethene | 5.06 | | 1.0 | 0.15 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-445753/5

Matrix: Water | Lab File ID: MS1_1909.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 19:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 10061-01-5 | cis-1,3-Dichloropropene | 4.79 | | 1.0 | 0.16 |
| 110-82-7 | Cyclohexane | 5.67 | | 2.0 | 0.28 |
| 75-27-4 | Dichlorobromomethane | 4.98 | | 1.0 | 0.17 |
| 75-71-8 | Dichlorodifluoromethane | 6.92 | | 2.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 5.02 | | 1.0 | 0.16 |
| 98-82-8 | Isopropylbenzene | 4.60 | | 1.0 | 0.19 |
| 79-20-9 | Methyl acetate | 10.2 | | 5.0 | 1.6 |
| 1634-04-4 | Methyl tert-butyl ether | 4.82 | J | 5.0 | 0.25 |
| 108-87-2 | Methylcyclohexane | 5.58 | | 1.0 | 0.36 |
| 75-09-2 | Methylene Chloride | 4.70 | | 2.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 5.00 | | 2.0 | 0.34 |
| 95-47-6 | o-Xylene | 5.03 | | 1.0 | 0.19 |
| 100-42-5 | Styrene | 4.61 | | 1.0 | 0.17 |
| 127-18-4 | Tetrachloroethene | 5.10 | | 1.0 | 0.20 |
| 108-88-3 | Toluene | 5.40 | | 1.0 | 0.17 |
| 156-60-5 | trans-1,2-Dichloroethene | 5.38 | | 1.0 | 0.15 |
| 10061-02-6 | trans-1,3-Dichloropropene | 4.88 | | 3.0 | 0.19 |
| 79-01-6 | Trichloroethene | 5.17 | | 1.0 | 0.16 |
| 75-69-4 | Trichlorofluoromethane | 6.54 | | 2.0 | 0.29 |
| 75-01-4 | Vinyl chloride | 6.15 | | 1.0 | 0.10 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 112 | | 70-127 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 102 | | 78-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 107 | | 77-120 |
| 2037-26-5 | Toluene-d8 (Surr) | 106 | | 80-125 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1909.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 28-Jan-2019 19:56:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.571 | 5.557 | 0.014 | 88 | 566568 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3182142 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 84 | 742529 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 94 | 1170096 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 713939 | 10.0 | 10.7 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 586820 | 10.0 | 11.2 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2935301 | 10.0 | 10.6 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.654 | -0.014 | 0 | 1019461 | 10.0 | 10.2 | |
| 24 Dichlorodifluoromethane | 85 | 3.909 | 3.894 | 0.015 | 99 | 666298 | 5.00 | 6.92 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 98 | 354525 | 5.00 | 6.11 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.244 | 0.014 | 89 | 371903 | 5.00 | 6.15 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 90 | 452799 | 5.00 | 6.28 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 382905 | 5.00 | 6.65 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 97 | 871206 | 5.00 | 6.42 | |
| 33 Trichlorofluoromethane | 101 | 4.928 | 4.914 | 0.014 | 98 | 785781 | 5.00 | 6.54 | |
| 36 Ethyl ether | 59 | 5.068 | 5.068 | 0.000 | 90 | 215483 | 5.00 | 5.33 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 99 | 206215 | 50.0 | 52.2 | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 99 | 157959 | 20.0 | 22.0 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.319 | 5.305 | 0.014 | 94 | 318474 | 5.00 | 5.24 | |
| 43 1,1-Dichloroethene | 96 | 5.333 | 5.333 | 0.000 | 97 | 378338 | 5.00 | 5.18 | |
| 45 Iodomethane | 142 | 5.515 | 5.501 | 0.014 | 98 | 657461 | 5.00 | 5.08 | |
| 46 Methyl acetate | 43 | 5.529 | 5.528 | 0.001 | 96 | 194644 | 10.0 | 10.2 | |
| 47 3-Chloro-1-propene | 41 | 5.585 | 5.584 | 0.000 | 83 | 591501 | 5.00 | 5.95 | |
| 48 Carbon disulfide | 76 | 5.612 | 5.598 | 0.014 | 98 | 1544878 | 5.00 | 5.00 | |
| 49 2-Methyl-2-propanol | 59 | 5.626 | 5.626 | 0.000 | 92 | 154819 | 50.0 | 48.6 | |
| 50 Methylene Chloride | 84 | 5.668 | 5.668 | 0.000 | 89 | 382095 | 5.00 | 4.70 | |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 100 | 543491 | 50.0 | 56.0 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 94 | 663252 | 5.00 | 4.82 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.906 | 5.892 | 0.014 | 98 | 445747 | 5.00 | 5.38 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 90 | 587151 | 5.00 | 4.97 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 97 | 696076 | 10.0 | 11.8 | |
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 96 | 696472 | 5.00 | 5.53 | |
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 98 | 272861 | 20.0 | 20.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 94 | 154132 | 75.0 | 68.3 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 80 | 453231 | 5.00 | 5.06 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 89 | 588217 | 5.00 | 5.35 | |
| 67 Chlorobromomethane | 128 | 6.827 | 6.827 | 0.000 | 95 | 163624 | 5.00 | 4.88 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 93 | 669837 | 5.00 | 5.35 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 84 | 80019 | 10.0 | 10.6 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 93 | 114622 | 125.0 | 139.0 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 98 | 638990 | 5.00 | 5.42 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 0 | 759441 | 5.00 | 5.67 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 98 | 583801 | 5.00 | 5.48 | |
| 74 Carbon tetrachloride | 117 | 7.219 | 7.204 | 0.015 | 95 | 539111 | 5.00 | 5.31 | |
| 75 1,2-Dichloroethane | 62 | 7.316 | 7.302 | 0.014 | 97 | 344608 | 5.00 | 5.42 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 95 | 1660486 | 5.00 | 5.33 | |
| 9 n-Heptane | 43 | 7.442 | 7.442 | 0.000 | 88 | 604658 | 5.00 | 5.92 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 98 | 426126 | 5.00 | 5.17 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 98 | 180279 | 10.0 | 10.1 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 97 | 374170 | 5.00 | 5.41 | |
| 83 Methylcyclohexane | 55 | 8.015 | 8.014 | 0.001 | 0 | 596715 | 5.00 | 5.58 | |
| 84 1,4-Dioxane | 88 | 8.029 | 8.028 | 0.001 | 89 | 33151 | 100.0 | 103.7 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 96 | 155070 | 5.00 | 5.03 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 100 | 424654 | 5.00 | 4.98 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 91 | 211861 | 10.0 | 11.2 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.476 | 8.475 | 0.001 | 98 | 500165 | 5.00 | 4.79 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 94 | 552573 | 20.0 | 21.7 | |
| 91 Toluene | 91 | 8.769 | 8.769 | 0.000 | 99 | 1765511 | 5.00 | 5.40 | |
| 92 Ethyl methacrylate | 69 | 8.839 | 8.838 | 0.001 | 89 | 243335 | 5.00 | 4.21 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.853 | 8.852 | 0.001 | 96 | 386600 | 5.00 | 4.88 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 90 | 226140 | 5.00 | 5.10 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 93 | 359664 | 20.0 | 20.1 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 89 | 397768 | 5.00 | 5.06 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 98 | 366613 | 5.00 | 5.10 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 90 | 248911 | 5.00 | 4.48 | |
| 100 Ethylene Dibromide | 107 | 9.453 | 9.467 | -0.014 | 98 | 198331 | 5.00 | 4.60 | |
| 101 1-Chlorohexane | 91 | 9.705 | 9.704 | 0.001 | 0 | 280475 | 2.50 | 2.33 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 96 | 1085476 | 5.00 | 5.01 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 98 | 644612 | 5.00 | 5.02 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 94 | 350504 | 5.00 | 4.85 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 98 | 790120 | 5.00 | 5.00 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 87 | 1092809 | 5.00 | 4.61 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 88 | 755858 | 5.00 | 5.03 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 98 | 118885 | 5.00 | 4.07 | |
| 108 Isopropylbenzene | 105 | 10.501 | 10.500 | 0.001 | 95 | 2025940 | 5.00 | 4.60 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 90 | 373501 | 200.0 | 194.7 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.696 | -0.014 | 92 | 246643 | 5.00 | 4.94 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 92 | 51416 | 5.00 | 4.72 | |
| 114 1,2,3-Trichloropropane | 110 | 10.752 | 10.766 | -0.014 | 84 | 68117 | 5.00 | 4.81 | |
| 116 Bromobenzene | 156 | 10.808 | 10.822 | -0.014 | 95 | 427417 | 5.00 | 4.75 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 98 | 580737 | 5.00 | 4.97 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.934 | 10.933 | 0.001 | 95 | 1677814 | 5.00 | 5.07 | |
| 117 2-Chlorotoluene | 126 | 10.934 | 10.933 | 0.001 | 96 | 475570 | 5.00 | 4.96 | |
| 118 4-Chlorotoluene | 126 | 11.017 | 11.017 | 0.000 | 97 | 468803 | 5.00 | 4.82 | |
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 91 | 1679774 | 5.00 | 4.96 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 96 | 1659206 | 5.00 | 4.95 | |
| 122 sec-Butylbenzene | 134 | 11.408 | 11.408 | 0.000 | 94 | 480000 | 5.00 | 4.98 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.506 | -0.014 | 97 | 1940465 | 5.00 | 4.72 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 97 | 888438 | 5.00 | 4.86 | |
| 126 1,4-Dichlorobenzene | 146 | 11.618 | 11.632 | -0.014 | 95 | 880451 | 5.00 | 4.85 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 97 | 1807976 | 5.00 | 5.34 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 98 | 762140 | 5.00 | 4.86 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 86 | 37398 | 5.00 | 4.08 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.671 | -0.014 | 94 | 569311 | 5.00 | 4.92 | |
| 131 Hexachlorobutadiene | 225 | 13.825 | 13.824 | 0.001 | 97 | 394897 | 5.00 | 5.39 | |
| 132 Naphthalene | 128 | 14.006 | 14.020 | -0.014 | 97 | 780644 | 5.00 | 4.47 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.327 | 14.341 | -0.014 | 96 | 483383 | 5.00 | 5.15 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 10.0 | 10.4 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 20.0 | 18.9 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 10.0 | 10.0 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 10.0 | 10.0 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 10.0 | 9.66 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 10.0 | 10.4 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| MV-MegaMain B_00007 | Amount Added: | 2.00 | Units: uL | |
| MV-Gas B_00007 | Amount Added: | 2.00 | Units: uL | |
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent |

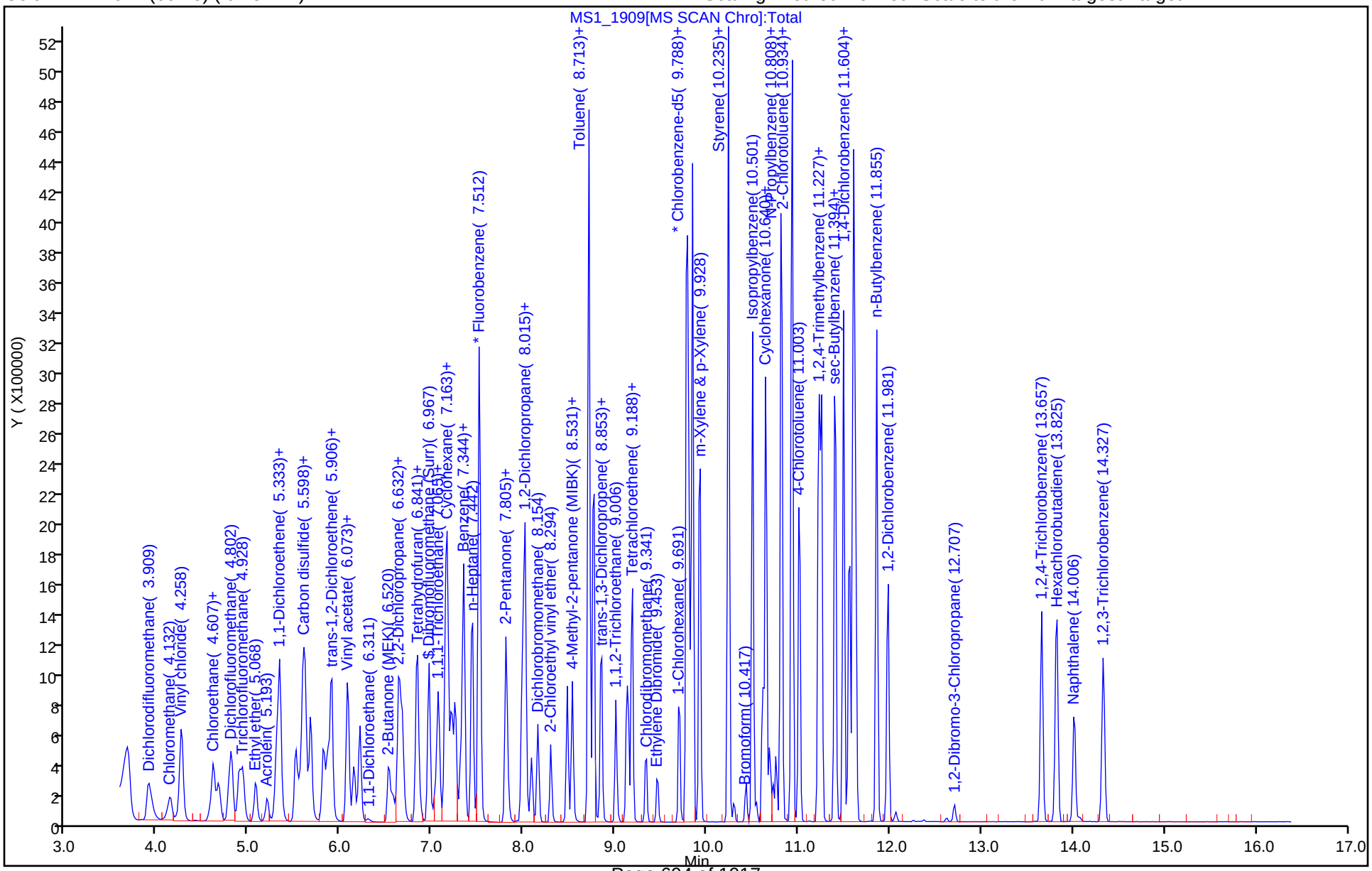
Report Date: 29-Jan-2019 17:54:12 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1909.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 19:56:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | LCSD | | | Worklist Smp#: | 5 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 5 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1909.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 28-Jan-2019 19:56:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 5 Dibromofluoromethane (Surr) | 10.0 | 10.7 | 106.63 |
| $ 6 1,2-Dichloroethane-d4 (Surr) | 10.0 | 11.2 | 112.24 |
| $ 7 Toluene-d8 (Surr) | 10.0 | 10.6 | 105.70 |
| $ 8 4-Bromofluorobenzene (Surr) | 10.0 | 10.2 | 101.74 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-445753/7

Matrix: Water | Lab File ID: MS1_1911.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 20:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 75-05-8 | Acetonitrile | 51.3 | | 30 | 9.6 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 114 | | 70-127 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 103 | | 78-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 109 | | 77-120 |
| 2037-26-5 | Toluene-d8 (Surr) | 108 | | 80-125 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1911.D
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 28-Jan-2019 20:37:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCSD s
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.571 | 5.557 | 0.013 | 72 | 541859 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3087873 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.774 | 9.788 | -0.014 | 86 | 710150 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 93 | 1094220 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 710528 | 10.0 | 10.9 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 98 | 579034 | 10.0 | 11.4 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2879521 | 10.0 | 10.8 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.654 | -0.014 | 0 | 961732 | 10.0 | 10.3 | |
| 28 Ethylene oxide | 43 | 4.537 | 4.523 | 0.014 | 98 | 314642 | 500.0 | 427.1 | |
| 34 Ethanol | 45 | 4.914 | 4.900 | 0.014 | 98 | 91770 | 300.0 | 296.1 | |
| 38 Propene oxide | 58 | 5.152 | 5.152 | 0.000 | 0 | 2133249 | 500.0 | 486.7 | |
| 41 Isopropyl alcohol | 45 | 5.305 | 5.305 | 0.000 | 97 | 94113 | 50.0 | 47.3 | |
| 44 Acetonitrile | 41 | 5.515 | 5.501 | 0.014 | 99 | 174410 | 50.0 | 51.3 | |
| 56 Isopropyl ether | 87 | 6.171 | 6.171 | 0.000 | 93 | 305198 | 5.00 | 5.59 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.283 | 6.283 | 0.000 | 89 | 568824 | 5.00 | 6.37 | |
| 59 Tert-butyl ethyl ether | 59 | 6.450 | 6.450 | 0.000 | 97 | 862923 | 5.00 | 5.45 | |
| 60 Ethyl acetate | 43 | 6.562 | 6.562 | 0.000 | 98 | 255059 | 10.0 | 9.60 | |
| 63 Propionitrile | 54 | 6.618 | 6.618 | 0.000 | 98 | 209081 | 50.0 | 50.8 | |
| 66 Methacrylonitrile | 41 | 6.744 | 6.744 | 0.000 | 89 | 897445 | 50.0 | 53.5 | |
| 76 Tert-amyl methyl ether | 73 | 7.330 | 7.330 | 0.000 | 98 | 753485 | 5.00 | 5.76 | |
| 78 n-Butanol | 56 | 7.526 | 7.526 | 0.000 | 84 | 113090 | 125.0 | 118.7 | |
| 81 Methyl methacrylate | 100 | 7.931 | 7.931 | 0.000 | 88 | 100340 | 10.0 | 12.4 | |
| 87 2-Nitropropane | 41 | 8.280 | 8.280 | 0.000 | 99 | 45185 | 10.0 | 10.5 | |
| 99 Tetrahydrothiophene | 60 | 9.383 | 9.383 | 0.000 | 90 | 9840 | NC | NC | |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 81 | 49005 | 10.0 | 7.33 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 98 | 1553363 | 5.00 | 5.04 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.945 | -0.014 | 98 | 696947 | 5.00 | 5.57 | |

## QC Flag Legend

Processing Flags
NC - Not Calibrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| MV-Supp B_00023 | Amount Added: | 2.00 | Units: uL | |
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent |

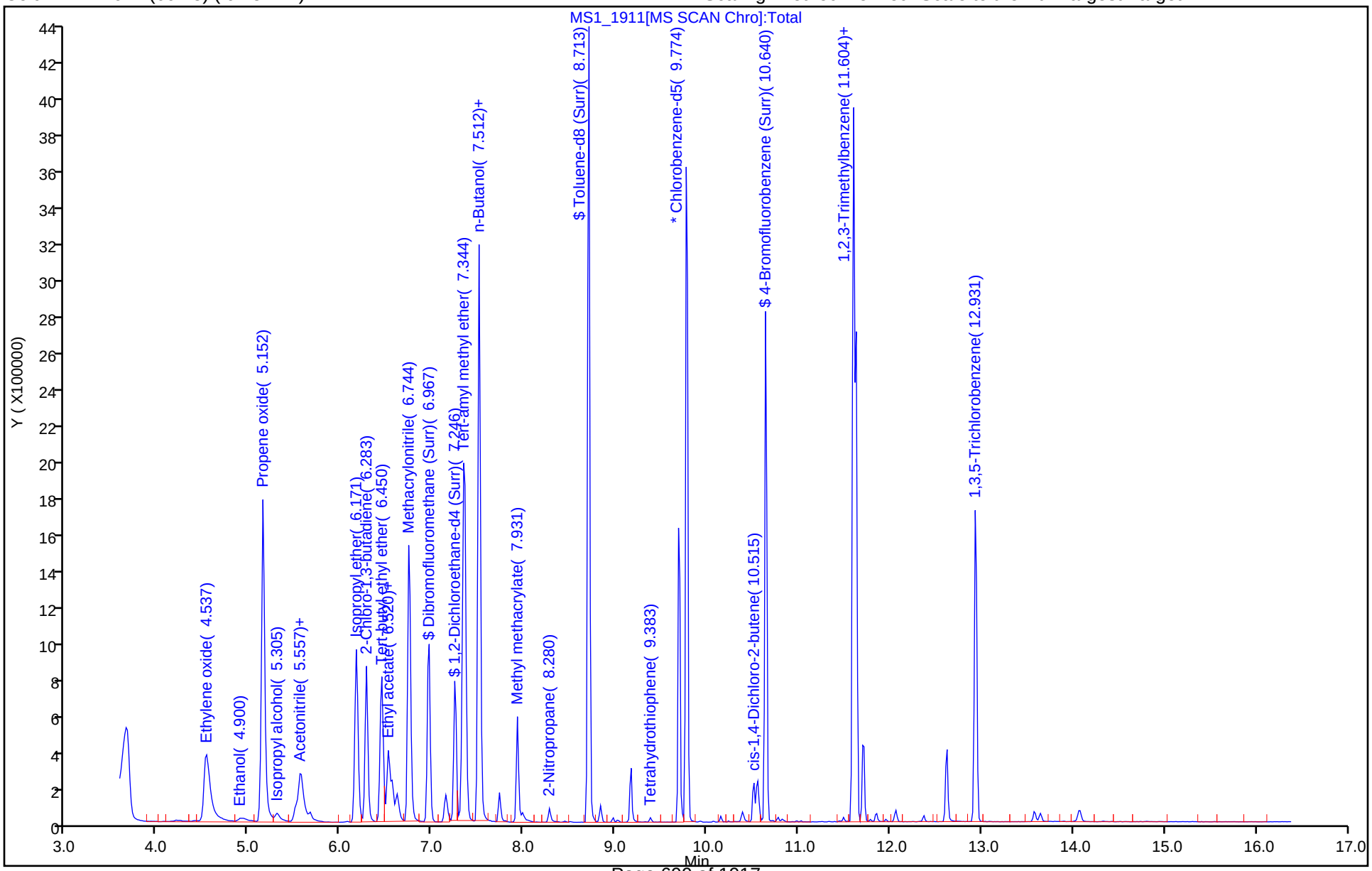
Report Date: 29-Jan-2019 17:54:19 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1911.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 20:37:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | lcsd | | | Worklist Smp#: | 7 |
| Client ID: | | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 7 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1911.D
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 28-Jan-2019 20:37:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCSD s
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 5 Dibromofluoromethane (Surr) | 10.0 | 10.9 | 109.36 |
| $ 6 1,2-Dichloroethane-d4 (Surr) | 10.0 | 11.4 | 114.13 |
| $ 7 Toluene-d8 (Surr) | 10.0 | 10.8 | 108.42 |
| $ 8 4-Bromofluorobenzene (Surr) | 10.0 | 10.3 | 102.63 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: 280-119359-C-1 MS

Matrix: Water | Lab File ID: MS1_1913.D

Analysis Method: 8260B | Date Collected: 01/17/2019 16:20

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 21:18

Soil Aliquot Vol: | Dilution Factor: 4000

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 21700 | | 4000 | 640 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 21000 | | 4000 | 840 |
| 79-00-5 | 1,1,2-Trichloroethane | 21700 | | 4000 | 1100 |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 20500 | | 12000 | 1700 |
| 75-34-3 | 1,1-Dichloroethane | 22500 | | 4000 | 880 |
| 75-35-4 | 1,1-Dichloroethene | 20300 | | 4000 | 920 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 20700 | | 4000 | 840 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 20100 | | 4000 | 840 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 17500 | J | 20000 | 1900 |
| 106-93-4 | 1,2-Dibromoethane | 19200 | | 4000 | 720 |
| 95-50-1 | 1,2-Dichlorobenzene | 25400 | | 4000 | 600 |
| 107-06-2 | 1,2-Dichloroethane | 22500 | | 4000 | 520 |
| 78-87-5 | 1,2-Dichloropropane | 22300 | | 4000 | 720 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 20400 | | 4000 | 640 |
| 541-73-1 | 1,3-Dichlorobenzene | 19900 | | 4000 | 520 |
| 106-46-7 | 1,4-Dichlorobenzene | 20100 | | 4000 | 640 |
| 123-91-1 | 1,4-Dioxane | 422000 | J | 800000 | 230000 |
| 78-93-3 | 2-Butanone (MEK) | 84000 | | 24000 | 8000 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 47000 | | 12000 | 2800 |
| 591-78-6 | 2-Hexanone | 85000 | | 20000 | 6800 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 89700 | | 20000 | 3900 |
| 67-64-1 | Acetone | 82800 | | 40000 | 7600 |
| 107-02-8 | Acrolein | 216000 | | 80000 | 11000 |
| 107-13-1 | Acrylonitrile | 232000 | | 80000 | 5600 |
| 71-43-2 | Benzene | 21800 | | 4000 | 640 |
| 75-25-2 | Bromoform | 18100 | | 4000 | 760 |
| 74-83-9 | Bromomethane | 24600 | | 8000 | 840 |
| 75-15-0 | Carbon disulfide | 19700 | | 8000 | 1800 |
| 56-23-5 | Carbon tetrachloride | 21400 | | 4000 | 760 |
| 108-90-7 | Chlorobenzene | 20500 | | 4000 | 680 |
| 74-97-5 | Chlorobromomethane | 20500 | | 4000 | 400 |
| 124-48-1 | Chlorodibromomethane | 19700 | | 4000 | 680 |
| 75-00-3 | Chloroethane | 26200 | | 8000 | 1600 |
| 67-66-3 | Chloroform | 37600 | | 4000 | 640 |
| 74-87-3 | Chloromethane | 24800 | | 8000 | 1200 |
| 156-59-2 | cis-1,2-Dichloroethene | 21100 | | 4000 | 600 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: 280-119359-C-1 MS

Matrix: Water | Lab File ID: MS1_1913.D

Analysis Method: 8260B | Date Collected: 01/17/2019 16:20

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 21:18

Soil Aliquot Vol: | Dilution Factor: 4000

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 10061-01-5 | cis-1,3-Dichloropropene | 20300 | | 4000 | 640 |
| 110-82-7 | Cyclohexane | 22600 | | 8000 | 1100 |
| 75-27-4 | Dichlorobromomethane | 21400 | | 4000 | 680 |
| 75-71-8 | Dichlorodifluoromethane | 27500 | | 8000 | 1200 |
| 100-41-4 | Ethylbenzene | 20100 | | 4000 | 640 |
| 98-82-8 | Isopropylbenzene | 18400 | | 4000 | 760 |
| 79-20-9 | Methyl acetate | 42400 | | 20000 | 6600 |
| 1634-04-4 | Methyl tert-butyl ether | 20100 | | 20000 | 1000 |
| 108-87-2 | Methylcyclohexane | 22400 | | 4000 | 1400 |
| 75-09-2 | Methylene Chloride | 1750000 | | 8000 | 1300 |
| 179601-23-1 | m-Xylene & p-Xylene | 20200 | | 8000 | 1400 |
| 95-47-6 | o-Xylene | 20500 | | 4000 | 760 |
| 100-42-5 | Styrene | 18800 | | 4000 | 680 |
| 127-18-4 | Tetrachloroethene | 20400 | | 4000 | 800 |
| 108-88-3 | Toluene | 22300 | | 4000 | 680 |
| 156-60-5 | trans-1,2-Dichloroethene | 21900 | | 4000 | 600 |
| 10061-02-6 | trans-1,3-Dichloropropene | 21300 | | 12000 | 760 |
| 79-01-6 | Trichloroethene | 20700 | | 4000 | 640 |
| 75-69-4 | Trichlorofluoromethane | 25900 | | 8000 | 1200 |
| 75-01-4 | Vinyl chloride | 24800 | | 4000 | 400 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 112 | | 70-127 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 102 | | 78-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 108 | | 77-120 |
| 2037-26-5 | Toluene-d8 (Surr) | 105 | | 80-125 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1913.D
Lims ID: 280-119359-C-1 MS
Client ID: GW0119-MW-041
Sample Type: MS
Inject. Date: 28-Jan-2019 21:18:30 ALS Bottle#: 9 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 4000.0000
Sample Info: 280-119359-C-1 MS pH<2 4000x
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 21:44:43

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.570 | 5.557 | 0.013 | 87 | 527335 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3196191 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.774 | 9.788 | -0.014 | 86 | 755868 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 94 | 1182196 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 725836 | 10.0 | 10.8 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 586071 | 10.0 | 11.2 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2961956 | 10.0 | 10.5 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.654 | -0.014 | 0 | 1031091 | 10.0 | 10.2 | |
| 24 Dichlorodifluoromethane | 85 | 3.894 | 3.894 | 0.000 | 99 | 665015 | 5.00 | 6.87 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 99 | 362078 | 5.00 | 6.21 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.244 | 0.014 | 91 | 376612 | 5.00 | 6.20 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 89 | 444634 | 5.00 | 6.14 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 378635 | 5.00 | 6.54 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 97 | 859265 | 5.00 | 6.31 | |
| 33 Trichlorofluoromethane | 101 | 4.914 | 4.914 | 0.000 | 99 | 780732 | 5.00 | 6.47 | |
| 36 Ethyl ether | 59 | 5.068 | 5.068 | 0.000 | 90 | 225933 | 5.00 | 5.57 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 99 | 214002 | 50.0 | 54.0 | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 98 | 149346 | 20.0 | 20.7 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.305 | 5.305 | 0.000 | 94 | 311858 | 5.00 | 5.11 | |
| 43 1,1-Dichloroethene | 96 | 5.333 | 5.333 | 0.000 | 98 | 373119 | 5.00 | 5.08 | |
| 45 Iodomethane | 142 | 5.501 | 5.501 | 0.000 | 99 | 812232 | 5.00 | 6.25 | |
| 46 Methyl acetate | 43 | 5.529 | 5.528 | 0.000 | 96 | 203663 | 10.0 | 10.6 | |
| 47 3-Chloro-1-propene | 41 | 5.584 | 5.584 | 0.000 | 88 | 575243 | 5.00 | 5.76 | |
| 48 Carbon disulfide | 76 | 5.612 | 5.598 | 0.014 | 98 | 1531617 | 5.00 | 4.94 | |
| 49 2-Methyl-2-propanol | 59 | 5.626 | 5.626 | 0.000 | 92 | 145173 | 50.0 | 49.0 | |
| 50 Methylene Chloride | 84 | 5.654 | 5.668 | -0.014 | 81 | 35779949 | 5.00 | 438.5 | Ee |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 99 | 566255 | 50.0 | 58.1 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 94 | 694916 | 5.00 | 5.03 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.892 | 5.892 | 0.000 | 99 | 455535 | 5.00 | 5.48 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 89 | 587490 | 5.00 | 4.88 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 97 | 791495 | 10.0 | 13.4 | |
| 57 1,1-Dichloroethane | 63 | 6.213 | 6.213 | 0.000 | 96 | 712727 | 5.00 | 5.63 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 98 | 278540 | 20.0 | 21.0 | |
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 95 | 165770 | 75.0 | 78.9 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 80 | 473564 | 5.00 | 5.27 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 88 | 589822 | 5.00 | 5.34 | |
| 67 Chlorobromomethane | 128 | 6.827 | 6.827 | 0.000 | 92 | 172382 | 5.00 | 5.12 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 93 | 1181189 | 5.00 | 9.39 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 85 | 86658 | 10.0 | 11.5 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 92 | 115123 | 125.0 | 150.0 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 98 | 643694 | 5.00 | 5.43 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 0 | 761088 | 5.00 | 5.66 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 99 | 596721 | 5.00 | 5.58 | |
| 74 Carbon tetrachloride | 117 | 7.204 | 7.204 | 0.000 | 97 | 545440 | 5.00 | 5.35 | |
| 75 1,2-Dichloroethane | 62 | 7.302 | 7.302 | 0.000 | 97 | 359432 | 5.00 | 5.63 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 96 | 1706532 | 5.00 | 5.45 | |
| 9 n-Heptane | 43 | 7.428 | 7.442 | -0.014 | 89 | 604209 | 5.00 | 5.89 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 98 | 427590 | 5.00 | 5.17 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 98 | 190024 | 10.0 | 10.6 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 97 | 386740 | 5.00 | 5.56 | |
| 83 Methylcyclohexane | 55 | 8.014 | 8.014 | 0.000 | 0 | 600635 | 5.00 | 5.60 | |
| 84 1,4-Dioxane | 88 | 8.028 | 8.028 | 0.000 | 90 | 33882 | 100.0 | 105.6 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 96 | 160749 | 5.00 | 5.19 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 99 | 458375 | 5.00 | 5.35 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 91 | 223998 | 10.0 | 11.8 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.475 | 8.475 | 0.000 | 98 | 539209 | 5.00 | 5.07 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 94 | 574695 | 20.0 | 22.4 | |
| 91 Toluene | 91 | 8.755 | 8.769 | -0.014 | 99 | 1827990 | 5.00 | 5.57 | |
| 92 Ethyl methacrylate | 69 | 8.839 | 8.838 | 0.000 | 87 | 265247 | 5.00 | 4.51 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.852 | 8.852 | 0.000 | 95 | 423562 | 5.00 | 5.32 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 90 | 241658 | 5.00 | 5.43 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 94 | 386352 | 20.0 | 21.2 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 90 | 420785 | 5.00 | 5.26 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 98 | 373168 | 5.00 | 5.10 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 89 | 278825 | 5.00 | 4.93 | |
| 100 Ethylene Dibromide | 107 | 9.453 | 9.467 | -0.014 | 98 | 210550 | 5.00 | 4.80 | |
| 101 1-Chlorohexane | 91 | 9.704 | 9.704 | 0.000 | 0 | 282858 | 2.50 | 2.31 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 97 | 1132273 | 5.00 | 5.14 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 98 | 657616 | 5.00 | 5.03 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 95 | 373625 | 5.00 | 5.07 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 99 | 812655 | 5.00 | 5.05 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 87 | 1133392 | 5.00 | 4.70 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 88 | 784598 | 5.00 | 5.13 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 98 | 134926 | 5.00 | 4.54 | |
| 108 Isopropylbenzene | 105 | 10.500 | 10.500 | 0.000 | 95 | 2041424 | 5.00 | 4.59 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 89 | 302076 | 200.0 | 154.7 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.696 | -0.014 | 93 | 264594 | 5.00 | 5.25 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 95 | 55840 | 5.00 | 5.07 | |
| 114 1,2,3-Trichloropropane | 110 | 10.752 | 10.766 | -0.014 | 84 | 73855 | 5.00 | 5.16 | |
| 116 Bromobenzene | 156 | 10.808 | 10.822 | -0.014 | 94 | 443524 | 5.00 | 4.88 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 98 | 587407 | 5.00 | 4.98 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.919 | 10.933 | -0.014 | 94 | 1701357 | 5.00 | 5.09 | |
| 117 2-Chlorotoluene | 126 | 10.933 | 10.933 | 0.000 | 96 | 486077 | 5.00 | 5.01 | |
| 118 4-Chlorotoluene | 126 | 11.003 | 11.017 | -0.014 | 98 | 479357 | 5.00 | 4.88 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 92 | 1709835 | 5.00 | 5.00 | |
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 96 | 1704522 | 5.00 | 5.03 | |
| 122 sec-Butylbenzene | 134 | 11.394 | 11.408 | -0.014 | 94 | 482111 | 5.00 | 4.95 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.506 | -0.014 | 97 | 1962062 | 5.00 | 4.73 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 97 | 917991 | 5.00 | 4.97 | |
| 126 1,4-Dichlorobenzene | 146 | 11.618 | 11.632 | -0.014 | 95 | 920119 | 5.00 | 5.01 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 97 | 1819383 | 5.00 | 5.32 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 99 | 1004212 | 5.00 | 6.34 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 87 | 40400 | 5.00 | 4.36 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.671 | -0.014 | 94 | 588745 | 5.00 | 5.03 | |
| 131 Hexachlorobutadiene | 225 | 13.824 | 13.824 | 0.000 | 97 | 389549 | 5.00 | 5.26 | |
| 132 Naphthalene | 128 | 14.006 | 14.020 | -0.014 | 97 | 802460 | 5.00 | 4.54 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.327 | 14.341 | -0.014 | 95 | 490780 | 5.00 | 5.18 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 10.0 | 10.7 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 20.0 | 24.2 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 10.0 | 10.2 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 10.0 | 10.2 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 10.0 | 10.4 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 10.0 | 10.7 | |

## QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

e - Potential Peak Saturated

## Reagents:

| | | | | |
|---|---|---|---|---|
| MV-MegaMain B_00007 | Amount Added: | 2.00 | Units: uL | |
| MV-Gas B_00007 | Amount Added: | 2.00 | Units: uL | |
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent |

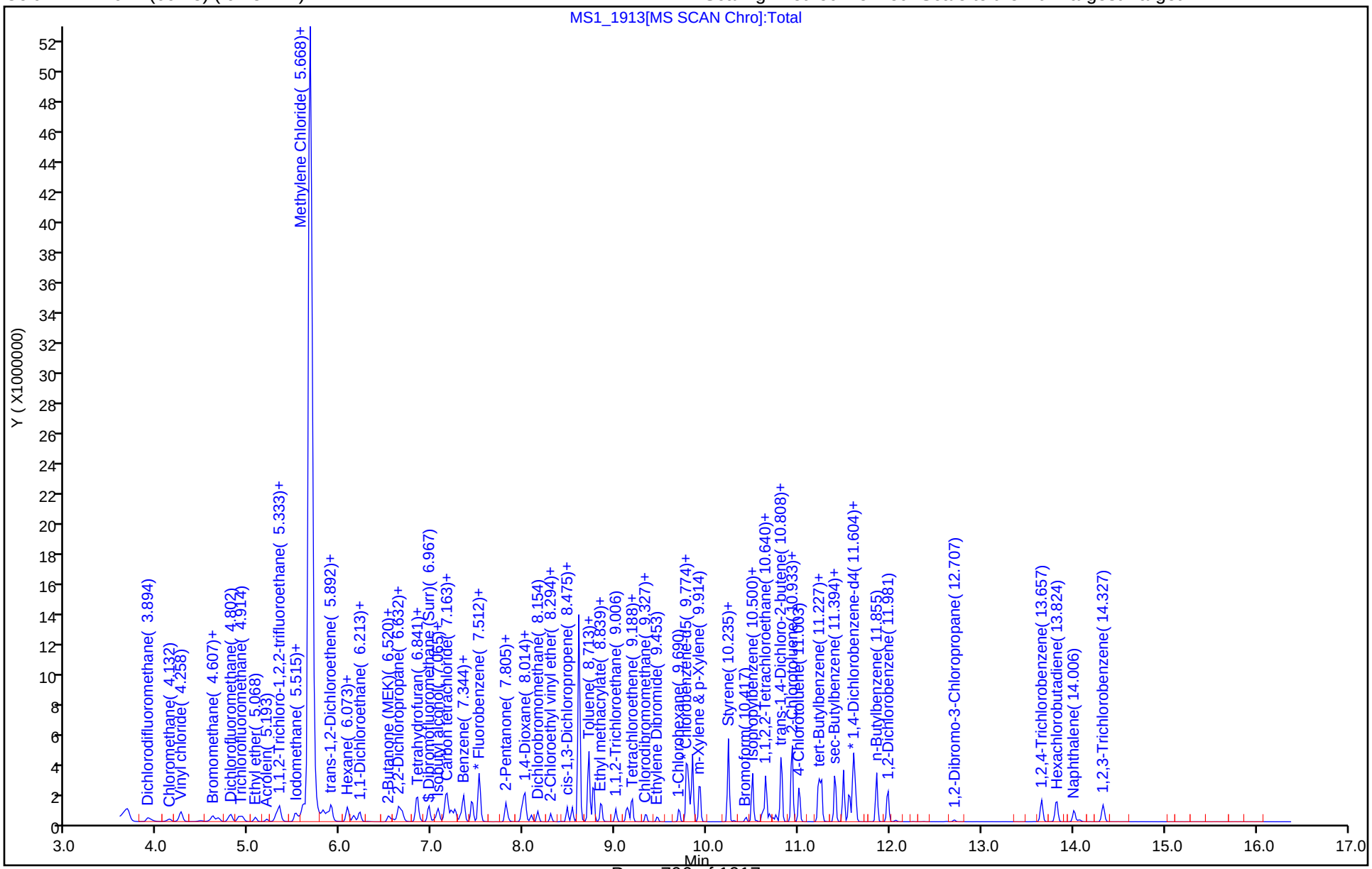
Report Date: 29-Jan-2019 17:54:29 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1913.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 21:18:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | 280-119359-C-1 MS | | | Worklist Smp#: | 13 |
| Client ID: | GW0119-MW-041 | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 4000.0000 | ALS Bottle#: | 9 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1913.D
Lims ID: 280-119359-C-1 MS
Client ID: GW0119-MW-041
Sample Type: MS
Inject. Date: 28-Jan-2019 21:18:30 ALS Bottle#: 9 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 4000.0000
Sample Info: 280-119359-C-1 MS pH<2 4000x
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 21:44:43

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 5 Dibromofluoromethane (Surr) | 10.0 | 10.8 | 107.93 |
| $ 6 1,2-Dichloroethane-d4 (Surr) | 10.0 | 11.2 | 111.61 |
| $ 7 Toluene-d8 (Surr) | 10.0 | 10.5 | 104.78 |
| $ 8 4-Bromofluorobenzene (Surr) | 10.0 | 10.2 | 101.85 |
| $ 4 BFB | 0.0 | 0 | 0.00 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: 280-119359-C-1 MS

Matrix: Water | Lab File ID: MS1_1915.D

Analysis Method: 8260B | Date Collected: 01/17/2019 16:20

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 21:59

Soil Aliquot Vol: | Dilution Factor: 4000

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 75-05-8 | Acetonitrile | 323000 | | 120000 | 38000 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 103 | | 70-127 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 95 | | 78-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 102 | | 77-120 |
| 2037-26-5 | Toluene-d8 (Surr) | 101 | | 80-125 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1915.D
Lims ID: 280-119359-C-1 MS
Client ID: GW0119-MW-041
Sample Type: MS
Inject. Date: 28-Jan-2019 21:59:30 ALS Bottle#: 11 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 4000.0000
Sample Info: 280-119359-C-1 MS pH<2 4000x
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 23:41:41

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.571 | 5.557 | 0.014 | 71 | 554440 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3200508 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.774 | 9.788 | -0.014 | 86 | 731753 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 94 | 1119488 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 686141 | 10.0 | 10.2 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 541310 | 10.0 | 10.3 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2771776 | 10.0 | 10.1 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.654 | -0.014 | 0 | 913456 | 10.0 | 9.53 | |
| 28 Ethylene oxide | 43 | 4.537 | 4.523 | 0.014 | 98 | 343400 | 500.0 | 454.1 | |
| 34 Ethanol | 45 | 4.914 | 4.900 | 0.014 | 99 | 89690 | 300.0 | 282.8 | |
| 38 Propene oxide | 58 | 5.152 | 5.152 | 0.000 | 0 | 2332860 | 500.0 | 513.5 | |
| 41 Isopropyl alcohol | 45 | 5.319 | 5.305 | 0.014 | 98 | 105131 | 50.0 | 51.7 | |
| 44 Acetonitrile | 41 | 5.515 | 5.501 | 0.014 | 100 | 284877 | 50.0 | 80.9 | |
| 56 Isopropyl ether | 87 | 6.171 | 6.171 | 0.000 | 94 | 347449 | 5.00 | 6.14 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.283 | 6.283 | 0.000 | 89 | 655613 | 5.00 | 7.09 | |
| 59 Tert-butyl ethyl ether | 59 | 6.450 | 6.450 | 0.000 | 97 | 993038 | 5.00 | 6.05 | |
| 60 Ethyl acetate | 43 | 6.562 | 6.562 | 0.000 | 98 | 268301 | 10.0 | 9.75 | |
| 63 Propionitrile | 54 | 6.618 | 6.618 | 0.000 | 98 | 229596 | 50.0 | 53.8 | |
| 66 Methacrylonitrile | 41 | 6.744 | 6.744 | 0.000 | 89 | 976048 | 50.0 | 56.2 | |
| 76 Tert-amyl methyl ether | 73 | 7.344 | 7.330 | 0.014 | 99 | 860252 | 5.00 | 6.35 | |
| 78 n-Butanol | 56 | 7.526 | 7.526 | 0.000 | 83 | 127264 | 125.0 | 131.6 | |
| 81 Methyl methacrylate | 100 | 7.931 | 7.931 | 0.000 | 86 | 112474 | 10.0 | 13.4 | |
| 87 2-Nitropropane | 41 | 8.280 | 8.280 | 0.000 | 97 | 58210 | 10.0 | 13.1 | |
| 99 Tetrahydrothiophene | 60 | 9.383 | 9.383 | 0.000 | 89 | 12018 | NC | NC | |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 79 | 62925 | 10.0 | 9.20 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 97 | 1745047 | 5.00 | 5.53 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.945 | -0.014 | 97 | 776927 | 5.00 | 6.07 | |

## QC Flag Legend

Processing Flags

NC - Not Calibrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| MV-Supp B_00023 | Amount Added: | 2.00 | Units: uL | |
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent |

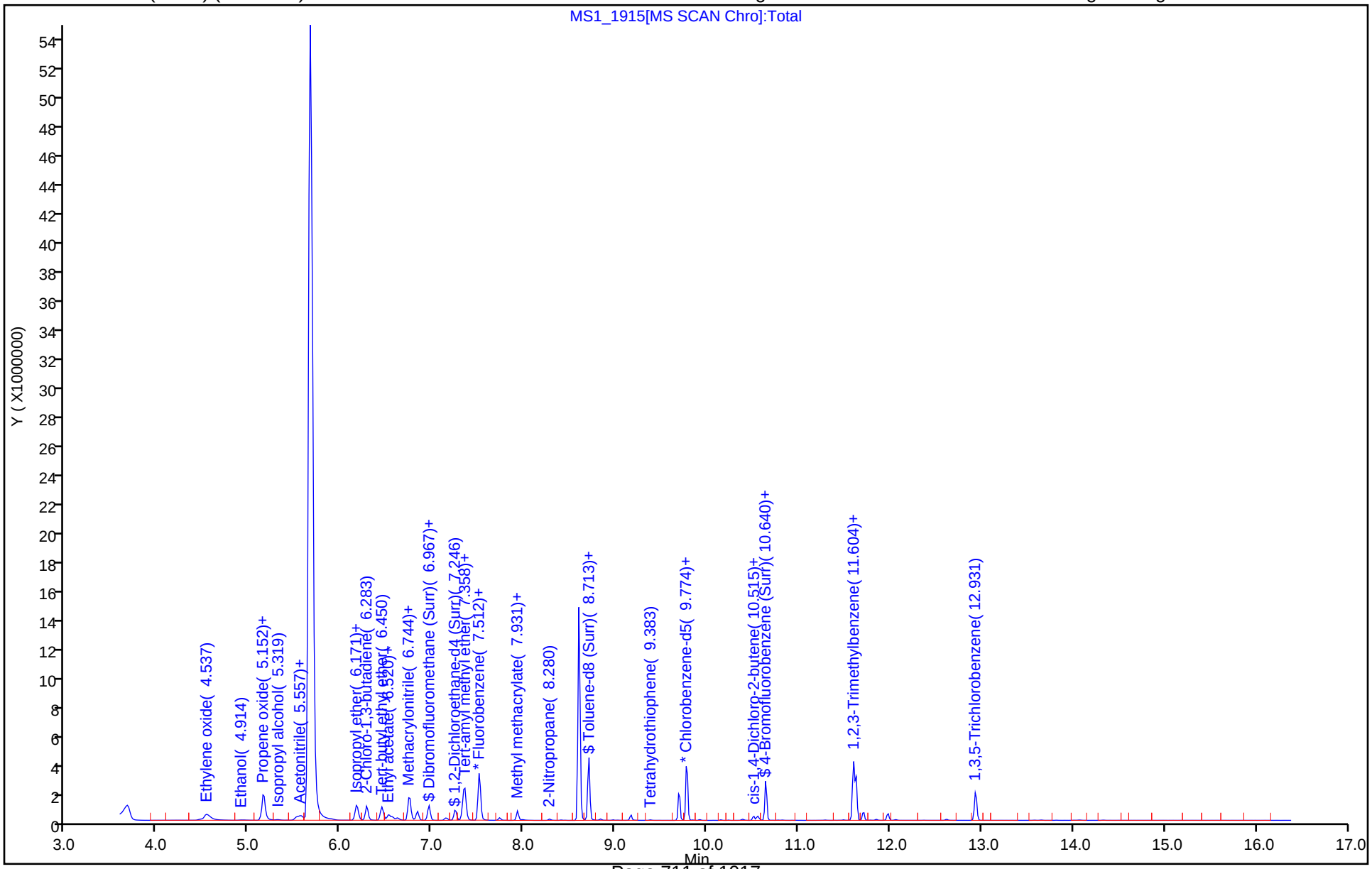
Report Date: 29-Jan-2019 17:54:42 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1915.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 21:59:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | 280-119359-C-1 MS | | | Worklist Smp#: | 15 |
| Client ID: | GW0119-MW-041 | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 4000.0000 | ALS Bottle#: | 11 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1915.D
Lims ID: 280-119359-C-1 MS
Client ID: GW0119-MW-041
Sample Type: MS
Inject. Date: 28-Jan-2019 21:59:30 ALS Bottle#: 11 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 4000.0000
Sample Info: 280-119359-C-1 MS pH<2 4000x
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 23:41:41

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 5 Dibromofluoromethane (Surr) | 10.0 | 10.2 | 101.89 |
| $ 6 1,2-Dichloroethane-d4 (Surr) | 10.0 | 10.3 | 102.94 |
| $ 7 Toluene-d8 (Surr) | 10.0 | 10.1 | 101.28 |
| $ 8 4-Bromofluorobenzene (Surr) | 10.0 | 9.53 | 95.28 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: 280-119359-A-1 MSD

Matrix: Water | Lab File ID: MS1_1914.D

Analysis Method: 8260B | Date Collected: 01/17/2019 16:20

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 21:38

Soil Aliquot Vol: | Dilution Factor: 4000

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 20600 | | 4000 | 640 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 19800 | | 4000 | 840 |
| 79-00-5 | 1,1,2-Trichloroethane | 20000 | | 4000 | 1100 |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 19700 | | 12000 | 1700 |
| 75-34-3 | 1,1-Dichloroethane | 20900 | | 4000 | 880 |
| 75-35-4 | 1,1-Dichloroethene | 19600 | | 4000 | 920 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 19700 | | 4000 | 840 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 19600 | | 4000 | 840 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 17600 | J | 20000 | 1900 |
| 106-93-4 | 1,2-Dibromoethane | 18100 | | 4000 | 720 |
| 95-50-1 | 1,2-Dichlorobenzene | 24900 | | 4000 | 600 |
| 107-06-2 | 1,2-Dichloroethane | 21000 | | 4000 | 520 |
| 78-87-5 | 1,2-Dichloropropane | 21000 | | 4000 | 720 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 19700 | | 4000 | 640 |
| 541-73-1 | 1,3-Dichlorobenzene | 18900 | | 4000 | 520 |
| 106-46-7 | 1,4-Dichlorobenzene | 19100 | | 4000 | 640 |
| 123-91-1 | 1,4-Dioxane | 376000 | J | 800000 | 230000 |
| 78-93-3 | 2-Butanone (MEK) | 77900 | | 24000 | 8000 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 40900 | | 12000 | 2800 |
| 591-78-6 | 2-Hexanone | 78500 | | 20000 | 6800 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 83000 | | 20000 | 3900 |
| 67-64-1 | Acetone | 82000 | | 40000 | 7600 |
| 107-02-8 | Acrolein | 200000 | | 80000 | 11000 |
| 107-13-1 | Acrylonitrile | 211000 | | 80000 | 5600 |
| 71-43-2 | Benzene | 20600 | | 4000 | 640 |
| 75-25-2 | Bromoform | 17400 | | 4000 | 760 |
| 74-83-9 | Bromomethane | 21200 | | 8000 | 840 |
| 75-15-0 | Carbon disulfide | 18700 | | 8000 | 1800 |
| 56-23-5 | Carbon tetrachloride | 20700 | | 4000 | 760 |
| 108-90-7 | Chlorobenzene | 19200 | | 4000 | 680 |
| 74-97-5 | Chlorobromomethane | 19100 | | 4000 | 400 |
| 124-48-1 | Chlorodibromomethane | 18300 | | 4000 | 680 |
| 75-00-3 | Chloroethane | 23000 | | 8000 | 1600 |
| 67-66-3 | Chloroform | 37400 | | 4000 | 640 |
| 74-87-3 | Chloromethane | 21400 | | 8000 | 1200 |
| 156-59-2 | cis-1,2-Dichloroethene | 19800 | | 4000 | 600 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: 280-119359-A-1 MSD

Matrix: Water | Lab File ID: MS1_1914.D

Analysis Method: 8260B | Date Collected: 01/17/2019 16:20

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 21:38

Soil Aliquot Vol: | Dilution Factor: 4000

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 10061-01-5 | cis-1,3-Dichloropropene | 19100 | | 4000 | 640 |
| 110-82-7 | Cyclohexane | 21300 | | 8000 | 1100 |
| 75-27-4 | Dichlorobromomethane | 19500 | | 4000 | 680 |
| 75-71-8 | Dichlorodifluoromethane | 23800 | | 8000 | 1200 |
| 100-41-4 | Ethylbenzene | 19100 | | 4000 | 640 |
| 98-82-8 | Isopropylbenzene | 17900 | | 4000 | 760 |
| 79-20-9 | Methyl acetate | 38600 | | 20000 | 6600 |
| 1634-04-4 | Methyl tert-butyl ether | 18800 | J | 20000 | 1000 |
| 108-87-2 | Methylcyclohexane | 21100 | | 4000 | 1400 |
| 75-09-2 | Methylene Chloride | 1700000 | | 8000 | 1300 |
| 179601-23-1 | m-Xylene & p-Xylene | 19200 | | 8000 | 1400 |
| 95-47-6 | o-Xylene | 19500 | | 4000 | 760 |
| 100-42-5 | Styrene | 17600 | | 4000 | 680 |
| 127-18-4 | Tetrachloroethene | 19300 | | 4000 | 800 |
| 108-88-3 | Toluene | 20900 | | 4000 | 680 |
| 156-60-5 | trans-1,2-Dichloroethene | 20900 | | 4000 | 600 |
| 10061-02-6 | trans-1,3-Dichloropropene | 19500 | | 12000 | 760 |
| 79-01-6 | Trichloroethene | 19700 | | 4000 | 640 |
| 75-69-4 | Trichlorofluoromethane | 22100 | | 8000 | 1200 |
| 75-01-4 | Vinyl chloride | 21900 | | 4000 | 400 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 108 | | 70-127 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 99 | | 78-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 103 | | 77-120 |
| 2037-26-5 | Toluene-d8 (Surr) | 102 | | 80-125 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1914.D
Lims ID: 280-119359-A-1 MSD
Client ID: GW0119-MW-041
Sample Type: MSD
Inject. Date: 28-Jan-2019 21:38:30 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 4000.0000
Sample Info: 280-119359-A-1 MSD pH<2 4000x
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.556 | 5.557 | -0.001 | 86 | 513656 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3442086 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.774 | 9.788 | -0.014 | 86 | 800599 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 95 | 1219522 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 93 | 748978 | 10.0 | 10.3 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 97 | 608501 | 10.0 | 10.8 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 3065076 | 10.0 | 10.2 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.654 | -0.014 | 0 | 1032553 | 10.0 | 9.89 | |
| 24 Dichlorodifluoromethane | 85 | 3.894 | 3.894 | 0.000 | 99 | 618812 | 5.00 | 5.95 | |
| 26 Chloromethane | 50 | 4.132 | 4.132 | 0.000 | 99 | 336548 | 5.00 | 5.36 | |
| 27 Vinyl chloride | 62 | 4.258 | 4.244 | 0.014 | 91 | 358452 | 5.00 | 5.48 | |
| 29 Bromomethane | 94 | 4.607 | 4.607 | 0.000 | 90 | 413039 | 5.00 | 5.30 | |
| 31 Chloroethane | 64 | 4.663 | 4.663 | 0.000 | 99 | 358149 | 5.00 | 5.75 | |
| 32 Dichlorofluoromethane | 67 | 4.802 | 4.802 | 0.000 | 97 | 800405 | 5.00 | 5.46 | |
| 33 Trichlorofluoromethane | 101 | 4.914 | 4.914 | 0.000 | 98 | 719938 | 5.00 | 5.54 | |
| 36 Ethyl ether | 59 | 5.068 | 5.068 | 0.000 | 89 | 227685 | 5.00 | 5.21 | |
| 39 Acrolein | 56 | 5.193 | 5.193 | 0.000 | 99 | 213096 | 50.0 | 49.9 | |
| 40 Acetone | 43 | 5.291 | 5.291 | 0.000 | 99 | 159262 | 20.0 | 20.5 | |
| 42 1,1,2-Trichloro-1,2,2-trif | 151 | 5.305 | 5.305 | 0.000 | 93 | 323531 | 5.00 | 4.93 | |
| 43 1,1-Dichloroethene | 96 | 5.333 | 5.333 | 0.000 | 97 | 387986 | 5.00 | 4.91 | |
| 45 Iodomethane | 142 | 5.501 | 5.501 | 0.000 | 98 | 879110 | 5.00 | 6.28 | |
| 46 Methyl acetate | 43 | 5.529 | 5.528 | 0.001 | 95 | 199632 | 10.0 | 9.64 | |
| 47 3-Chloro-1-propene | 41 | 5.584 | 5.584 | 0.000 | 84 | 580467 | 5.00 | 5.39 | |
| 48 Carbon disulfide | 76 | 5.612 | 5.598 | 0.014 | 98 | 1558953 | 5.00 | 4.67 | |
| 49 2-Methyl-2-propanol | 59 | 5.626 | 5.626 | 0.000 | 92 | 138119 | 50.0 | 47.8 | |
| 50 Methylene Chloride | 84 | 5.654 | 5.668 | -0.014 | 82 | 37396408 | 5.00 | 425.5 | Ee |
| 51 Acrylonitrile | 53 | 5.808 | 5.808 | 0.000 | 98 | 553799 | 50.0 | 52.8 | |
| 52 Methyl tert-butyl ether | 73 | 5.864 | 5.864 | 0.000 | 94 | 698449 | 5.00 | 4.69 | |
| 53 trans-1,2-Dichloroethene | 96 | 5.892 | 5.892 | 0.000 | 98 | 466974 | 5.00 | 5.21 | |
| 54 Hexane | 57 | 6.073 | 6.073 | 0.000 | 88 | 596138 | 5.00 | 4.68 | |
| 55 Vinyl acetate | 43 | 6.143 | 6.143 | 0.000 | 97 | 775028 | 10.0 | 12.2 | |
| 57 1,1-Dichloroethane | 63 | 6.199 | 6.213 | -0.014 | 96 | 713124 | 5.00 | 5.23 | |
| 61 2-Butanone (MEK) | 43 | 6.576 | 6.576 | 0.000 | 98 | 277949 | 20.0 | 19.5 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 62 sec-Butyl Alcohol | 45 | 6.618 | 6.618 | 0.000 | 94 | 159143 | 75.0 | 77.7 | |
| 64 cis-1,2-Dichloroethene | 96 | 6.632 | 6.632 | 0.000 | 80 | 479965 | 5.00 | 4.96 | |
| 65 2,2-Dichloropropane | 77 | 6.674 | 6.674 | 0.000 | 87 | 596243 | 5.00 | 5.02 | |
| 67 Chlorobromomethane | 128 | 6.827 | 6.827 | 0.000 | 95 | 173167 | 5.00 | 4.78 | |
| 68 Chloroform | 83 | 6.841 | 6.841 | 0.000 | 93 | 1267942 | 5.00 | 9.36 | |
| 69 Tetrahydrofuran | 42 | 6.869 | 6.869 | 0.000 | 86 | 85853 | 10.0 | 10.5 | |
| 70 Isobutyl alcohol | 41 | 7.023 | 7.023 | 0.000 | 95 | 110240 | 125.0 | 147.5 | |
| 71 1,1,1-Trichloroethane | 97 | 7.065 | 7.065 | 0.000 | 98 | 658552 | 5.00 | 5.16 | |
| 72 Cyclohexane | 56 | 7.149 | 7.149 | 0.000 | 0 | 770902 | 5.00 | 5.32 | |
| 73 1,1-Dichloropropene | 75 | 7.163 | 7.163 | 0.000 | 99 | 594163 | 5.00 | 5.16 | |
| 74 Carbon tetrachloride | 117 | 7.204 | 7.204 | 0.000 | 95 | 569079 | 5.00 | 5.18 | |
| 75 1,2-Dichloroethane | 62 | 7.302 | 7.302 | 0.000 | 97 | 360586 | 5.00 | 5.25 | |
| 77 Benzene | 78 | 7.344 | 7.344 | 0.000 | 96 | 1734634 | 5.00 | 5.15 | |
| 9 n-Heptane | 43 | 7.428 | 7.442 | -0.014 | 90 | 623416 | 5.00 | 5.64 | |
| 79 Trichloroethene | 95 | 7.805 | 7.805 | 0.000 | 98 | 438168 | 5.00 | 4.92 | |
| 80 2-Pentanone | 43 | 7.833 | 7.833 | 0.000 | 98 | 187689 | 10.0 | 9.70 | |
| 82 1,2-Dichloropropane | 63 | 7.987 | 7.987 | 0.000 | 97 | 392084 | 5.00 | 5.24 | |
| 83 Methylcyclohexane | 55 | 8.015 | 8.014 | 0.001 | 0 | 610429 | 5.00 | 5.28 | |
| 84 1,4-Dioxane | 88 | 8.028 | 8.028 | 0.000 | 93 | 32530 | 100.0 | 94.1 | |
| 85 Dibromomethane | 93 | 8.084 | 8.084 | 0.000 | 96 | 162528 | 5.00 | 4.87 | |
| 86 Dichlorobromomethane | 83 | 8.154 | 8.154 | 0.000 | 100 | 450166 | 5.00 | 4.88 | |
| 88 2-Chloroethyl vinyl ether | 63 | 8.294 | 8.294 | 0.000 | 91 | 209651 | 10.0 | 10.2 | |
| 89 cis-1,3-Dichloropropene | 75 | 8.475 | 8.475 | 0.000 | 98 | 537449 | 5.00 | 4.77 | |
| 90 4-Methyl-2-pentanone (MIBK | 43 | 8.531 | 8.531 | 0.000 | 94 | 572963 | 20.0 | 20.8 | |
| 91 Toluene | 91 | 8.755 | 8.769 | -0.014 | 99 | 1844943 | 5.00 | 5.22 | |
| 92 Ethyl methacrylate | 69 | 8.839 | 8.838 | 0.001 | 88 | 259046 | 5.00 | 4.16 | |
| 93 trans-1,3-Dichloropropene | 75 | 8.852 | 8.852 | 0.000 | 95 | 417909 | 5.00 | 4.88 | |
| 94 1,1,2-Trichloroethane | 97 | 9.006 | 9.006 | 0.000 | 90 | 239321 | 5.00 | 4.99 | |
| 95 2-Hexanone | 43 | 9.118 | 9.118 | 0.000 | 94 | 377967 | 20.0 | 19.6 | |
| 96 1,3-Dichloropropane | 76 | 9.146 | 9.146 | 0.000 | 93 | 417314 | 5.00 | 4.93 | |
| 97 Tetrachloroethene | 164 | 9.188 | 9.188 | 0.000 | 98 | 373927 | 5.00 | 4.82 | |
| 98 Chlorodibromomethane | 129 | 9.341 | 9.341 | 0.000 | 90 | 274258 | 5.00 | 4.58 | |
| 100 Ethylene Dibromide | 107 | 9.453 | 9.467 | -0.014 | 100 | 210889 | 5.00 | 4.54 | |
| 101 1-Chlorohexane | 91 | 9.704 | 9.704 | 0.000 | 0 | 289574 | 2.50 | 2.23 | |
| 102 Chlorobenzene | 112 | 9.802 | 9.802 | 0.000 | 97 | 1123700 | 5.00 | 4.81 | |
| 104 Ethylbenzene | 106 | 9.844 | 9.844 | 0.000 | 98 | 662709 | 5.00 | 4.78 | |
| 103 1,1,1,2-Tetrachloroethane | 131 | 9.844 | 9.844 | 0.000 | 95 | 373912 | 5.00 | 4.79 | |
| 105 m-Xylene & p-Xylene | 106 | 9.928 | 9.928 | 0.000 | 99 | 818467 | 5.00 | 4.80 | |
| 106 Styrene | 104 | 10.235 | 10.235 | 0.000 | 87 | 1126730 | 5.00 | 4.41 | |
| 109 o-Xylene | 106 | 10.235 | 10.235 | 0.000 | 88 | 789245 | 5.00 | 4.87 | |
| 107 Bromoform | 173 | 10.431 | 10.431 | 0.000 | 98 | 137085 | 5.00 | 4.35 | |
| 108 Isopropylbenzene | 105 | 10.501 | 10.500 | 0.000 | 95 | 2060317 | 5.00 | 4.48 | |
| 111 Cyclohexanone | 55 | 10.612 | 10.612 | 0.000 | 89 | 366429 | 200.0 | 177.1 | |
| 112 1,1,2,2-Tetrachloroethane | 83 | 10.682 | 10.696 | -0.014 | 92 | 257735 | 5.00 | 4.96 | |
| 113 trans-1,4-Dichloro-2-buten | 53 | 10.724 | 10.724 | 0.000 | 91 | 55269 | 5.00 | 4.86 | |
| 114 1,2,3-Trichloropropane | 110 | 10.752 | 10.766 | -0.014 | 84 | 72428 | 5.00 | 4.90 | |
| 116 Bromobenzene | 156 | 10.808 | 10.822 | -0.014 | 94 | 443323 | 5.00 | 4.73 | |
| 115 N-Propylbenzene | 120 | 10.822 | 10.822 | 0.000 | 98 | 588579 | 5.00 | 4.84 | |
| 120 1,3,5-Trimethylbenzene | 105 | 10.920 | 10.933 | -0.013 | 96 | 1694446 | 5.00 | 4.91 | |
| 117 2-Chlorotoluene | 126 | 10.933 | 10.933 | 0.000 | 96 | 488660 | 5.00 | 4.89 | |
| 118 4-Chlorotoluene | 126 | 11.003 | 11.017 | -0.014 | 98 | 479741 | 5.00 | 4.73 | |
| 119 tert-Butylbenzene | 119 | 11.227 | 11.227 | 0.000 | 92 | 1702377 | 5.00 | 4.82 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 121 1,2,4-Trimethylbenzene | 105 | 11.255 | 11.255 | 0.000 | 96 | 1717256 | 5.00 | 4.92 | |
| 122 sec-Butylbenzene | 134 | 11.394 | 11.408 | -0.014 | 94 | 483640 | 5.00 | 4.81 | |
| 123 4-Isopropyltoluene | 119 | 11.492 | 11.506 | -0.014 | 97 | 1942918 | 5.00 | 4.53 | |
| 124 1,3-Dichlorobenzene | 146 | 11.562 | 11.562 | 0.000 | 97 | 899574 | 5.00 | 4.73 | |
| 126 1,4-Dichlorobenzene | 146 | 11.618 | 11.632 | -0.014 | 95 | 905246 | 5.00 | 4.78 | |
| 127 n-Butylbenzene | 91 | 11.855 | 11.855 | 0.000 | 97 | 1803425 | 5.00 | 5.11 | |
| 128 1,2-Dichlorobenzene | 146 | 11.981 | 11.981 | 0.000 | 99 | 1016420 | 5.00 | 6.22 | |
| 129 1,2-Dibromo-3-Chloropropan | 157 | 12.707 | 12.707 | 0.000 | 87 | 42095 | 5.00 | 4.41 | |
| 130 1,2,4-Trichlorobenzene | 180 | 13.657 | 13.671 | -0.014 | 95 | 591180 | 5.00 | 4.90 | |
| 131 Hexachlorobutadiene | 225 | 13.824 | 13.824 | 0.000 | 97 | 390811 | 5.00 | 5.12 | |
| 132 Naphthalene | 128 | 14.006 | 14.020 | -0.014 | 97 | 806363 | 5.00 | 4.43 | |
| 133 1,2,3-Trichlorobenzene | 180 | 14.327 | 14.341 | -0.014 | 96 | 481650 | 5.00 | 4.93 | |
| S 140 1,2-Dichloroethene, Total | 96 | | | | 0 | | 10.0 | 10.2 | |
| S 134 Trihalomethanes, Total | 1 | | | | 0 | | 20.0 | 23.2 | |
| S 138 Xylenes, Total | 106 | | | | 0 | | 10.0 | 9.67 | |
| S 139 Xylenes, Total (URS) | 1 | | | | 0 | | 10.0 | 9.67 | |
| S 135 1,3-Dichloropropene, Total | 1 | | | | 0 | | 10.0 | 9.64 | |
| S 136 1,2-Dichloroethene, Total | 1 | | | | 0 | | 10.0 | 10.2 | |

## QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

e - Potential Peak Saturated

## Reagents:

| | | | | |
|---|---|---|---|---|
| MV-MegaMain B_00007 | Amount Added: | 2.00 | Units: uL | |
| MV-Gas B_00007 | Amount Added: | 2.00 | Units: uL | |
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent |

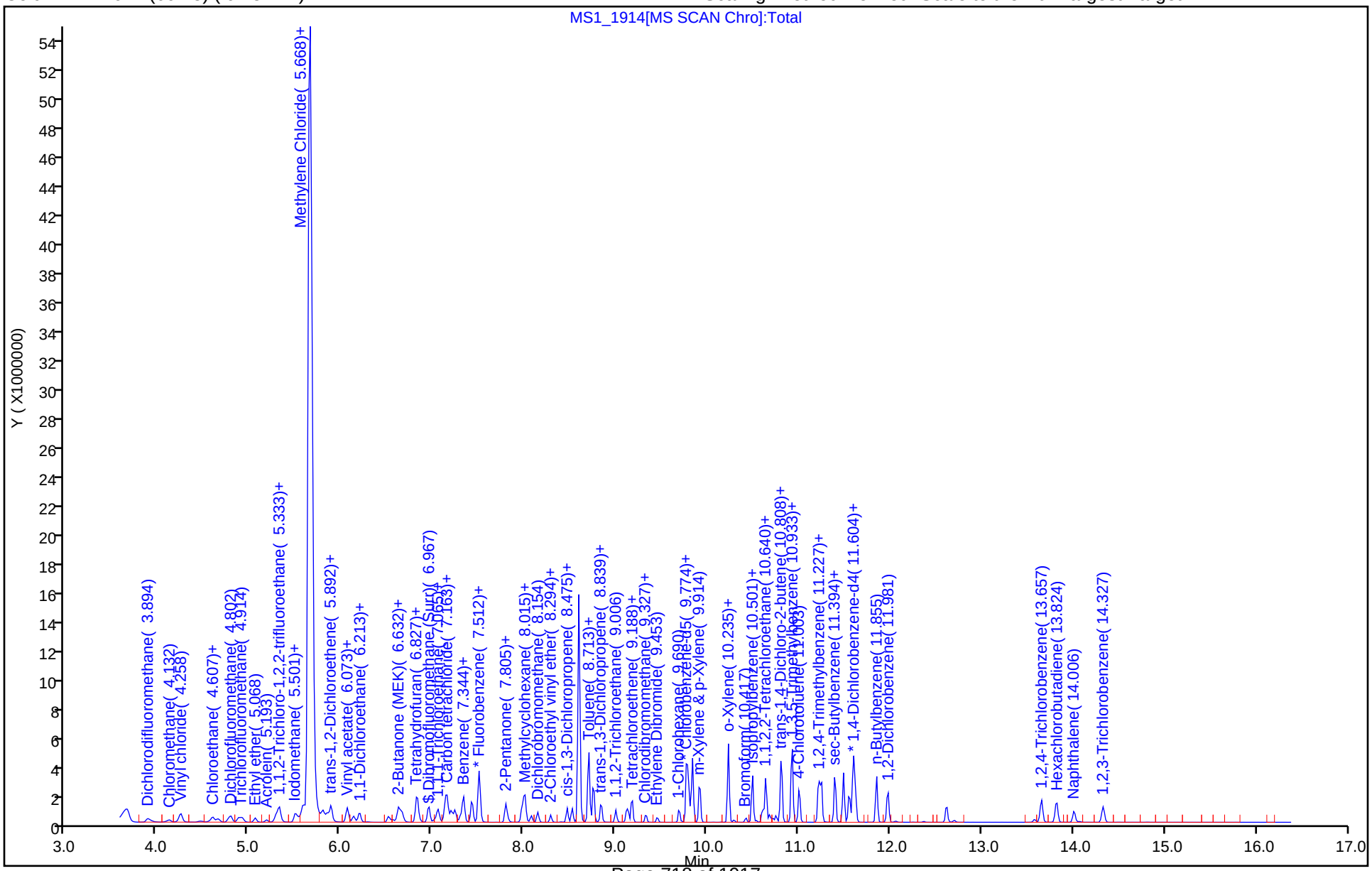
Report Date: 29-Jan-2019 17:54:38 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1914.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 21:38:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | 280-119359-A-1 MSD | | | Worklist Smp#: | 14 |
| Client ID: | GW0119-MW-041 | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 4000.0000 | ALS Bottle#: | 10 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1914.D
Lims ID: 280-119359-A-1 MSD
Client ID: GW0119-MW-041
Sample Type: MSD
Inject. Date: 28-Jan-2019 21:38:30 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 4000.0000
Sample Info: 280-119359-A-1 MSD pH<2 4000x
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 5 Dibromofluoromethane (Surr) | 10.0 | 10.3 | 103.42 |
| $ 6 1,2-Dichloroethane-d4 (Surr) | 10.0 | 10.8 | 107.60 |
| $ 7 Toluene-d8 (Surr) | 10.0 | 10.2 | 102.37 |
| $ 8 4-Bromofluorobenzene (Surr) | 10.0 | 9.89 | 98.87 |
| $ 4 BFB | 0.0 | 0 | 0.00 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: 280-119359-A-1 MSD

Matrix: Water | Lab File ID: MS1_1916.D

Analysis Method: 8260B | Date Collected: 01/17/2019 16:20

Sample wt/vol: 20(mL) | Date Analyzed: 01/28/2019 22:19

Soil Aliquot Vol: | Dilution Factor: 4000

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 445753 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 75-05-8 | Acetonitrile | 310000 | | 120000 | 38000 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 106 | | 70-127 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 97 | | 78-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 105 | | 77-120 |
| 2037-26-5 | Toluene-d8 (Surr) | 103 | | 80-125 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1916.D
Lims ID: 280-119359-A-1 MSD
Client ID: GW0119-MW-041
Sample Type: MSD
Inject. Date: 28-Jan-2019 22:19:30 ALS Bottle#: 12 Worklist Smp#: 20
Purge Vol: 20.000 mL Dil. Factor: 4000.0000
Sample Info: 280-119359-A-1 MSD pH<2 4000x
Operator ID: nwangumaf Instrument ID: VMS_MS1

Method: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Jan-2019 17:54:01 Calib Date: 18-Jan-2019 13:52:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D

Column 1 : DB-624 (60.25) ( 0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: nwangumaf Date: 28-Jan-2019 23:43:44

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 150 TBA-d9 (IS) | 65 | 5.571 | 5.557 | 0.013 | 71 | 548178 | 250.0 | 250.0 | |
| * 1 Fluorobenzene | 96 | 7.512 | 7.512 | 0.000 | 99 | 3331082 | 12.5 | 12.5 | |
| * 2 Chlorobenzene-d5 | 119 | 9.788 | 9.788 | 0.000 | 85 | 766101 | 12.5 | 12.5 | |
| * 3 1,4-Dichlorobenzene-d4 | 152 | 11.604 | 11.604 | 0.000 | 93 | 1182542 | 12.5 | 12.5 | |
| $ 5 Dibromofluoromethane (Surr | 111 | 6.967 | 6.967 | 0.000 | 94 | 732514 | 10.0 | 10.5 | |
| $ 6 1,2-Dichloroethane-d4 (Sur | 65 | 7.246 | 7.246 | 0.000 | 98 | 582788 | 10.0 | 10.6 | |
| $ 7 Toluene-d8 (Surr) | 98 | 8.713 | 8.713 | 0.000 | 92 | 2938028 | 10.0 | 10.3 | |
| $ 8 4-Bromofluorobenzene (Surr | 95 | 10.640 | 10.654 | -0.014 | 0 | 984596 | 10.0 | 9.72 | |
| 28 Ethylene oxide | 43 | 4.537 | 4.523 | 0.014 | 98 | 317652 | 500.0 | 394.4 | |
| 34 Ethanol | 45 | 4.914 | 4.900 | 0.014 | 99 | 96278 | 300.0 | 307.0 | |
| 38 Propene oxide | 58 | 5.165 | 5.152 | 0.013 | 0 | 2185770 | 500.0 | 462.2 | |
| 41 Isopropyl alcohol | 45 | 5.319 | 5.305 | 0.014 | 97 | 101165 | 50.0 | 50.3 | |
| 44 Acetonitrile | 41 | 5.515 | 5.501 | 0.014 | 100 | 284158 | 50.0 | 77.5 | |
| 56 Isopropyl ether | 87 | 6.185 | 6.171 | 0.014 | 94 | 325029 | 5.00 | 5.52 | |
| 58 2-Chloro-1,3-butadiene | 53 | 6.283 | 6.283 | 0.000 | 89 | 594259 | 5.00 | 6.17 | |
| 59 Tert-butyl ethyl ether | 59 | 6.450 | 6.450 | 0.000 | 97 | 921841 | 5.00 | 5.40 | |
| 60 Ethyl acetate | 43 | 6.562 | 6.562 | 0.000 | 98 | 260198 | 10.0 | 9.08 | |
| 63 Propionitrile | 54 | 6.618 | 6.618 | 0.000 | 98 | 218704 | 50.0 | 49.2 | |
| 66 Methacrylonitrile | 41 | 6.744 | 6.744 | 0.000 | 90 | 913981 | 50.0 | 50.5 | |
| 76 Tert-amyl methyl ether | 73 | 7.344 | 7.330 | 0.014 | 98 | 806866 | 5.00 | 5.72 | |
| 78 n-Butanol | 56 | 7.526 | 7.526 | 0.000 | 85 | 123962 | 125.0 | 129.5 | |
| 81 Methyl methacrylate | 100 | 7.931 | 7.931 | 0.000 | 87 | 104858 | 10.0 | 12.0 | |
| 87 2-Nitropropane | 41 | 8.280 | 8.280 | 0.000 | 98 | 52509 | 10.0 | 11.3 | |
| 99 Tetrahydrothiophene | 60 | 9.383 | 9.383 | 0.000 | 91 | 11160 | NC | NC | |
| 110 cis-1,4-Dichloro-2-butene | 53 | 10.515 | 10.515 | 0.000 | 78 | 57146 | 10.0 | 7.91 | |
| 125 1,2,3-Trimethylbenzene | 105 | 11.632 | 11.632 | 0.000 | 98 | 1642309 | 5.00 | 4.93 | |
| 21 1,3,5-Trichlorobenzene | 180 | 12.931 | 12.945 | -0.014 | 97 | 732018 | 5.00 | 5.42 | |

## QC Flag Legend

Processing Flags

NC - Not Calibrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| MV-Supp B_00023 | Amount Added: | 2.00 | Units: uL | |
| MV-568718-D_00014 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| MV-ARCH SS A_00108 | Amount Added: | 0.80 | Units: uL | Run Reagent |

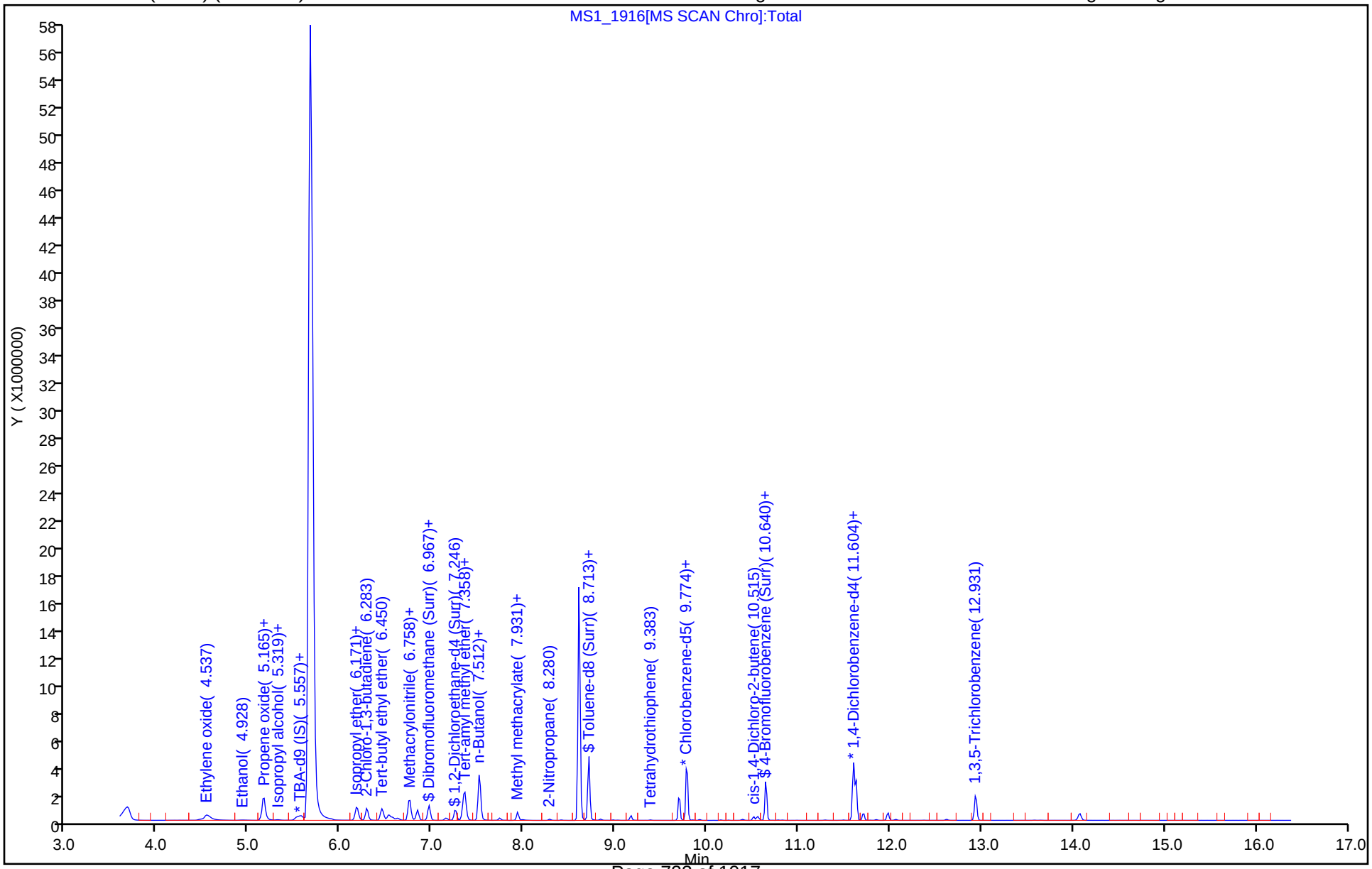
Report Date: 29-Jan-2019 17:54:44 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1916.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 28-Jan-2019 22:19:30 | Instrument ID: | VMS_MS1 | Operator ID: | nwangumaf |
| Lims ID: | 280-119359-A-1 MSD | | | Worklist Smp#: | 20 |
| Client ID: | GW0119-MW-041 | | | | |
| Purge Vol: | 20.000 mL | Dil. Factor: | 4000.0000 | ALS Bottle#: | 12 |
| Method: | AQ_VMS1_8260 | Limit Group: | MSV - 8260B Water and Solid | | |

Column: DB-624 (60.25) ( 0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\MS1_1916.D | | | | |
| Lims ID: | 280-119359-A-1 MSD | | | | |
| Client ID: | GW0119-MW-041 | | | | |
| Sample Type: | MSD | | | | |
| Inject. Date: | 28-Jan-2019 22:19:30 | ALS Bottle#: | 12 | Worklist Smp#: | 20 |
| Purge Vol: | 20.000 mL | Dil. Factor: | 4000.0000 | | |
| Sample Info: | 280-119359-A-1 MSD pH<2 4000x | | | | |
| Operator ID: | nwangumaf | Instrument ID: | VMS_MS1 | | |
| Method: | \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b\AQ_VMS1_8260.m | | | | |
| Limit Group: | MSV - 8260B Water and Solid | | | | |
| Last Update: | 29-Jan-2019 17:54:01 | Calib Date: | 18-Jan-2019 13:52:30 | | |
| Integrator: | RTE | ID Type: | Deconvolution ID | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b\MS1_1427.D | | | | |
| Column 1 : | DB-624 (60.25) ( 0.25 mm) | | Det: MS SCAN | | |
| Process Host: | CTX0327 | | | | |

First Level Reviewer: nwangumaf Date: 28-Jan-2019 23:43:44

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 5 Dibromofluoromethane (Surr) | 10.0 | 10.5 | 104.51 |
| $ 6 1,2-Dichloroethane-d4 (Surr) | 10.0 | 10.6 | 106.49 |
| $ 7 Toluene-d8 (Surr) | 10.0 | 10.3 | 102.54 |
| $ 8 4-Bromofluorobenzene (Surr) | 10.0 | 9.72 | 97.23 |

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: VMS_MS1 Start Date: 01/08/2019 08:17

Analysis Batch Number: 443512 End Date: 01/08/2019 18:21

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| BFB 280-443512/1 | | 01/08/2019 08:17 | 1 | MS1_1065.D | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/12 IC | | 01/08/2019 09:26 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/08/2019 09:26 | 1 | | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/13 IC | | 01/08/2019 09:46 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/08/2019 09:46 | 1 | | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/14 IC | | 01/08/2019 10:07 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/08/2019 10:07 | 1 | | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/15 IC | | 01/08/2019 10:28 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/08/2019 10:28 | 1 | | DB-624 (60.25) 0.25(mm) |
| ICIS 280-443512/16 | | 01/08/2019 10:48 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/08/2019 10:48 | 1 | | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/17 IC | | 01/08/2019 11:09 | 1 | | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/18 IC | | 01/08/2019 11:30 | 1 | | DB-624 (60.25) 0.25(mm) |
| ICV 280-443512/19 | | 01/08/2019 12:11 | 1 | | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/20 IC | | 01/08/2019 12:31 | 1 | MS1_1077.D | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/08/2019 12:31 | 1 | | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/21 IC | | 01/08/2019 12:52 | 1 | MS1_1078.D | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/08/2019 12:52 | 1 | | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/22 IC | | 01/08/2019 13:13 | 1 | MS1_1079.D | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/08/2019 13:13 | 1 | | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/23 IC | | 01/08/2019 13:33 | 1 | MS1_1080.D | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/08/2019 13:33 | 1 | | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/24 IC | | 01/08/2019 13:54 | 1 | MS1_1081.D | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/08/2019 13:54 | 1 | | DB-624 (60.25) 0.25(mm) |
| STD 280-443512/25 IC | | 01/08/2019 14:14 | 1 | MS1_1082.D | DB-624 (60.25) 0.25(mm) |
| ICV 280-443512/26 | | 01/08/2019 14:55 | 1 | MS1_1084.D | DB-624 (60.25) 0.25(mm) |
| 280-117879-A-1 MDLV | | 01/08/2019 15:16 | 1 | | DB-624 (60.25) 0.25(mm) |
| 280-117879-A-2 MDLV | | 01/08/2019 15:37 | 1 | | DB-624 (60.25) 0.25(mm) |
| 280-117879-A-3 MDLV | | 01/08/2019 15:57 | 1 | | DB-624 (60.25) 0.25(mm) |
| 280-117879-A-4 MDLV | | 01/08/2019 16:18 | 1 | | DB-624 (60.25) 0.25(mm) |
| 280-117879-A-5 MDLV | | 01/08/2019 16:38 | 1 | | DB-624 (60.25) 0.25(mm) |
| 280-117879-A-7 MDLV | | 01/08/2019 16:59 | 1 | | DB-624 (60.25) 0.25(mm) |
| 280-117879-A-8 MDLV | | 01/08/2019 17:19 | 1 | | DB-624 (60.25) 0.25(mm) |
| 280-117879-A-9 MDLV | | 01/08/2019 17:40 | 1 | | DB-624 (60.25) 0.25(mm) |
| 280-117879-A-10 MDLV | | 01/08/2019 18:00 | 1 | | DB-624 (60.25) 0.25(mm) |
| 280-117879-A-11 MDLV | | 01/08/2019 18:21 | 1 | | DB-624 (60.25) 0.25(mm) |

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: VMS_MS1 Start Date: 01/18/2019 09:52

Analysis Batch Number: 444687 End Date: 01/18/2019 14:33

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| BFB 280-444687/1 | | 01/18/2019 09:52 | 1 | MS1_1418.D | DB-624 (60.25) 0.25(mm) |
| STD 280-444687/12 IC | | 01/18/2019 11:48 | 1 | MS1_1421.D | DB-624 (60.25) 0.25(mm) |
| STD 280-444687/13 IC | | 01/18/2019 12:09 | 1 | MS1_1422.D | DB-624 (60.25) 0.25(mm) |
| STD 280-444687/14 IC | | 01/18/2019 12:29 | 1 | MS1_1423.D | DB-624 (60.25) 0.25(mm) |
| STD 280-444687/15 IC | | 01/18/2019 12:50 | 1 | MS1_1424.D | DB-624 (60.25) 0.25(mm) |
| ICIS 280-444687/16 | | 01/18/2019 13:10 | 1 | MS1_1425.D | DB-624 (60.25) 0.25(mm) |
| STD 280-444687/17 IC | | 01/18/2019 13:31 | 1 | MS1_1426.D | DB-624 (60.25) 0.25(mm) |
| STD 280-444687/18 IC | | 01/18/2019 13:52 | 1 | MS1_1427.D | DB-624 (60.25) 0.25(mm) |
| ICV 280-444687/19 | | 01/18/2019 14:33 | 1 | MS1_1429.D | DB-624 (60.25) 0.25(mm) |

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: VMS_MS1 Start Date: 01/28/2019 17:51

Analysis Batch Number: 445753 End Date: 01/29/2019 05:09

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| BFB 280-445753/1 | | 01/28/2019 17:51 | 1 | MS1_1904.D | DB-624 (60.25) 0.25(mm) |
| CCV 280-445753/2 | | 01/28/2019 18:23 | 1 | MS1_1905.D | DB-624 (60.25) 0.25(mm) |
| CCV 280-445753/3 | | 01/28/2019 18:48 | 1 | MS1_1906.D | DB-624 (60.25) 0.25(mm) |
| MB 280-445753/8 | | 01/28/2019 19:09 | 1 | MS1_1907.D | DB-624 (60.25) 0.25(mm) |
| LCS 280-445753/4 | | 01/28/2019 19:36 | 1 | MS1_1908.D | DB-624 (60.25) 0.25(mm) |
| LCSD 280-445753/5 | | 01/28/2019 19:56 | 1 | MS1_1909.D | DB-624 (60.25) 0.25(mm) |
| LCS 280-445753/6 | | 01/28/2019 20:16 | 1 | MS1_1910.D | DB-624 (60.25) 0.25(mm) |
| LCSD 280-445753/7 | | 01/28/2019 20:37 | 1 | MS1_1911.D | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/28/2019 20:57 | 4000 | | DB-624 (60.25) 0.25(mm) |
| 280-119359-C-1 MS | | 01/28/2019 21:18 | 4000 | MS1_1913.D | DB-624 (60.25) 0.25(mm) |
| 280-119359-A-1 MSD | | 01/28/2019 21:38 | 4000 | MS1_1914.D | DB-624 (60.25) 0.25(mm) |
| 280-119359-C-1 MS | | 01/28/2019 21:59 | 4000 | MS1_1915.D | DB-624 (60.25) 0.25(mm) |
| 280-119359-A-1 MSD | | 01/28/2019 22:19 | 4000 | MS1_1916.D | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/28/2019 22:40 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/28/2019 23:00 | 100000 | | DB-624 (60.25) 0.25(mm) |
| 160-32649-1 | | 01/28/2019 23:21 | 1 | MS1_1919.D | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/28/2019 23:41 | 50 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 00:02 | 500 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 00:22 | 10 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 00:43 | 100000 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 01:03 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 01:24 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 01:44 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 02:05 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 02:25 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 02:46 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 03:06 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 03:27 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 03:47 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 04:08 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 04:28 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 04:49 | 1 | | DB-624 (60.25) 0.25(mm) |
| ZZZZZ | | 01/29/2019 05:09 | 1 | | DB-624 (60.25) 0.25(mm) |

Sequence Name: C:\msdchem\1\sequence\012819pm.s
Comment:
Operator: nwangumaf
Data Path: C:\MSDCHEM\1\DATA\012819pm\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

MS1
17:51 - 05:09
445753

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

| Line | | | Sample Name/Misc Info | |
|---|---|---|---|---|
| 1) | Sample | 100 | MS1_1904 BFB | bfb |
| 2) | Sample | 1 | MS1_1905 8260 | CCV |
| 3) | Sample | 2 | MS1_1906 8260 | CCV |
| 4) | Sample | 3 | MS1_1907 8260 | MB |
| 5) | Sample | 4 | MS1_1908 8260 | LCS |
| 6) | Sample | 5 | MS1_1909 8260 | LCSD |
| 7) | Sample | 6 | MS1_1910 8260 | LCS s |
| 8) | Sample | 7 | MS1_1911 8260 | LCSD s |
| 9) | Sample | 8 | MS1_1912 8260 | 280-119359-B-1 pH<2 4000x |
| 10) | Sample | 9 | MS1_1913 8260 | 280-119359-C-1 MS pH<2 4000x |
| 11) | Sample | 10 | MS1_1914 8260 | 280-119359-A-1 MSD pH<2 4000x |
| 12) | Sample | 11 | MS1_1915 8260 | 280-119359-C-1 MS pH<2 4000x |
| 13) | Sample | 12 | MS1_1916 8260 | 280-119359-A-1 MSD pH<2 4000x |
| 14) | Sample | 13 | MS1_1917 8260 | BLK |
| 15) | Sample | 14 | MS1_1918 8260 | 280-119359-B-1 pH<2 100,000x |
| 16) | Sample | 15 | MS1_1919 8260 | 160-32649-A-1 pH<2 |
| 17) | Sample | 16 | MS1_1920 8260 | 280-119356-A-7 pH<2 50x |
| 18) | Sample | 17 | MS1_1921 8260 | 280-119356-A-7 pH<2 500x |
| 19) | Sample | 18 | MS1_1922 8260 | 280-119356-B-8 pH<2 10x |
| 20) | Sample | 19 | MS1_1923 8260 | 280-119359-B-1 pH<2 100,000x |
| 21) | Sample | 20 | MS1_1924 8260 | 280-119250-A-1 pH<2 |
| 22) | Sample | 21 | MS1_1925 8260 | 280-119250-C-2 pH<2 |
| 23) | Sample | 22 | MS1_1926 8260 | 280-119250-A-3 pH<2 |
| 24) | Sample | 23 | MS1_1927 8260 | 280-119250-A-4 pH<2 |
| 25) | Sample | 24 | MS1_1928 8260 | 280-119250-B-5 pH<2 |
| 26) | Sample | 25 | MS1_1929 8260 | 280-119250-K-6 pH<2 |
| 27) | Sample | 26 | MS1_1930 8260 | 280-119250-B-7 pH<2 |
| 28) | Sample | 27 | MS1_1931 8260 | 280-119334-C-1 pH=7! |
| 29) | Sample | 28 | MS1_1932 8260 | 280-119334-C-2 pH=7! |
| 30) | Sample | 29 | MS1_1933 8260 | 280-119334-D-3 pH=7! |
| 31) | Sample | 30 | MS1_1934 8260 | 280-119334-D-4 pH=7! |
| 32) | Sample | 31 | MS1_1935 8260 | 280-119334-B-5 pH=7! |
| 33) | Sample | 32 | MS1_1936 8260 | 280-119334-A-6 pH~~7~~ <2 |

FCA
01/29/19

# Preliminary Report

TestAmerica Laboratories
Qc Batch Report

Data Path: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b

| | | | |
|---|---|---|---|
| Worklist Name: | 012819pm | Worklist Num: | 78474 |
| Instrument: | VMS_MS1 | Method: | AQ_VMS1_8260 |
| Analysis Type: | VOA | Creator: | Nwanguma, Frankline C |
| Inj Volume: | 20 | Inj Vol Units: | mL |
| QC Batching: | Disabled | Limit Group Batching: | Disabled |

| QC Batch: 1 | MSV - 8260B Water and Solid<br>Raw Batch: 445753 |
|---|---|
| # 1 BFB | # 1 BFB |
| # 2 CCV | # 2 CCV |
| # 3 CCV | # 3 CCV |
| # 4 LCS | # 4 LCS |
| # 5 LCSD | # 5 LCSD |
| # 6 lcs | # 6 lcs |
| # 7 lcsd | # 7 lcsd |
| # 8 MB | # 8 MB |
| # 9 280-108595-A-1 | # 9 280-108595-A-1 |
| # 10 280-108595-A-2 | # 10 280-108595-A-2 |
| # 11 280-108595-A-3 | # 11 280-108595-A-3 |
| # 12 280-119359-B-1 | # 12 280-119359-B-1 |
| # 13 280-119359-C-1 MS | # 13 280-119359-C-1 MS |
| # 14 280-119359-A-1 MSD | # 14 280-119359-A-1 MSD |
| # 15 280-119359-C-1 MS | # 15 280-119359-C-1 MS |
| # 20 280-119359-A-1 MSD | # 20 280-119359-A-1 MSD |
| # 18 BLK | # 18 BLK |
| # 17 280-119359-B-1 | # 17 280-119359-B-1 |
| # 19 160-32649-A-1 | # 19 160-32649-A-1 |
| # 21 280-119356-A-7 | # 21 280-119356-A-7 |
| # 22 280-119356-A-7 | # 22 280-119356-A-7 |
| # 23 280-119356-B-8 | # 23 280-119356-B-8 |
| # 39 280-119359-B-1 | # 39 280-119359-B-1 |
| # 24 280-119250-A-1 | # 24 280-119250-A-1 |
| # 25 280-119250-C-2 | # 25 280-119250-C-2 |
| # 26 280-119250-A-3 | # 26 280-119250-A-3 |
| # 27 280-119250-A-4 | # 27 280-119250-A-4 |
| # 28 280-119250-B-5 | # 28 280-119250-B-5 |
| # 29 280-119250-K-6 | # 29 280-119250-K-6 |
| # 30 280-119250-B-7 | # 30 280-119250-B-7 |
| # 31 280-119334-C-1 | # 31 280-119334-C-1 |
| # 32 280-119334-C-2 | # 32 280-119334-C-2 |
| # 33 280-119334-D-3 | # 33 280-119334-D-3 |
| # 34 280-119334-D-4 | # 34 280-119334-D-4 |
| # 35 280-119334-B-5 | # 35 280-119334-B-5 |
| # 36 280-119334-A-6 | # 36 280-119334-A-6 |
| # 38 Samp 38 | # 38 Samp 38 |

FCN
01/29/19

TestAmerica Laboratories
Worklist Report

JCO
01/29/19

Worklist Name: 012819pm Worklist Number: 78474
Instrument Name: VMS_MS1 Chrom Method: AQ_VMS1_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\chromna\Denver\ChromData\VMS_MS1\20190128-78474.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_MS1
Run Reagent: MV-568718-D_00014 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00108 Amount Added: 0.800, Units: uL

| Worklist ID | Lims ID | Sample Reagents | Smp Type | Fract | Initial Vol/Wt | Vol/Wt Units | Dil Fact |
|---|---|---|---|---|---|---|---|
| 280-0078474-001 | # 1 BFB | MV-BFB_00027 | BFB | voaWater | 1.000 | uL | 1.000 |
| 280-0078474-002 | # 2 CCV | MV-MegaMainA_00009<br>MV-Gas A_00006 | CCV | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-003 | # 3 CCV | MV-568718-D_00014<br>MV-Supp A_00033 | CCV | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-004 | # 4 LCS | MV-MegaMain B_00007<br>MV-Gas B_00007 | LCS | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-005 | # 5 LCSD | MV-MegaMain B_00007<br>MV-Gas B_00007 | LCSD | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-006 | # 6 lcs | MV-Supp B_00023 | LCS | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-007 | # 7 lcsd | MV-Supp B_00023 | LCSD | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-008 | # 8 MB | | MB | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-009 | # 9 280-108595-A-1 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-010 | #10 280-108595-A-2 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-011 | #11 280-108595-A-3 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-012 | #12 280-119359-B-1 | | Client | voaWater | 20.00 | mL | 4000.0 |
| 280-0078474-013 | #13 280-119359-C-1 MS | MV-MegaMain B_00007<br>MV-Gas B_00007 | MS | voaWater | 20.00 | mL | 4000.0 |

| Worklist ID | Lims ID | Sample Reagents | Smp Type | Fract | Initial Vol/Wt | Vol/Wt Units | Dil Fact |
|---|---|---|---|---|---|---|---|
| 280-0078474-014 | #14 280-119359-A-1 MSD | MV-MegaMain B_00007<br>MV-Gas B_00007 | MSD | voaWater | 20.00 | mL | 4000.0 |
| 280-0078474-015 | #15 280-119359-C-1 MS | MV-Supp B_00023 | MS | voaWater | 20.00 | mL | 4000.0 |
| 280-0078474-020 | #20 280-119359-A-1 MSD | MV-Supp B_00023 | MSD | voaWater | 20.00 | mL | 4000.0 |
| 280-0078474-018 | #18 BLK | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-017 | #17 280-119359-B-1 | | Client | voaWater | 20.00 | mL | 100000 |
| 280-0078474-019 | #19 160-32649-A-1 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-021 | #21 280-119356-A-7 | | Client | voaWater | 20.00 | mL | 50.00 |
| 280-0078474-022 | #22 280-119356-A-7 | | Client | voaWater | 20.00 | mL | 500.0 |
| 280-0078474-023 | #23 280-119356-B-8 | | Client | voaWater | 20.00 | mL | 10.00 |
| 280-0078474-039 | #39 280-119359-B-1 | | Client | voaWater | 20.00 | mL | 100000 |
| 280-0078474-024 | #24 280-119250-A-1 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-025 | #25 280-119250-C-2 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-026 | #26 280-119250-A-3 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-027 | #27 280-119250-A-4 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-028 | #28 280-119250-B-5 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-029 | #29 280-119250-K-6 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-030 | #30 280-119250-B-7 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-031 | #31 280-119334-C-1 | | Client | voaWater | 20.00 | mL | 1.000 |

| Worklist ID | Lims ID | Sample Reagents | Smp Type | Fract | Initial Vol/Wt | Vol/Wt Units | Dil Fact |
|---|---|---|---|---|---|---|---|
| 280-0078474-032 | #32 280-119334-C-2 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-033 | #33 280-119334-D-3 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-034 | #34 280-119334-D-4 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-035 | #35 280-119334-B-5 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-036 | #36 280-119334-A-6 | | Client | voaWater | 20.00 | mL | 1.000 |
| 280-0078474-038 | #38 Samp 38 | | Client | voaWater | 20.00 | mL | 1.000 |

# Sample Request Form: 53180



den_msvoa_totalbacklog 1/29/2019 6:03:45 PM Assigned to:Nwanguma, Frankline C

| Sample | Client Sample ID | Container | Method | Analytical Method | Hold Time | Due | PM | State Code | Storage | Hazard Level |
|---|---|---|---|---|---|---|---|---|---|---|
| **280-119334-3** | DB-33 | 20 | 8260B | 8260B 7! | 01/31 23:59 | 01/29/19 | EMH | LA | MS-Strge & Mtls-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119334-4** | PROCESS #1 | 20 | 8260B | 8260B 7! | 01/31 23:59 | 01/29/19 | EMH | LA | Mtls-Strge & MS-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119334-5** | PROCESS #2 | 20 | 8260B | 8260B 7! | 01/31 23:59 | 01/29/19 | EMH | LA | Mtls-Strge & MS-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119334-6** | TRIP BLANK-#17-1 | 20 | 8260B | 8260B <2 | 01/31 23:59 | 01/29/19 | EMH | LA | MS-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119359-1** | GW0119-MW-041 | 0.005/100,000x | 8260B | 8260B <2 | 01/31 23:59 | 01/25/19 | MAJ | TX | MS-Strge | Unconfirmed |
| M DuPont QAS_TRRP_DIL3_All targets must be spiked_LCS/LCSD required_8260 Supp Spk | | | | | | | | | | |
| M Late 8260B 1/28/19 | | | | | | | | | | |
| **280-119359-1MS** | GW0119-MW-041 | 0.005/100,000x | 8260B | 8260B <2 | 01/31 23:59 | 01/25/19 | MAJ | TX | MS-Strge | Unconfirmed |
| M DuPont QAS_TRRP_DIL3_All targets must be spiked_LCS/LCSD required_8260 Supp Spk | | | | | | | | | | |
| **280-119359-1MSD** | GW0119-MW-041 | 0.005 | 8260B | 8260B <2 | 01/31 23:59 | 01/25/19 | MAJ | TX | MS-Strge | Unconfirmed |
| M DuPont QAS_TRRP_DIL3_All targets must be spiked_LCS/LCSD required_8260 Supp Spk | | | | | | | | | | |

# Sample Request Form: 53180



FCN 01/29/19

den_msvoa_totalbacklog 1/29/2019 6:03:45 PM Assigned to:Nwanguma, Frankline C

| Sample | Client Sample ID | Container Vol/mL | Method | Analytical Method pH | Hold Time | Due | PM | State Code | Storage | Hazard Level |
|---|---|---|---|---|---|---|---|---|---|---|
| **160-32649-1** | CRC-MW-1-01151 9 | 20 | 8260B | 8260B <2 | 01/29 23:59 | 02/01/19 | CYLS | IL | MS-Strge & 86 | Unconfirmed |
| **280-119250-1** | 16A | 20 | 8260B | 8260B <2 | 01/30 23:59 | 02/04/19 | EMH | LA | MS-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119250-2** | 39A | 20 | 8260B | 8260B <2 | 01/30 23:59 | 02/04/19 | EMH | LA | MS-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119250-3** | 39B-2 | 20 | 8260B | 8260B <2 | 01/30 23:59 | 02/04/19 | EMH | LA | MS-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119250-4** | 40A | 20 | 8260B | 8260B <2 | 01/30 23:59 | 02/04/19 | EMH | LA | MS-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119250-5** | 40B-2 | 20 | 8260B | 8260B <2 | 01/30 23:59 | 02/04/19 | EMH | LA | MS-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119250-6** | 5C | 20 | 8260B | 8260B <2 | 01/30 23:59 | 02/04/19 | EMH | LA | Mtls-Strge & 88 & MS-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119250-7** | TRIP BLANK-#16-1 | 20 | 8260B | 8260B <2 7! | 01/30 23:59 | 02/04/19 | EMH | LA | MS-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119334-1** | 11B | 20 | 8260B | 8260B 7! | 01/31 23:59 | 01/29/19 | EMH | LA | MS-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |
| **280-119334-2** | 11C | 20 | 8260B | 8260B 7! | 01/31 23:59 | 01/29/19 | EMH | LA | MS-Strge & Mtls-Strge | Unconfirmed |
| M DIL3;No reanalyze outside of HT | | | | | | | | | | |

Sequence Name: C:\msdchem\1\sequence\010819am.s
Comment:
Operator: wickhamt
Data Path: C:\MSDCHEM\1\DATA\010819am\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Test America Denver
Instrument: MS1
OV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 08:17 - 18:21
Tune Data: 443512

1-9-19 Tan

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

| Line | | | Sample Name/Misc Info | | |
|---|---|---|---|---|---|
| 1) | Sample | 100 | MS1_1064 | BFB | BFB |
| 2) | Sample | 100 | MS1_1065 | BFB | BFB 08:17 |
| 3) | Sample | 1 | MS1_1066 | 8260 | blank |
| 4) | Sample | 2 | MS1_1067 | 8260 | blank |
| 5) | Sample | 3 | MS1_1068 | 8260 | std |
| 6) | Sample | 4 | MS1_1069 | 8260 | std |
| 7) | Sample | 5 | MS1_1070 | 8260 | std |
| 8) | Sample | 6 | MS1_1071 | 8260 | std |
| 9) | Sample | 7 | MS1_1072 | 8260 | icis |
| 10) | Sample | 8 | MS1_1073 | 8260 | std |
| 11) | Sample | 9 | MS1_1074 | 8260 | std |
| 12) | Sample | 10 | MS1_1075 | 8260 | blank |
| 13) | Sample | 11 | MS1_1076 | 8260 | icv |
| 14) | Sample | 12 | MS1_1077 | 8260 | std |
| 15) | Sample | 13 | MS1_1078 | 8260 | std |
| 16) | Sample | 14 | MS1_1079 | 8260 | std |
| 17) | Sample | 15 | MS1_1080 | 8260 | std |
| 18) | Sample | 16 | MS1_1081 | 8260 | std |
| 19) | Sample | 17 | MS1_1082 | 8260 | std |
| 20) | Sample | 18 | MS1_1083 | 8260 | blank |
| 21) | Sample | 19 | MS1_1084 | 8260 | icv |
| 22) | Sample | 20 | MS1_1085 | 8260 | mdlv m/g/s 1 |
| 23) | Sample | 21 | MS1_1086 | 8260 | mdlv m/g/s 2 |
| 24) | Sample | 22 | MS1_1087 | 8260 | mdlv m/g/s 3 |
| 25) | Sample | 23 | MS1_1088 | 8260 | mdlv m/g/s 4 |
| 26) | Sample | 24 | MS1_1089 | 8260 | mdlv m/g/s 5 |
| 27) | Sample | 25 | MS1_1090 | 8260 | mdlv supp 1 |
| 28) | Sample | 26 | MS1_1091 | 8260 | mdlv supp 2 |
| 29) | Sample | 27 | MS1_1092 | 8260 | mdlv supp 3 |
| 30) | Sample | 28 | MS1_1093 | 8260 | mdlv supp 4 |
| 31) | Sample | 29 | MS1_1094 | 8260 | mdlv supp 5 18:21 |
| 32) | Sample | 30 | MS1_1095 | 8260 | primer |

MAIN/GAS/SURR ICAL
Calib ID: 34748
WL: 77845
ICIS: 16
ICV: 19
ICV good for Q4/Q5 except:
2-clev -21.0%
cyclohexanone -28.9%

SUPP ICAL
Calib ID: 34749
WL: 77845
ICV: 26
ICV good for Q4/Q5 except
2-nitropropane -28.6%

1st level: Tan 1-9-19

2nd level: AMT 1/11/19

TestAmerica Laboratories
Worklist Report

Worklist Name: 010819am
Instrument Name: VMS_MS1
Purge Volume: 20.00
Analysis Type: VOA
Batch Directory: \\chromna\Denver\ChromData\VMS_MS1\20190108-77845.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_MS1
Run Reagent: MV-568718-D_00014
Run Reagent: MV-ARCH SS A_00108

Worklist Number: 77845
Chrom Method: AQ_VMS1_8260
Units: mL
Amount Added: 1.000, Units: uL
Amount Added: 0.800, Units: uL

| Worklist ID | Lims ID | Sample Reagents | Smp Type | Cal Lvl | Fract | Initial Vol/Wt | Vol/Wt Units | Dil Fact |
|---|---|---|---|---|---|---|---|---|
| 280-0077845-001 | # 1 BFB | MV-BFB_00027 | BFB | | voaWater | 1.000 | uL | 1.000 |
| 280-0077845-002 | # 2 CCV | MV-MegaMainA_00009<br>MV-Gas A_00003 | CCV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-003 | # 3 CCV | MV-568718-D_00014<br>MV-Supp A_00033 | CCV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-004 | # 4 LCS | MV-Gas B_00004<br>MV-MegaMain B_00007 | LCS | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-005 | # 5 LCSD | MV-Gas B_00004<br>MV-MegaMain B_00007 | LCSD | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-006 | # 6 lcs | MV-Supp B_00023 | LCS | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-007 | # 7 lcsd | MV-Supp B_00023 | LCSD | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-008 | # 8 MB | | MB | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-009 | # 9 280-108595-A-1 | | Client | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-010 | #10 280-108595-A-2 | | Client | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-011 | #11 280-108595-A-3 | | Client | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-012 | #12 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | IC | 1 | voaWater | 20.00 | mL | 1.000 |

| Worklist ID | Lims ID | Sample Reagents | Smp Type | Cal Lvl | Fract | Initial Vol/Wt | Vol/Wt Units | Dil Fact |
|---|---|---|---|---|---|---|---|---|
| 280-0077845-013 | #13 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | IC | 2 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-014 | #14 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | IC | 3 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-015 | #15 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | IC | 4 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-016 | #16 icis | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | ICIS | 5 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-017 | #17 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | IC | 6 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-018 | #18 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | IC | 7 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-019 | #19 icv | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMain B_00007<br>MV-Gas B_00004 | ICV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-020 | #20 std | MV-568718-D_00014<br>MV-Supp A_00033 | IC | 2 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-021 | #21 std | MV-568718-D_00014<br>MV-Supp A_00033 | IC | 3 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-022 | #22 std | MV-568718-D_00014<br>MV-Supp A_00033 | IC | 4 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-023 | #23 std | MV-568718-D_00014<br>MV-Supp A_00033 | IC | 5 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-024 | #24 std | MV-568718-D_00014<br>MV-Supp A_00033 | IC | 6 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-025 | #25 std | MV-568718-D_00014<br>MV-Supp A_00033 | IC | 7 | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-026 | #26 icv | MV-568718-D_00014<br>MV-Supp B_00023 | ICV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-027 | #27 mdlv | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | MDLV | | voaWater | 20.00 | mL | 1.000 |

| Worklist ID | Lims ID | Sample Reagents | Smp Type | Cal Lvl | Fract | Initial Vol/Wt | Vol/Wt Units | Dil Fact |
|---|---|---|---|---|---|---|---|---|
| 280-0077845-028 | #28 mdlv | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | MDLV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-029 | #29 mdlv | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | MDLV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-030 | #30 mdlv | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | MDLV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-031 | #31 mdlv | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00003 | MDLV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-032 | #32 mdlv | MV-568718-D_00014<br>MV-Supp A_00033 | MDLV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-033 | #33 mdlv | MV-568718-D_00014<br>MV-Supp A_00033 | MDLV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-034 | #34 mdlv | MV-568718-D_00014<br>MV-Supp A_00033 | MDLV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-035 | #35 mdlv | MV-568718-D_00014<br>MV-Supp A_00033 | MDLV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-036 | #36 mdlv | MV-568718-D_00014<br>MV-Supp A_00033 | MDLV | | voaWater | 20.00 | mL | 1.000 |
| 280-0077845-037 | #37 Samp 37 | | Client | | voaWater | 20.00 | mL | 1.000 |

Sequence Name: C:\msdchem\1\sequence\011819am.s
Comment:
Operator: wickhamt
Data Path: C:\MSDCHEM\1\DATA\011819am\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

| Line | | Sample | Name/Misc Info | |
|---|---|---|---|---|
| 1) | Sample | 1 | MS1_1415 8260 | primer |
| 2) | Sample | 2 | MS1_1416 8260 | ccv test |
| 3) | Sample | 100 | MS1_1417 BFB | bfb |
| 4) | Sample | 100 | MS1_1418 BFB | bfb |
| 5) | Sample | 1 | MS1_1419 8260 | blank |
| 6) | Sample | 2 | MS1_1420 8260 | blank |
| 7) | Sample | 3 | MS1_1421 8260 | std |
| 8) | Sample | 4 | MS1_1422 8260 | std |
| 9) | Sample | 5 | MS1_1423 8260 | std |
| 10) | Sample | 6 | MS1_1424 8260 | std |
| 11) | Sample | 7 | MS1_1425 8260 | icis |
| 12) | Sample | 8 | MS1_1426 8260 | std |
| 13) | Sample | 9 | MS1_1427 8260 | std |
| 14) | Sample | 10 | MS1_1428 8260 | blank |
| 15) | Sample | 11 | MS1_1429 8260 | icv |

Test America Denver
Instrument: VMS MS1
OV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 0952 / 1433
Lims Batch: 444687
WL#7816973
5a 1/22/19

- Main + Gases + Surr ICAL
- ICV is ≤20% for All except Cyclohexanone (-21.3%)

JG 1/22/19

RSN 1/22/19

Last Modified: Tue Jan 22 17:28:49 2019 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 011819am Worklist Number: 78173
Instrument Name: VMS_MS1 Chrom Method: AQ_VMS1_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_MS1
Run Reagent: MV-568718-D_00014 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00108 Amount Added: 0.800, Units: uL

| Worklist ID | Lims ID | Sample Reagents | Smp Type | Cal Lvl | Fract | Initial Vol/Wt | Vol/Wt Units | Dil Fact |
|---|---|---|---|---|---|---|---|---|
| 280-0078173-001 | # 1 BFB | MV-BFB_00027 | BFB | | voaWater | 1.000 | uL | 1.000 |
| 280-0078173-002 | # 2 CCV | MV-MegaMainA_00009 | CCV | | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-003 | # 3 CCV | MV-568718-D_00014<br>MV-Supp A_00033 | CCV | | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-004 | # 4 LCS | MV-MegaMain B_00007<br>MV-Gas B_00005 | LCS | | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-005 | # 5 LCSD | MV-MegaMain B_00007<br>MV-Gas B_00005 | LCSD | | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-006 | # 6 lcs | MV-Supp B_00023 | LCS | | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-007 | # 7 lcsd | MV-Supp B_00023 | LCSD | | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-008 | # 8 MB | | MB | | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-009 | # 9 280-108595-A-1 | | Client | | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-010 | #10 280-108595-A-2 | | Client | | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-011 | #11 280-108595-A-3 | | Client | | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-012 | #12 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00005 | IC | 1 | voaWater | 20.00 | mL | 1.000 |

| Worklist ID | Lims ID | Sample Reagents | Smp Type | Cal Lvl | Fract | Initial Vol/Wt | Vol/Wt Units | Dil Fact |
|---|---|---|---|---|---|---|---|---|
| 280-0078173-013 | #13 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00005 | IC | 2 | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-014 | #14 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00005 | IC | 3 | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-015 | #15 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00005 | IC | 4 | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-016 | #16 icis | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00005 | ICIS | 5 | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-017 | #17 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00005 | IC | 6 | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-018 | #18 std | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMainA_00009<br>MV-Gas A_00005 | IC | 7 | voaWater | 20.00 | mL | 1.000 |
| 280-0078173-019 | #19 icv | MV-568718-D_00014<br>MV-ARCH SS A_00108<br>MV-MegaMain B_00007<br>MV-Gas B_00006 | ICV | | voaWater | 20.00 | mL | 1.000 |

# Preliminary Report

TestAmerica Laboratories
Qc Batch Report

Data Path: \\chromna\Denver\ChromData\VMS_MS1\20190118-78173.b

| | | | |
|---|---|---|---|
| Worklist Name: | 011819am | Worklist Num: | 78173 |
| Instrument: | VMS_MS1 | Method: | AQ_VMS1_8260 |
| Analysis Type: | VOA | Creator: | Wickham, Tom A |
| Inj Volume: | 20 | Inj Vol Units: | mL |

QC Batching: Disabled Limit Group Batching: Disabled

| QC Batch: 1 | MSV - 8260B Water and Solid<br>Raw Batch: 444687 |
|---|---|
| # 1 BFB | # 1 BFB |
| # 2 CCV | # 2 CCV |
| # 3 CCV | # 3 CCV |
| # 4 LCS | # 4 LCS |
| # 5 LCSD | # 5 LCSD |
| # 6 lcs | # 6 lcs |
| # 7 lcsd | # 7 lcsd |
| # 8 MB | # 8 MB |
| # 9 280-108595-A-1 | # 9 280-108595-A-1 |
| # 10 280-108595-A-2 | # 10 280-108595-A-2 |
| # 11 280-108595-A-3 | # 11 280-108595-A-3 |
| # 12 std | # 12 std |
| # 13 std | # 13 std |
| # 14 std | # 14 std |
| # 15 std | # 15 std |
| # 16 icis | # 16 icis |
| # 17 std | # 17 std |
| # 18 std | # 18 std |
| # 19 icv | # 19 icv |

# GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Batch Number: 443512  Batch Start Date: 01/08/19 08:17  Batch Analyst: Wickham, Tom A

Batch Method: 8260B  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | MV-568718-D 00014 | MV-BFB 00027 | MV-Supp A 00033 | MV-Supp B 00023 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 280-443512/1 | | 8260B | | 1 uL | 1 uL | | 1 uL | | |
| STD 280-443512/20 IC | | 8260B | | 20 mL | 20 mL | 1 uL | | 0.4 uL | |
| STD 280-443512/21 IC | | 8260B | | 20 mL | 20 mL | 1 uL | | 1 uL | |
| STD 280-443512/22 IC | | 8260B | | 20 mL | 20 mL | 1 uL | | 2 uL | |
| STD 280-443512/23 IC | | 8260B | | 20 mL | 20 mL | 1 uL | | 4 uL | |
| STD 280-443512/24 IC | | 8260B | | 20 mL | 20 mL | 1 uL | | 10 uL | |
| STD 280-443512/25 IC | | 8260B | | 20 mL | 20 mL | 1 uL | | 24 uL | |
| ICV 280-443512/26 | | 8260B | | 20 mL | 20 mL | 1 uL | | | 4 uL |

| Batch Notes | |
|---|---|
| | |

| Basis | Basis Description |
|---|---|
| | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Batch Number: 444687  Batch Start Date: 01/18/19 09:52  Batch Analyst: Ornelas, Gabriel

Batch Method: 8260B  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | MV-568718-D 00014 | MV-ARCH SS A 00108 | MV-BFB 00027 | MV-Gas A 00005 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 280-444687/1 | | 8260B | | 1 uL | 1 uL | | | 1 uL | |
| STD 280-444687/12 IC | | 8260B | | 20 mL | 20 mL | 1 uL | 0.04 uL | | 0.2 uL |
| STD 280-444687/13 IC | | 8260B | | 20 mL | 20 mL | 1 uL | 0.08 uL | | 0.4 uL |
| STD 280-444687/14 IC | | 8260B | | 20 mL | 20 mL | 1 uL | 0.16 uL | | 1 uL |
| STD 280-444687/15 IC | | 8260B | | 20 mL | 20 mL | 1 uL | 0.4 uL | | 2 uL |
| ICIS 280-444687/16 | | 8260B | | 20 mL | 20 mL | 1 uL | 0.8 uL | | 4 uL |
| STD 280-444687/17 IC | | 8260B | | 20 mL | 20 mL | 1 uL | 2.4 uL | | 10 uL |
| STD 280-444687/18 IC | | 8260B | | 20 mL | 20 mL | 1 uL | 4.8 uL | | 24 uL |
| ICV 280-444687/19 | | 8260B | | 20 mL | 20 mL | 1 uL | 0.8 uL | | |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | MV-Gas B 00006 | MV-MegaMain B 00007 | MV-MegaMainA 00009 | | | |
|---|---|---|---|---|---|---|---|---|---|
| BFB 280-444687/1 | | 8260B | | | | | | | |
| STD 280-444687/12 IC | | 8260B | | | | 0.2 uL | | | |
| STD 280-444687/13 IC | | 8260B | | | | 0.4 uL | | | |
| STD 280-444687/14 IC | | 8260B | | | | 1 uL | | | |
| STD 280-444687/15 IC | | 8260B | | | | 2 uL | | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Batch Number: 444687  Batch Start Date: 01/18/19 09:52  Batch Analyst: Ornelas, Gabriel

Batch Method: 8260B  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | MV-Gas B 00006 | MV-MegaMain B 00007 | MV-MegaMainA 00009 | | | |
|---|---|---|---|---|---|---|---|---|---|
| ICIS 280-444687/16 | | 8260B | | | | 4 uL | | | |
| STD 280-444687/17 IC | | 8260B | | | | 10 uL | | | |
| STD 280-444687/18 IC | | 8260B | | | | 24 uL | | | |
| ICV 280-444687/19 | | 8260B | | 4 uL | 4 uL | | | | |

| Batch Notes | |
|---|---|
| | |

| Basis | Basis Description |
|---|---|
| | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Batch Number: 445753  Batch Start Date: 01/28/19 17:51  Batch Analyst: Nwanguma, Frankline C

Batch Method: 8260B  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | MV-568718-D 00014 | MV-ARCH SS A 00108 | MV-BFB 00027 | MV-Gas A 00006 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 280-445753/1 | | 8260B | | 1 uL | 1 uL | | | 1 uL | |
| CCV 280-445753/2 | | 8260B | | 20 mL | 20 mL | 1 uL | 0.8 uL | | 4 uL |
| CCV 280-445753/3 | | 8260B | | 20 mL | 20 mL | 1 uL | | | |
| LCS 280-445753/4 | | 8260B | | 20 mL | 20 mL | 1 uL | 0.8 uL | | |
| LCSD 280-445753/5 | | 8260B | | 20 mL | 20 mL | 1 uL | 0.8 uL | | |
| LCS 280-445753/6 | | 8260B | | 20 mL | 20 mL | 1 uL | 0.8 uL | | |
| LCSD 280-445753/7 | | 8260B | | 20 mL | 20 mL | 1 uL | 0.8 uL | | |
| MB 280-445753/8 | | 8260B | | 20 mL | 20 mL | 1 uL | 0.8 uL | | |
| 280-119359-C-1 MS | GW0119-MW-041 | 8260B | T | 20 mL | 20 mL | 1 uL | 0.8 uL | | |
| 280-119359-A-1 MSD | GW0119-MW-041 | 8260B | T | 20 mL | 20 mL | 1 uL | 0.8 uL | | |
| 280-119359-C-1 MS | GW0119-MW-041 | 8260B | T | 20 mL | 20 mL | 1 uL | 0.8 uL | | |
| 160-32649-A-1 | CRC-MW-1-011519 | 8260B | T | 20 mL | 20 mL | 1 uL | 0.8 uL | | |
| 280-119359-A-1 MSD | GW0119-MW-041 | 8260B | T | 20 mL | 20 mL | 1 uL | 0.8 uL | | |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | MV-Gas B 00007 | MV-MegaMain B 00007 | MV-MegaMainA 00009 | MV-Supp A 00033 | MV-Supp B 00023 | |
|---|---|---|---|---|---|---|---|---|---|
| BFB 280-445753/1 | | 8260B | | | | | | | |
| CCV 280-445753/2 | | 8260B | | | | 4 uL | | | |
| CCV 280-445753/3 | | 8260B | | | | | 4 uL | | |
| LCS 280-445753/4 | | 8260B | | 2 uL | 2 uL | | | | |
| LCSD 280-445753/5 | | 8260B | | 2 uL | 2 uL | | | | |
| LCS 280-445753/6 | | 8260B | | | | | | 2 uL | |
| LCSD 280-445753/7 | | 8260B | | | | | | 2 uL | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Batch Number: 445753  Batch Start Date: 01/28/19 17:51  Batch Analyst: Nwanguma, Frankline C

Batch Method: 8260B  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | MV-Gas B 00007 | MV-MegaMain B 00007 | MV-MegaMainA 00009 | MV-Supp A 00033 | MV-Supp B 00023 | |
|---|---|---|---|---|---|---|---|---|---|
| MB 280-445753/8 | | 8260B | | | | | | | |
| 280-119359-C-1 MS | GW0119-MW-041 | 8260B | T | 2 uL | 2 uL | | | | |
| 280-119359-A-1 MSD | GW0119-MW-041 | 8260B | T | 2 uL | 2 uL | | | | |
| 280-119359-C-1 MS | GW0119-MW-041 | 8260B | T | | | | | 2 uL | |
| 160-32649-A-1 | CRC-MW-1-011519 | 8260B | T | | | | | | |
| 280-119359-A-1 MSD | GW0119-MW-041 | 8260B | T | | | | | 2 uL | |

| Batch Notes | |
|---|---|
| | |

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Method 8270D

## Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): Rxi-5Sil MS  ID: 0.25(mm)

| Client Sample ID | Lab Sample ID | 2FP # | PHL # | NBZ # | FBP # | TBP # | TPHL # |
|---|---|---|---|---|---|---|---|
| CRC-MW-1-011519 | 160-32649-1 | 49 | 34 | 67 | 65 | 77 | 74 |
| | MB 280-444835/1-A | 44 | 30 | 59 | 56 | 73 | 81 |
| | LCS 280-444835/2-A | 42 | 26 | 82 | 80 | 86 | 82 |
| | LCSD 280-444835/3-A | 54 | 38 | 75 | 74 | 84 | 82 |

| | QC LIMITS |
|---|---|
| 2FP = 2-Fluorophenol (Surr) | 17-71 |
| PHL = Phenol-d5 (Surr) | 10-52 |
| NBZ = Nitrobenzene-d5 (Surr) | 45-113 |
| FBP = 2-Fluorobiphenyl | 47-119 |
| TBP = 2,4,6-Tribromophenol (Surr) | 52-123 |
| TPHL = Terphenyl-d14 (Surr) | 50-123 |

# Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: D31290.D

Lab ID: LCS 280-444835/2-A Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| 1,1'-Biphenyl | 80.0 | 65.2 | 81 | 53-116 | |
| 1,2,4,5-Tetrachlorobenzene | 80.0 | 67.4 | 84 | 52-110 | |
| 1,2,4-Trichlorobenzene | 80.0 | 62.7 | 78 | 47-103 | |
| 1,2-Dichlorobenzene | 80.0 | 56.8 | 71 | 44-103 | |
| 1,2-Diphenylhydrazine(as Azobenzene) | 80.9 | 67.5 | 83 | 59-116 | |
| 1,3-Dichlorobenzene | 80.0 | 56.1 | 70 | 42-100 | |
| 1,3-Dinitrobenzene | 80.0 | 69.6 | 87 | 66-124 | |
| 1,4-Dichlorobenzene | 80.0 | 56.9 | 71 | 43-101 | |
| 1,4-Dioxane | 80.0 | 31.8 | 40 | 20-63 | |
| 1-Methylnaphthalene | 80.0 | 70.4 | 88 | 57-108 | |
| 2,3,4,6-Tetrachlorophenol | 80.0 | 69.3 | 87 | 53-129 | |
| 2,4,5-Trichlorophenol | 80.0 | 67.2 | 84 | 58-121 | |
| 2,4,6-Trichlorophenol | 80.0 | 70.1 | 88 | 52-132 | |
| 2,4-Dichlorophenol | 80.0 | 68.8 | 86 | 60-108 | |
| 2,4-Dimethylphenol | 80.0 | 66.7 | 83 | 54-105 | |
| 2,4-Dinitrophenol | 160 | 126 | 79 | 38-125 | |
| 2,4-Dinitrotoluene | 80.0 | 68.9 | 86 | 63-124 | |
| 2,6-Dichlorophenol | 80.0 | 69.6 | 87 | 56-114 | |
| 2,6-Dinitrotoluene | 80.0 | 68.8 | 86 | 64-123 | |
| 2-Chloronaphthalene | 80.0 | 63.9 | 80 | 52-116 | |
| 2-Chlorophenol | 80.0 | 58.5 | 73 | 50-105 | |
| 2-Methylnaphthalene | 80.0 | 68.6 | 86 | 55-107 | |
| 2-Methylphenol | 80.0 | 54.1 | 68 | 43-94 | |
| 2-Nitroaniline | 80.0 | 65.3 | 82 | 59-121 | |
| 2-Nitrophenol | 80.0 | 66.7 | 83 | 58-110 | |
| 3 & 4 Methylphenol | 80.0 | 49.8 | 62 | 34-88 | |
| 3,3'-Dichlorobenzidine | 160 | 148 | 93 | 38-118 | |
| 3-Nitroaniline | 80.0 | 55.7 | 70 | 40-108 | |
| 4,6-Dinitro-2-methylphenol | 160 | 167 | 104 | 48-126 | |
| 4-Bromophenyl phenyl ether | 80.0 | 72.8 | 91 | 60-115 | |
| 4-Chloro-3-methylphenol | 80.0 | 69.5 | 87 | 63-107 | |
| 4-Chloroaniline | 80.0 | 60.6 | 76 | 41-93 | |
| 4-Chlorophenyl phenyl ether | 80.0 | 66.5 | 83 | 57-120 | |
| 4-Methylphenol | 80.0 | 49.8 | 62 | 34-88 | |
| 4-Nitroaniline | 80.0 | 65.6 | 82 | 55-123 | |
| 4-Nitrophenol | 160 | 52.3 | 33 | 15-60 | |
| Acenaphthene | 80.0 | 66.1 | 83 | 52-122 | |
| Acenaphthylene | 80.0 | 65.3 | 82 | 58-112 | |
| Acetophenone | 80.0 | 64.3 | 80 | 58-108 | |
| Aniline | 80.0 | 51.2 | 64 | 29-87 | |
| Anthracene | 80.0 | 75.1 | 94 | 62-113 | |

# Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: D31290.D

Lab ID: LCS 280-444835/2-A Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| Azobenzene | 80.0 | 66.7 | 83 | 59-115 | |
| Benzaldehyde | 80.0 | 38.2 | 48 | 31-91 | |
| Benzidine | 160 | 64.7 J | 40 | 5-82 | |
| Benzo[a]anthracene | 80.0 | 68.1 | 85 | 61-115 | |
| Benzo[a]pyrene | 80.0 | 74.7 | 93 | 61-114 | |
| Benzo[b]fluoranthene | 80.0 | 75.4 | 94 | 61-117 | |
| Benzo[g,h,i]perylene | 80.0 | 75.4 | 94 | 67-111 | |
| Benzo[k]fluoranthene | 80.0 | 75.7 | 95 | 69-119 | |
| Benzoic acid | 80.0 | 20.9 J | 26 | 10-54 | |
| Benzyl alcohol | 80.0 | 52.5 | 66 | 40-91 | |
| bis (2-chloroisopropyl) ether | 80.0 | 60.7 | 76 | 49-114 | |
| Bis(2-chloroethoxy)methane | 80.0 | 67.8 | 85 | 61-107 | |
| Bis(2-chloroethyl)ether | 80.0 | 64.9 | 81 | 56-112 | |
| Bis(2-ethylhexyl) phthalate | 80.0 | 72.7 | 91 | 60-116 | |
| Butyl benzyl phthalate | 80.0 | 70.3 | 88 | 66-111 | |
| Caprolactam | 80.0 | 14.6 | 18 | 10-50 | |
| Carbazole | 80.0 | 74.4 | 93 | 69-109 | |
| Chrysene | 80.0 | 72.4 | 90 | 63-118 | |
| Dibenz(a,h)anthracene | 80.0 | 76.4 | 96 | 65-111 | |
| Dibenzofuran | 80.0 | 67.0 | 84 | 58-116 | |
| Diethyl phthalate | 80.0 | 68.1 | 85 | 65-121 | |
| Dimethyl phthalate | 80.0 | 67.4 | 84 | 63-120 | |
| Di-n-butyl phthalate | 80.0 | 74.6 | 93 | 68-110 | |
| Di-n-octyl phthalate | 80.0 | 73.0 | 91 | 60-111 | |
| Diphenylamine | 68.0 | 57.9 | 85 | 62-118 | |
| Fluoranthene | 80.0 | 74.3 | 93 | 68-111 | |
| Fluorene | 80.0 | 67.8 | 85 | 48-130 | |
| Hexachlorobenzene | 80.0 | 75.7 | 95 | 64-112 | |
| Hexachlorobutadiene | 80.0 | 62.6 | 78 | 41-102 | |
| Hexachlorocyclopentadiene | 160 | 114 | 71 | 27-107 | |
| Hexachloroethane | 80.0 | 53.2 | 66 | 39-100 | |
| Hexadecane | 80.0 | 64.8 | 81 | 54-112 | |
| Indeno[1,2,3-cd]pyrene | 80.0 | 72.2 | 90 | 56-111 | |
| Isophorone | 80.0 | 66.8 | 84 | 59-100 | |
| Naphthalene | 80.0 | 64.9 | 81 | 53-105 | |
| Nitrobenzene | 80.0 | 65.2 | 82 | 56-106 | |
| N-Nitrosodimethylamine | 80.0 | 33.3 | 42 | 22-70 | |
| N-Nitrosodi-n-propylamine | 80.0 | 65.6 | 82 | 59-106 | |
| N-Nitrosodiphenylamine | 80.0 | 75.9 | 95 | 64-112 | |
| Pentachlorophenol | 160 | 147 | 92 | 41-121 | |
| Phenanthrene | 80.0 | 74.8 | 93 | 63-113 | |
| Phenol | 80.0 | 22.9 | 29 | 11-52 | |

# Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: D31290.D

Lab ID: LCS 280-444835/2-A Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| Pyrene | 80.0 | 72.4 | 91 | 62-114 | |
| Pyridine | 160 | 59.1 | 37 | 10-69 | |

# Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: D31291.D

Lab ID: LCSD 280-444835/3-A Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| 1,1'-Biphenyl | 80.0 | 60.9 | 76 | 7 | 30 | 53-116 | |
| 1,2,4,5-Tetrachlorobenzene | 80.0 | 60.7 | 76 | 11 | 30 | 52-110 | |
| 1,2,4-Trichlorobenzene | 80.0 | 56.6 | 71 | 10 | 30 | 47-103 | |
| 1,2-Dichlorobenzene | 80.0 | 51.7 | 65 | 9 | 30 | 44-103 | |
| 1,2-Diphenylhydrazine(as Azobenzene) | 80.9 | 66.1 | 82 | 2 | 30 | 59-116 | |
| 1,3-Dichlorobenzene | 80.0 | 49.8 | 62 | 12 | 30 | 42-100 | |
| 1,3-Dinitrobenzene | 80.0 | 66.9 | 84 | 4 | 30 | 66-124 | |
| 1,4-Dichlorobenzene | 80.0 | 51.0 | 64 | 11 | 30 | 43-101 | |
| 1,4-Dioxane | 80.0 | 25.1 | 31 | 23 | 30 | 20-63 | |
| 1-Methylnaphthalene | 80.0 | 64.2 | 80 | 9 | 30 | 57-108 | |
| 2,3,4,6-Tetrachlorophenol | 80.0 | 66.2 | 83 | 5 | 30 | 53-129 | |
| 2,4,5-Trichlorophenol | 80.0 | 64.6 | 81 | 4 | 30 | 58-121 | |
| 2,4,6-Trichlorophenol | 80.0 | 65.6 | 82 | 7 | 30 | 52-132 | |
| 2,4-Dichlorophenol | 80.0 | 61.0 | 76 | 12 | 30 | 60-108 | |
| 2,4-Dimethylphenol | 80.0 | 59.3 | 74 | 12 | 30 | 54-105 | |
| 2,4-Dinitrophenol | 160 | 124 | 77 | 2 | 30 | 38-125 | |
| 2,4-Dinitrotoluene | 80.0 | 66.5 | 83 | 4 | 30 | 63-124 | |
| 2,6-Dichlorophenol | 80.0 | 62.9 | 79 | 10 | 50 | 56-114 | |
| 2,6-Dinitrotoluene | 80.0 | 65.9 | 82 | 4 | 30 | 64-123 | |
| 2-Chloronaphthalene | 80.0 | 59.4 | 74 | 7 | 30 | 52-116 | |
| 2-Chlorophenol | 80.0 | 55.2 | 69 | 6 | 30 | 50-105 | |
| 2-Methylnaphthalene | 80.0 | 63.0 | 79 | 9 | 30 | 55-107 | |
| 2-Methylphenol | 80.0 | 55.2 | 69 | 2 | 30 | 43-94 | |
| 2-Nitroaniline | 80.0 | 63.3 | 79 | 3 | 30 | 59-121 | |
| 2-Nitrophenol | 80.0 | 61.5 | 77 | 8 | 30 | 58-110 | |
| 3 & 4 Methylphenol | 80.0 | 55.5 | 69 | 11 | 30 | 34-88 | |
| 3,3'-Dichlorobenzidine | 160 | 147 | 92 | 1 | 30 | 38-118 | |
| 3-Nitroaniline | 80.0 | 57.9 | 72 | 4 | 30 | 40-108 | |
| 4,6-Dinitro-2-methylphenol | 160 | 160 | 100 | 4 | 30 | 48-126 | |
| 4-Bromophenyl phenyl ether | 80.0 | 70.8 | 88 | 3 | 30 | 60-115 | |
| 4-Chloro-3-methylphenol | 80.0 | 65.9 | 82 | 5 | 30 | 63-107 | |
| 4-Chloroaniline | 80.0 | 32.4 | 40 | 61 | 30 | 41-93 | * |
| 4-Chlorophenyl phenyl ether | 80.0 | 64.1 | 80 | 4 | 30 | 57-120 | |
| 4-Methylphenol | 80.0 | 55.5 | 69 | 11 | 30 | 34-88 | |
| 4-Nitroaniline | 80.0 | 63.8 | 80 | 3 | 30 | 55-123 | |
| 4-Nitrophenol | 160 | 79.5 | 50 | 41 | 30 | 15-60 | * |
| Acenaphthene | 80.0 | 61.9 | 77 | 7 | 30 | 52-122 | |
| Acenaphthylene | 80.0 | 61.7 | 77 | 6 | 30 | 58-112 | |
| Acetophenone | 80.0 | 59.3 | 74 | 8 | 30 | 58-108 | |
| Aniline | 80.0 | 2.37 J | 3 | 182 | 30 | 29-87 | * |
| Anthracene | 80.0 | 73.4 | 92 | 2 | 30 | 62-113 | |

# Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: D31291.D

Lab ID: LCSD 280-444835/3-A Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Azobenzene | 80.0 | 65.4 | 82 | 2 | 30 | 59-115 | |
| Benzaldehyde | 80.0 | 48.5 | 61 | 24 | 50 | 31-91 | |
| Benzidine | 160 | 13.9 J | 9 | 129 | 50 | 5-82 | * |
| Benzo[a]anthracene | 80.0 | 65.5 | 82 | 4 | 30 | 61-115 | |
| Benzo[a]pyrene | 80.0 | 72.3 | 90 | 3 | 30 | 61-114 | |
| Benzo[b]fluoranthene | 80.0 | 72.6 | 91 | 4 | 30 | 61-117 | |
| Benzo[g,h,i]perylene | 80.0 | 74.2 | 93 | 2 | 30 | 67-111 | |
| Benzo[k]fluoranthene | 80.0 | 73.7 | 92 | 3 | 30 | 69-119 | |
| Benzoic acid | 80.0 | 30.3 | 38 | 36 | 30 | 10-54 | * |
| Benzyl alcohol | 80.0 | 46.1 | 58 | 13 | 30 | 40-91 | |
| bis (2-chloroisopropyl) ether | 80.0 | 55.3 | 69 | 9 | 30 | 49-114 | |
| Bis(2-chloroethoxy)methane | 80.0 | 61.2 | 77 | 10 | 30 | 61-107 | |
| Bis(2-chloroethyl)ether | 80.0 | 58.5 | 73 | 10 | 30 | 56-112 | |
| Bis(2-ethylhexyl) phthalate | 80.0 | 72.0 | 90 | 1 | 30 | 60-116 | |
| Butyl benzyl phthalate | 80.0 | 68.9 | 86 | 2 | 30 | 66-111 | |
| Caprolactam | 80.0 | 13.1 | 16 | 11 | 30 | 10-50 | |
| Carbazole | 80.0 | 71.9 | 90 | 3 | 30 | 69-109 | |
| Chrysene | 80.0 | 70.2 | 88 | 3 | 30 | 63-118 | |
| Dibenz(a,h)anthracene | 80.0 | 74.5 | 93 | 3 | 30 | 65-111 | |
| Dibenzofuran | 80.0 | 63.5 | 79 | 5 | 30 | 58-116 | |
| Diethyl phthalate | 80.0 | 66.8 | 84 | 2 | 30 | 65-121 | |
| Dimethyl phthalate | 80.0 | 65.7 | 82 | 3 | 30 | 63-120 | |
| Di-n-butyl phthalate | 80.0 | 72.6 | 91 | 3 | 30 | 68-110 | |
| Di-n-octyl phthalate | 80.0 | 71.2 | 89 | 3 | 30 | 60-111 | |
| Diphenylamine | 68.0 | 55.6 | 82 | 4 | 50 | 62-118 | |
| Fluoranthene | 80.0 | 70.6 | 88 | 5 | 30 | 68-111 | |
| Fluorene | 80.0 | 65.0 | 81 | 4 | 30 | 48-130 | |
| Hexachlorobenzene | 80.0 | 72.6 | 91 | 4 | 30 | 64-112 | |
| Hexachlorobutadiene | 80.0 | 56.1 | 70 | 11 | 30 | 41-102 | |
| Hexachlorocyclopentadiene | 160 | 105 | 66 | 8 | 50 | 27-107 | |
| Hexachloroethane | 80.0 | 46.9 | 59 | 12 | 30 | 39-100 | |
| Hexadecane | 80.0 | 61.4 | 77 | 5 | 30 | 54-112 | |
| Indeno[1,2,3-cd]pyrene | 80.0 | 71.0 | 89 | 2 | 30 | 56-111 | |
| Isophorone | 80.0 | 60.8 | 76 | 9 | 30 | 59-100 | |
| Naphthalene | 80.0 | 60.0 | 75 | 8 | 30 | 53-105 | |
| Nitrobenzene | 80.0 | 59.8 | 75 | 9 | 30 | 56-106 | |
| N-Nitrosodimethylamine | 80.0 | 28.1 | 35 | 17 | 34 | 22-70 | |
| N-Nitrosodi-n-propylamine | 80.0 | 59.6 | 74 | 10 | 30 | 59-106 | |
| N-Nitrosodiphenylamine | 80.0 | 73.0 | 91 | 4 | 30 | 64-112 | |
| Pentachlorophenol | 160 | 147 | 92 | 0 | 30 | 41-121 | |
| Phenanthrene | 80.0 | 72.7 | 91 | 3 | 30 | 63-113 | |
| Phenol | 80.0 | 31.7 | 40 | 32 | 30 | 11-52 | * |

# Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: D31291.D

Lab ID: LCSD 280-444835/3-A Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Pyrene | 80.0 | 70.4 | 88 | 3 | 30 | 62-114 | |
| Pyridine | 160 | 1.8 U | 0 | 200 | 41 | 10-69 | * |

# Column to be used to flag recovery and RPD values

FORM III 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab File ID: D31289.D Lab Sample ID: MB 280-444835/1-A

Matrix: Water Date Extracted: 01/21/2019 06:56

Instrument ID: SMS_D Date Analyzed: 01/22/2019 17:40

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| | LCS 280-444835/2-A | D31290.D | 01/22/2019 18:10 |
| | LCSD 280-444835/3-A | D31291.D | 01/22/2019 18:40 |
| CRC-MW-1-011519 | 160-32649-1 | D31299.D | 01/22/2019 22:36 |

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab File ID: D30601.D  DFTPP Injection Date: 12/05/2018

Instrument ID: SMS_D  DFTPP Injection Time: 12:48

Analysis Batch No.: 440161

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 10-80% of Base Peak | 36.1 | |
| 68 | Less than 2% of mass 69 | 0.0 | (0.0) 1 |
| 69 | Mass 69 Relative abundance | 45.2 | |
| 70 | Less than 2% of mass 69 | 0.0 | (0.0) 1 |
| 127 | 10-80% of Base Peak | 46.6 | |
| 197 | Less than 2% of mass 198 | 0.0 | |
| 198 | Base peak | 100.0 | |
| 199 | 5-9% of mass 198 | 7.0 | |
| 275 | 10-60% of Base Peak | 24.3 | |
| 365 | Greater than 1% of mass 198 | 2.7 | |
| 441 | present but less than 24% of mass 442 | 13.6 | (15.0) 2 |
| 442 | Greater than 50% of mass 198 | 90.5 | |
| 443 | 15-24% of mass 442 | 17.4 | (19.3) 2 |

1-Value is % mass 69  2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | STD080 280-440161/13 | D30612.D | 12/05/2018 | 18:02 |
| | STD004 280-440161/14 | D30613.D | 12/05/2018 | 18:27 |
| | STD010 280-440161/15 | D30614.D | 12/05/2018 | 18:52 |
| | STD020 280-440161/16 | D30615.D | 12/05/2018 | 19:17 |
| | STD050 280-440161/17 | D30616.D | 12/05/2018 | 19:42 |
| | STD120 280-440161/18 | D30617.D | 12/05/2018 | 20:07 |
| | STD160 280-440161/19 | D30618.D | 12/05/2018 | 20:32 |
| | STD200 280-440161/20 | D30619.D | 12/05/2018 | 20:57 |
| | ICV 280-440161/21 | D30620.D | 12/05/2018 | 21:22 |

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab File ID: D30601.D  DFTPP Injection Date: 12/05/2018

Instrument ID: SMS_D  DFTPP Injection Time: 12:48

Analysis Batch No.: 440162

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 10-80% of Base Peak | 36.1 | |
| 68 | Less than 2% of mass 69 | 0.0 | (0.0) 1 |
| 69 | Mass 69 Relative abundance | 45.2 | |
| 70 | Less than 2% of mass 69 | 0.0 | (0.0) 1 |
| 127 | 10-80% of Base Peak | 46.6 | |
| 197 | Less than 2% of mass 198 | 0.0 | |
| 198 | Base peak | 100.0 | |
| 199 | 5-9% of mass 198 | 7.0 | |
| 275 | 10-60% of Base Peak | 24.3 | |
| 365 | Greater than 1% of mass 198 | 2.7 | |
| 441 | present but less than 24% of mass 442 | 13.6 | (15.0) 2 |
| 442 | Greater than 50% of mass 198 | 90.5 | |
| 443 | 15-24% of mass 442 | 17.4 | (19.3) 2 |

1-Value is % mass 69  2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | STD080 280-440162/22 | D30621.D | 12/05/2018 | 21:46 |
| | STD010 280-440162/23 | D30622.D | 12/05/2018 | 22:11 |
| | STD020 280-440162/24 | D30623.D | 12/05/2018 | 22:36 |
| | STD050 280-440162/25 | D30624.D | 12/05/2018 | 23:01 |
| | STD120 280-440162/26 | D30625.D | 12/05/2018 | 23:26 |
| | STD160 280-440162/27 | D30626.D | 12/05/2018 | 23:51 |
| | STD200 280-440162/28 | D30627.D | 12/06/2018 | 00:16 |
| | ICV 280-440162/29 | D30628.D | 12/06/2018 | 00:40 |

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab File ID: D30630.D  DFTPP Injection Date: 12/06/2018

Instrument ID: SMS_D  DFTPP Injection Time: 08:39

Analysis Batch No.: 440302

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 10-80% of Base Peak | 33.6 | |
| 68 | Less than 2% of mass 69 | 0.0 | (0.0) 1 |
| 69 | Mass 69 Relative abundance | 42.2 | |
| 70 | Less than 2% of mass 69 | 0.2 | (0.4) 1 |
| 127 | 10-80% of Base Peak | 44.4 | |
| 197 | Less than 2% of mass 198 | 0.0 | |
| 198 | Base peak | 100.0 | |
| 199 | 5-9% of mass 198 | 7.1 | |
| 275 | 10-60% of Base Peak | 25.7 | |
| 365 | Greater than 1% of mass 198 | 2.9 | |
| 441 | present but less than 24% of mass 442 | 16.4 | (16.5) 2 |
| 442 | Greater than 50% of mass 198 | 99.8 | |
| 443 | 15-24% of mass 442 | 19.3 | (19.3) 2 |

1-Value is % mass 69  2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | STD080 280-440302/3 | D30631.D | 12/06/2018 | 08:53 |
| | STD010 280-440302/4 | D30632.D | 12/06/2018 | 09:17 |
| | STD020 280-440302/5 | D30633.D | 12/06/2018 | 09:42 |
| | STD050 280-440302/6 | D30634.D | 12/06/2018 | 10:07 |
| | STD120 280-440302/7 | D30635.D | 12/06/2018 | 10:32 |
| | STD160 280-440302/8 | D30636.D | 12/06/2018 | 10:56 |
| | STD200 280-440302/9 | D30637.D | 12/06/2018 | 11:21 |
| | ICV 280-440302/10 | D30638.D | 12/06/2018 | 11:46 |

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab File ID: D31075.D  DFTPP Injection Date: 01/08/2019

Instrument ID: SMS_D  DFTPP Injection Time: 14:30

Analysis Batch No.: 443607

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 10-80% of Base Peak | 40.6 | |
| 68 | Less than 2% of mass 69 | 0.0 | (0.0) 1 |
| 69 | Mass 69 Relative abundance | 47.5 | |
| 70 | Less than 2% of mass 69 | 0.3 | (0.6) 1 |
| 127 | 10-80% of Base Peak | 49.6 | |
| 197 | Less than 2% of mass 198 | 0.0 | |
| 198 | Base peak | 100.0 | |
| 199 | 5-9% of mass 198 | 7.0 | |
| 275 | 10-60% of Base Peak | 21.8 | |
| 365 | Greater than 1% of mass 198 | 2.3 | |
| 441 | present but less than 24% of mass 442 | 11.6 | (15.3) 2 |
| 442 | Greater than 50% of mass 198 | 75.6 | |
| 443 | 15-24% of mass 442 | 14.5 | (19.2) 2 |

1-Value is % mass 69  2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | ICIS 280-443607/3 | D31076.D | 01/08/2019 | 14:43 |
| | STD004 280-443607/4 | D31077.D | 01/08/2019 | 15:12 |
| | STD010 280-443607/5 | D31078.D | 01/08/2019 | 15:42 |
| | STD020 280-443607/6 | D31079.D | 01/08/2019 | 16:11 |
| | STD050 280-443607/7 | D31080.D | 01/08/2019 | 16:40 |
| | STD120 280-443607/8 | D31081.D | 01/08/2019 | 17:10 |
| | STD160 280-443607/9 | D31082.D | 01/08/2019 | 17:39 |
| | STD200 280-443607/10 | D31083.D | 01/08/2019 | 18:08 |
| | ICV 280-443607/11 | D31084.D | 01/08/2019 | 18:38 |
| | ICV 280-443607/12 | D31085.D | 01/08/2019 | 19:07 |

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab File ID: D31280.D  DFTPP Injection Date: 01/22/2019

Instrument ID: SMS_D  DFTPP Injection Time: 13:47

Analysis Batch No.: 445019

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 10-80% of Base Peak | 37.5 | |
| 68 | Less than 2% of mass 69 | 0.0 | (0.0) 1 |
| 69 | Mass 69 Relative abundance | 45.1 | |
| 70 | Less than 2% of mass 69 | 0.2 | (0.5) 1 |
| 127 | 10-80% of Base Peak | 46.7 | |
| 197 | Less than 2% of mass 198 | 0.0 | |
| 198 | Base peak | 100.0 | |
| 199 | 5-9% of mass 198 | 6.2 | |
| 275 | 10-60% of Base Peak | 22.4 | |
| 365 | Greater than 1% of mass 198 | 2.3 | |
| 441 | present but less than 24% of mass 442 | 11.2 | (15.2) 2 |
| 442 | Greater than 50% of mass 198 | 73.7 | |
| 443 | 15-24% of mass 442 | 14.2 | (19.3) 2 |

1-Value is % mass 69  2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | CCV 280-445019/3 | D31281.D | 01/22/2019 | 13:59 |
| | CCV 280-445019/4 | D31282.D | 01/22/2019 | 14:29 |
| | CCV 280-445019/5 | D31283.D | 01/22/2019 | 14:54 |
| | CCV 280-445019/6 | D31285.D | 01/22/2019 | 15:47 |
| | MB 280-444835/1-A | D31289.D | 01/22/2019 | 17:40 |
| | LCS 280-444835/2-A | D31290.D | 01/22/2019 | 18:10 |
| | LCSD 280-444835/3-A | D31291.D | 01/22/2019 | 18:40 |
| CRC-MW-1-011519 | 160-32649-1 | D31299.D | 01/22/2019 | 22:36 |

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Sample No.: ICIS 280-443607/3 Date Analyzed: 01/08/2019 14:43

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): D31076.D Heated Purge: (Y/N) N

Calibration ID: 34752

| | | DCBd4 | | NPT | | ANT | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| INITIAL CALIBRATION MID-POINT | | 131559 | 4.59 | 537462 | 5.83 | 311721 | 7.58 |
| UPPER LIMIT | | 263118 | 5.09 | 1074924 | 6.33 | 623442 | 8.08 |
| LOWER LIMIT | | 65780 | 4.09 | 268731 | 5.33 | 155861 | 7.08 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICV 280-443607/11 | | 125201 | 4.60 | 517009 | 5.83 | 304800 | 7.58 |
| ICV 280-443607/12 | | 110316 | 4.60 | 443859 | 5.83 | 259621 | 7.58 |
| CCV 280-445019/3 | | 152080 | 4.51 | 605546 | 5.74 | 347168 | 7.48 |
| CCV 280-445019/4 | | 130916 | 4.50 | 524852 | 5.74 | 301972 | 7.48 |
| CCV 280-445019/5 | | 156088 | 4.50 | 623656 | 5.74 | 358059 | 7.48 |
| CCV 280-445019/6 | | 140784 | 4.51 | 555420 | 5.74 | 328488 | 7.48 |
| MB 280-444835/1-A | | 133680 | 4.51 | 516611 | 5.74 | 327764 | 7.48 |
| LCS 280-444835/2-A | | 132748 | 4.51 | 529049 | 5.74 | 332199 | 7.48 |
| LCSD 280-444835/3-A | | 137307 | 4.51 | 549546 | 5.74 | 341796 | 7.49 |
| 160-32649-1 | CRC-MW-1-011519 | 138895 | 4.51 | 537028 | 5.74 | 346380 | 7.48 |

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Sample No.: ICIS 280-443607/3  Date Analyzed: 01/08/2019 14:43

Instrument ID: SMS_D  GC Column: Rxi-5Sil MS  ID: 0.25(mm)

Lab File ID (Standard): D31076.D  Heated Purge: (Y/N) N

Calibration ID: 34752

| | | PHN | | CRY | | PRY | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| INITIAL CALIBRATION MID-POINT | | 646286 | 9.07 | 635088 | 13.13 | 630299 | 17.05 |
| UPPER LIMIT | | 1292572 | 9.57 | 1270176 | 13.63 | 1260598 | 17.55 |
| LOWER LIMIT | | 323143 | 8.57 | 317544 | 12.63 | 315150 | 16.55 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICV 280-443607/11 | | 642482 | 9.07 | 644059 | 13.13 | 649435 | 17.07 |
| ICV 280-443607/12 | | 546221 | 9.07 | 627075 | 13.12 | 633770 | 17.05 |
| CCV 280-445019/3 | | 710100 | 8.97 | 710819 | 12.91 | 704464 | 16.76 |
| CCV 280-445019/4 | | 602486 | 8.97 | 612471 | 12.90 | 598458 | 16.74 |
| CCV 280-445019/5 | | 739697 | 8.96 | 759793 | 12.90 | 777964 | 16.75 |
| CCV 280-445019/6 | | 666770 | 8.96 | 676799 | 12.90 | 696625 | 16.76 |
| MB 280-444835/1-A | | 618832 | 8.97 | 643464 | 12.90 | 618251 | 16.75 |
| LCS 280-444835/2-A | | 608169 | 8.96 | 625943 | 12.91 | 611322 | 16.75 |
| LCSD 280-444835/3-A | | 625676 | 8.97 | 626631 | 12.91 | 612773 | 16.75 |
| 160-32649-1 | CRC-MW-1-011519 | 644442 | 8.97 | 665593 | 12.90 | 647263 | 16.75 |

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: CRC-MW-1-011519 | Lab Sample ID: 160-32649-1

Matrix: Water | Lab File ID: D31299.D

Analysis Method: 8270D | Date Collected: 01/15/2019 12:30

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 968(mL) | Date Analyzed: 01/22/2019 22:36

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 92-52-4 | 1,1'-Biphenyl | 0.42 | U | 10 | 0.42 |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 2.1 | U | 10 | 2.1 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 2.1 | U | 5.2 | 2.1 |
| 95-50-1 | 1,2-Dichlorobenzene | 2.1 | U | 5.2 | 2.1 |
| 122-66-7 | 1,2-Diphenylhydrazine(as Azobenzene) | 0.56 | U | 10 | 0.56 |
| 541-73-1 | 1,3-Dichlorobenzene | 2.1 | U | 10 | 2.1 |
| 99-65-0 | 1,3-Dinitrobenzene | 1.0 | U | 10 | 1.0 |
| 106-46-7 | 1,4-Dichlorobenzene | 2.1 | U | 5.2 | 2.1 |
| 123-91-1 | 1,4-Dioxane | 0.73 | U | 21 | 0.73 |
| 90-12-0 | 1-Methylnaphthalene | 0.36 | U | 4.1 | 0.36 |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 0.99 | U | 52 | 0.99 |
| 95-95-4 | 2,4,5-Trichlorophenol | 0.54 | U | 10 | 0.54 |
| 88-06-2 | 2,4,6-Trichlorophenol | 0.76 | U | 10 | 0.76 |
| 120-83-2 | 2,4-Dichlorophenol | 0.70 | U | 10 | 0.70 |
| 105-67-9 | 2,4-Dimethylphenol | 0.69 | U | 10 | 0.69 |
| 51-28-5 | 2,4-Dinitrophenol | 7.7 | U | 31 | 7.7 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.96 | U | 10 | 0.96 |
| 87-65-0 | 2,6-Dichlorophenol | 0.77 | U | 10 | 0.77 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.74 | U | 10 | 0.74 |
| 91-58-7 | 2-Chloronaphthalene | 0.48 | U | 4.1 | 0.48 |
| 95-57-8 | 2-Chlorophenol | 0.44 | U | 10 | 0.44 |
| 91-57-6 | 2-Methylnaphthalene | 0.42 | U | 4.1 | 0.42 |
| 95-48-7 | 2-Methylphenol | 0.58 | U | 10 | 0.58 |
| 88-74-4 | 2-Nitroaniline | 0.93 | U | 10 | 0.93 |
| 88-75-5 | 2-Nitrophenol | 0.64 | U | 10 | 0.64 |
| 15831-10-4 | 3 & 4 Methylphenol | 0.41 | U | 10 | 0.41 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 0.86 | U | 52 | 0.86 |
| 108-39-4 | 3-Methylphenol | 0.41 | U | 10 | 0.41 |
| 99-09-2 | 3-Nitroaniline | 0.81 | U | 10 | 0.81 |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 6.1 | U | 52 | 6.1 |
| 101-55-3 | 4-Bromophenyl phenyl ether | 0.42 | U | 10 | 0.42 |
| 59-50-7 | 4-Chloro-3-methylphenol | 0.46 | U | 10 | 0.46 |
| 106-47-8 | 4-Chloroaniline | 0.58 | U * | 10 | 0.58 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 0.65 | U | 10 | 0.65 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: CRC-MW-1-011519 | Lab Sample ID: 160-32649-1

Matrix: Water | Lab File ID: D31299.D

Analysis Method: 8270D | Date Collected: 01/15/2019 12:30

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 968(mL) | Date Analyzed: 01/22/2019 22:36

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 106-44-5 | 4-Methylphenol | 0.41 | U | 10 | 0.41 |
| 100-01-6 | 4-Nitroaniline | 0.87 | U | 10 | 0.87 |
| 100-02-7 | 4-Nitrophenol | 1.0 | U * | 10 | 1.0 |
| 83-32-9 | Acenaphthene | 0.46 | U | 4.1 | 0.46 |
| 208-96-8 | Acenaphthylene | 0.52 | U | 4.1 | 0.52 |
| 98-86-2 | Acetophenone | 0.54 | U | 10 | 0.54 |
| 62-53-3 | Aniline | 0.91 | U * | 10 | 0.91 |
| 120-12-7 | Anthracene | 0.46 | U | 4.1 | 0.46 |
| 103-33-3 | Azobenzene | 0.56 | U | 4.1 | 0.56 |
| 100-52-7 | Benzaldehyde | 0.55 | U | 10 | 0.55 |
| 92-87-5 | Benzidine | 4.5 | U * | 100 | 4.5 |
| 56-55-3 | Benzo[a]anthracene | 0.60 | U | 4.1 | 0.60 |
| 50-32-8 | Benzo[a]pyrene | 0.66 | U | 4.1 | 0.66 |
| 205-99-2 | Benzo[b]fluoranthene | 0.55 | U | 4.1 | 0.55 |
| 191-24-2 | Benzo[g,h,i]perylene | 0.82 | U | 4.1 | 0.82 |
| 207-08-9 | Benzo[k]fluoranthene | 0.58 | U | 4.1 | 0.58 |
| 65-85-0 | Benzoic acid | 5.8 | U * | 26 | 5.8 |
| 100-51-6 | Benzyl alcohol | 0.36 | U | 10 | 0.36 |
| 108-60-1 | bis (2-chloroisopropyl) ether | 0.43 | U | 10 | 0.43 |
| 111-91-1 | Bis(2-chloroethoxy)methane | 0.63 | U | 10 | 0.63 |
| 111-44-4 | Bis(2-chloroethyl)ether | 0.51 | U | 10 | 0.51 |
| 117-81-7 | Bis(2-ethylhexyl) phthalate | 5.2 | J | 10 | 1.2 |
| 85-68-7 | Butyl benzyl phthalate | 2.1 | U | 5.2 | 2.1 |
| 105-60-2 | Caprolactam | 1.2 | U | 10 | 1.2 |
| 86-74-8 | Carbazole | 0.46 | U | 4.1 | 0.46 |
| 218-01-9 | Chrysene | 0.54 | U | 4.1 | 0.54 |
| 53-70-3 | Dibenz(a,h)anthracene | 0.67 | U | 4.1 | 0.67 |
| 132-64-9 | Dibenzofuran | 0.37 | U | 4.1 | 0.37 |
| 84-66-2 | Diethyl phthalate | 0.77 | U | 4.1 | 0.77 |
| 131-11-3 | Dimethyl phthalate | 0.55 | U | 4.1 | 0.55 |
| 84-74-2 | Di-n-butyl phthalate | 0.91 | U | 4.1 | 0.91 |
| 117-84-0 | Di-n-octyl phthalate | 1.6 | U | 5.2 | 1.6 |
| 122-39-4 | Diphenylamine | 0.51 | U | 10 | 0.51 |
| 52-85-7 | Famphur | 2.1 | U | 100 | 2.1 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: CRC-MW-1-011519 | Lab Sample ID: 160-32649-1

Matrix: Water | Lab File ID: D31299.D

Analysis Method: 8270D | Date Collected: 01/15/2019 12:30

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 968(mL) | Date Analyzed: 01/22/2019 22:36

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 206-44-0 | Fluoranthene | 0.66 | U | 4.1 | 0.66 |
| 86-73-7 | Fluorene | 0.51 | U | 4.1 | 0.51 |
| 118-74-1 | Hexachlorobenzene | 0.99 | U | 10 | 0.99 |
| 87-68-3 | Hexachlorobutadiene | 7.8 | U | 31 | 7.8 |
| 77-47-4 | Hexachlorocyclopentadiene | 6.8 | U | 52 | 6.8 |
| 67-72-1 | Hexachloroethane | 7.9 | U | 31 | 7.9 |
| 544-76-3 | Hexadecane | 0.36 | U | 10 | 0.36 |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 1.7 | U | 4.1 | 1.7 |
| 78-59-1 | Isophorone | 0.69 | U | 10 | 0.69 |
| 91-20-3 | Naphthalene | 0.41 | U | 4.1 | 0.41 |
| 98-95-3 | Nitrobenzene | 0.44 | U | 10 | 0.44 |
| 62-75-9 | N-Nitrosodimethylamine | 0.64 | U | 10 | 0.64 |
| 621-64-7 | N-Nitrosodi-n-propylamine | 0.58 | U | 10 | 0.58 |
| 86-30-6 | N-Nitrosodiphenylamine | 0.63 | U | 10 | 0.63 |
| 87-86-5 | Pentachlorophenol | 5.7 | U | 52 | 5.7 |
| 85-01-8 | Phenanthrene | 0.29 | U | 4.1 | 0.29 |
| 108-95-2 | Phenol | 0.58 | U * | 10 | 0.58 |
| 129-00-0 | Pyrene | 0.44 | U | 10 | 0.44 |
| 110-86-1 | Pyridine | 1.8 | U * | 21 | 1.8 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 118-79-6 | 2,4,6-Tribromophenol (Surr) | 77 | | 52-123 |
| 321-60-8 | 2-Fluorobiphenyl | 65 | | 47-119 |
| 367-12-4 | 2-Fluorophenol (Surr) | 49 | | 17-71 |
| 4165-60-0 | Nitrobenzene-d5 (Surr) | 67 | | 45-113 |
| 4165-62-2 | Phenol-d5 (Surr) | 34 | | 10-52 |
| 1718-51-0 | Terphenyl-d14 (Surr) | 74 | | 50-123 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: CRC-MW-1-011519 | Lab Sample ID: 160-32649-1

Matrix: Water | Lab File ID: D31299.D

Analysis Method: 8270D | Date Collected: 01/15/2019 12:30

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 968(mL) | Date Analyzed: 01/22/2019 22:36

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 4.6

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Unknown | 3.01 | 4.6 | T J | |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31299.D
Lims ID: 160-32649-F-1-A
Client ID: CRC-MW-1-011519
Sample Type: Client
Inject. Date: 22-Jan-2019 22:36:30 ALS Bottle#: 20 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 160-32649-F-1-A
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:40 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 23-Jan-2019 09:17:44

| | Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * | 1 1,4-Dichlorobenzene-d4 | 152 | 4.506 | 4.503 | 0.003 | 96 | 138895 | 40.0 | |
| * | 2 Naphthalene-d8 | 136 | 5.740 | 5.737 | 0.003 | 99 | 537028 | 40.0 | |
| * | 3 Acenaphthene-d10 | 164 | 7.482 | 7.484 | -0.002 | 91 | 346380 | 40.0 | |
| * | 4 Phenanthrene-d10 | 188 | 8.967 | 8.964 | 0.003 | 97 | 644442 | 40.0 | |
| * | 5 Chrysene-d12 | 240 | 12.898 | 12.901 | -0.003 | 98 | 665593 | 40.0 | |
| * | 6 Perylene-d12 | 264 | 16.750 | 16.752 | -0.002 | 97 | 647263 | 40.0 | |
| $ | 7 2-Fluorophenol | 112 | 3.315 | 3.309 | 0.006 | 93 | 253581 | 48.6 | |
| $ | 8 Phenol-d5 | 99 | 4.153 | 4.153 | 0.000 | 98 | 237079 | 34.1 | |
| $ | 9 Nitrobenzene-d5 | 82 | 5.024 | 5.023 | 0.001 | 86 | 386132 | 66.7 | |
| $ | 10 2-Fluorobiphenyl | 172 | 6.798 | 6.797 | 0.001 | 99 | 781902 | 64.9 | |
| $ | 11 2,4,6-Tribromophenol | 330 | 8.267 | 8.271 | -0.004 | 94 | 128642 | 76.9 | |
| $ | 12 Terphenyl-d14 | 244 | 10.858 | 10.857 | 0.001 | 100 | 1135580 | 74.2 | |
| | 13 1,4-Dioxane | 88 | | 1.856 | | | | ND | |
| | 14 N-Nitrosodimethylamine | 74 | | 2.096 | | | | ND | |
| | 15 Pyridine | 79 | | 2.149 | | | | ND | |
| | 22 Benzaldehyde | 106 | | 4.091 | | | | ND | |
| | 24 Phenol | 94 | | 4.169 | | | | ND | |
| | 25 Aniline | 93 | | 4.190 | | | | ND | |
| | 27 Bis(2-chloroethyl)ether | 93 | | 4.233 | | | | ND | |
| | 28 2-Chlorophenol | 128 | | 4.313 | | | | ND | |
| | 29 1,3-Dichlorobenzene | 146 | | 4.457 | | | | ND | |
| | 30 1,4-Dichlorobenzene | 146 | | 4.521 | | | | ND | |
| | 31 Benzyl alcohol | 108 | | 4.623 | | | | ND | |
| | 32 1,2-Dichlorobenzene | 146 | | 4.671 | | | | ND | |
| | 34 2,2'-oxybis[1-chloropropan | 45 | | 4.746 | | | | ND | |
| | 35 2-Methylphenol | 108 | | 4.735 | | | | ND | |
| | 38 N-Nitrosodi-n-propylamine | 70 | | 4.874 | | | | ND | |
| | 39 Acetophenone | 105 | | 4.879 | | | | ND | |
| | 40 4-Methylphenol | 108 | | 4.879 | | | | ND | |
| | 41 3-Methylphenol | 108 | | 4.879 | | | | ND | |
| | 42 3 & 4 Methylphenol | 108 | | 4.879 | | | | ND | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|
| 44 Hexachloroethane | 117 | | 4.997 | | | | ND | |
| 45 Nitrobenzene | 77 | | 5.045 | | | | ND | |
| 47 Isophorone | 82 | | 5.275 | | | | ND | |
| 48 2-Nitrophenol | 139 | | 5.355 | | | | ND | |
| 49 2,4-Dimethylphenol | 107 | | 5.392 | | | | ND | |
| 51 Bis(2-chloroethoxy)methane | 93 | | 5.472 | | | | ND | |
| 52 Benzoic acid | 105 | | 5.536 | | | | ND | |
| 53 2,4-Dichlorophenol | 162 | | 5.600 | | | | ND | |
| 55 1,2,4-Trichlorobenzene | 180 | | 5.681 | | | | ND | |
| 56 Naphthalene | 128 | | 5.761 | | | | ND | |
| 57 4-Chloroaniline | 127 | | 5.798 | | | | ND | |
| 58 2,6-Dichlorophenol | 162 | | 5.819 | | | | ND | |
| 60 Hexachlorobutadiene | 225 | | 5.884 | | | | ND | |
| 63 Caprolactam | 55 | | 6.145 | | | | ND | |
| 64 4-Chloro-3-methylphenol | 107 | | 6.290 | | | | ND | |
| 66 2-Methylnaphthalene | 142 | | 6.439 | | | | ND | |
| 67 1-Methylnaphthalene | 142 | | 6.541 | | | | ND | |
| 68 Hexachlorocyclopentadiene | 237 | | 6.610 | | | | ND | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | | 6.615 | | | | ND | |
| 71 2,4,6-Trichlorophenol | 196 | | 6.722 | | | | ND | |
| 72 2,4,5-Trichlorophenol | 196 | | 6.765 | | | | ND | |
| 74 1,1'-Biphenyl | 154 | | 6.899 | | | | ND | |
| 75 2-Chloronaphthalene | 162 | | 6.925 | | | | ND | |
| 77 2-Nitroaniline | 65 | | 7.016 | | | | ND | |
| 80 Dimethyl phthalate | 163 | | 7.192 | | | | ND | |
| 81 1,3-Dinitrobenzene | 168 | | 7.219 | | | | ND | |
| 82 2,6-Dinitrotoluene | 165 | | 7.251 | | | | ND | |
| 83 Acenaphthylene | 152 | | 7.342 | | | | ND | |
| 84 3-Nitroaniline | 138 | | 7.427 | | | | ND | |
| 85 Acenaphthene | 153 | | 7.513 | | | | ND | |
| 86 2,4-Dinitrophenol | 184 | | 7.529 | | | | ND | |
| 88 4-Nitrophenol | 109 | | 7.609 | | | | ND | |
| 89 2,4-Dinitrotoluene | 165 | | 7.657 | | | | ND | |
| 90 Dibenzofuran | 168 | | 7.684 | | | | ND | |
| 92 Hexadecane | 57 | | 7.914 | | | | ND | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | | 7.812 | | | | ND | |
| 95 Diethyl phthalate | 149 | | 7.892 | | | | ND | |
| 97 4-Chlorophenyl phenyl ethe | 204 | | 8.015 | | | | ND | |
| 99 Fluorene | 166 | | 8.026 | | | | ND | |
| 100 4-Nitroaniline | 138 | | 8.042 | | | | ND | |
| 101 4,6-Dinitro-2-methylphenol | 198 | | 8.074 | | | | ND | |
| 102 N-Nitrosodiphenylamine | 169 | | 8.133 | | | | ND | |
| 103 Diphenylamine | 169 | | 8.133 | | | | ND | |
| 105 1,2-Diphenylhydrazine | 77 | | 8.175 | | | | ND | |
| 106 Azobenzene | 77 | | 8.175 | | | | ND | |
| 114 4-Bromophenyl phenyl ether | 248 | | 8.507 | | | | ND | |
| 116 Hexachlorobenzene | 284 | | 8.592 | | | | ND | |
| 119 Pentachlorophenol | 266 | | 8.784 | | | | ND | |
| 123 Phenanthrene | 178 | | 8.993 | | | | ND | |
| 124 Anthracene | 178 | | 9.041 | | | | ND | |
| 125 Carbazole | 167 | | 9.196 | | | | ND | |
| 127 Di-n-butyl phthalate | 149 | | 9.527 | | | | ND | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|
| 132 Fluoranthene | 202 | | 10.312 | | | | ND | U |
| 133 Benzidine | 184 | | 10.477 | | | | ND | |
| 134 Pyrene | 202 | | 10.638 | | | | ND | |
| 139 Famphur | 218 | | 11.600 | | | | ND | |
| 141 Butyl benzyl phthalate | 149 | | 11.717 | | | | ND | |
| 144 3,3'-Dichlorobenzidine | 252 | | 12.850 | | | | ND | |
| 145 Benzo[a]anthracene | 228 | | 12.887 | | | | ND | |
| 146 Chrysene | 228 | | 12.973 | | | | ND | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.053 | 13.053 | 0.000 | 97 | 61253 | 5.02 | |
| 148 Di-n-octyl phthalate | 149 | | 14.821 | | | | ND | |
| 150 Benzo[b]fluoranthene | 252 | | 15.686 | | | | ND | |
| 151 Benzo[k]fluoranthene | 252 | | 15.766 | | | | ND | |
| 153 Benzo[a]pyrene | 252 | | 16.600 | | | | ND | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | | 19.837 | | | | ND | |
| 157 Dibenz(a,h)anthracene | 278 | | 19.939 | | | | ND | |
| 158 Benzo[g,h,i]perylene | 276 | | 20.574 | | | | ND | |

## QC Flag Legend

Review Flags

U - Marked Undetected

## Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

TestAmerica Denver
Tentatively Identified Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31299.D | | | | |
| Lims ID: | 160-32649-F-1-A | | | | |
| Client ID: | CRC-MW-1-011519 | | | | |
| Sample Type: | Client | | | | |
| Inject. Date: | 22-Jan-2019 22:36:30 | ALS Bottle#: | 20 | Worklist Smp#: | 22 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | 160-32649-F-1-A | | | | |
| Operator ID: | KIEKELD | Instrument ID: | SMS_D | | |
| Method: | \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m | | | | |
| Limit Group: | MSSV - 8270D | | | | |
| Last Update: | 23-Jan-2019 10:44:40 | Calib Date: | 08-Jan-2019 18:08:30 | | |
| Tic RT Window: | 0.000 -0.000 | Response: | area | | |
| Quant By: | Nearest ISTD | Quant LOD: | 10.00000 | | |
| MS Library: | \\chromna\Denver\Database\NIST98.L | | | | |
| Min. Match: | 80 | | | | |
| Column 1 : | VF-5ms ( 0.50 mm) | | Det: MS SCAN | | |
| Process Host: | CTX0325 | | | | |
| First Level Reviewer: kiekeld | | Date: | 23-Jan-2019 09:17:44 | | |

Calibrated Tentative Identified Compound Results

| Compound | RT | Response | Amount ug/ml | Flags |
|---|---|---|---|---|

Report Date: 23-Jan-2019 10:44:49 Chrom Revision: 2.3 15-Jan-2019 08:51:34
Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31299.D
Tentative Identified Compound Results

| RT | Area | Amount ug/ml | Quant Cpnd | Qual | Lib Entry | Molecular Formula | Mol. Weight | Flags |
|---|---|---|---|---|---|---|---|---|
| | | Unknown | | | | | | |
| 3.005 | 88950 | 4.42 | 1 | | | | | |

Quantitation Compounds

| Compound | RT | Area | Amount ug/ml |
|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 4.506 | 805621 | 40.0 |

## QC Flag Legend

Processing Flags

## Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

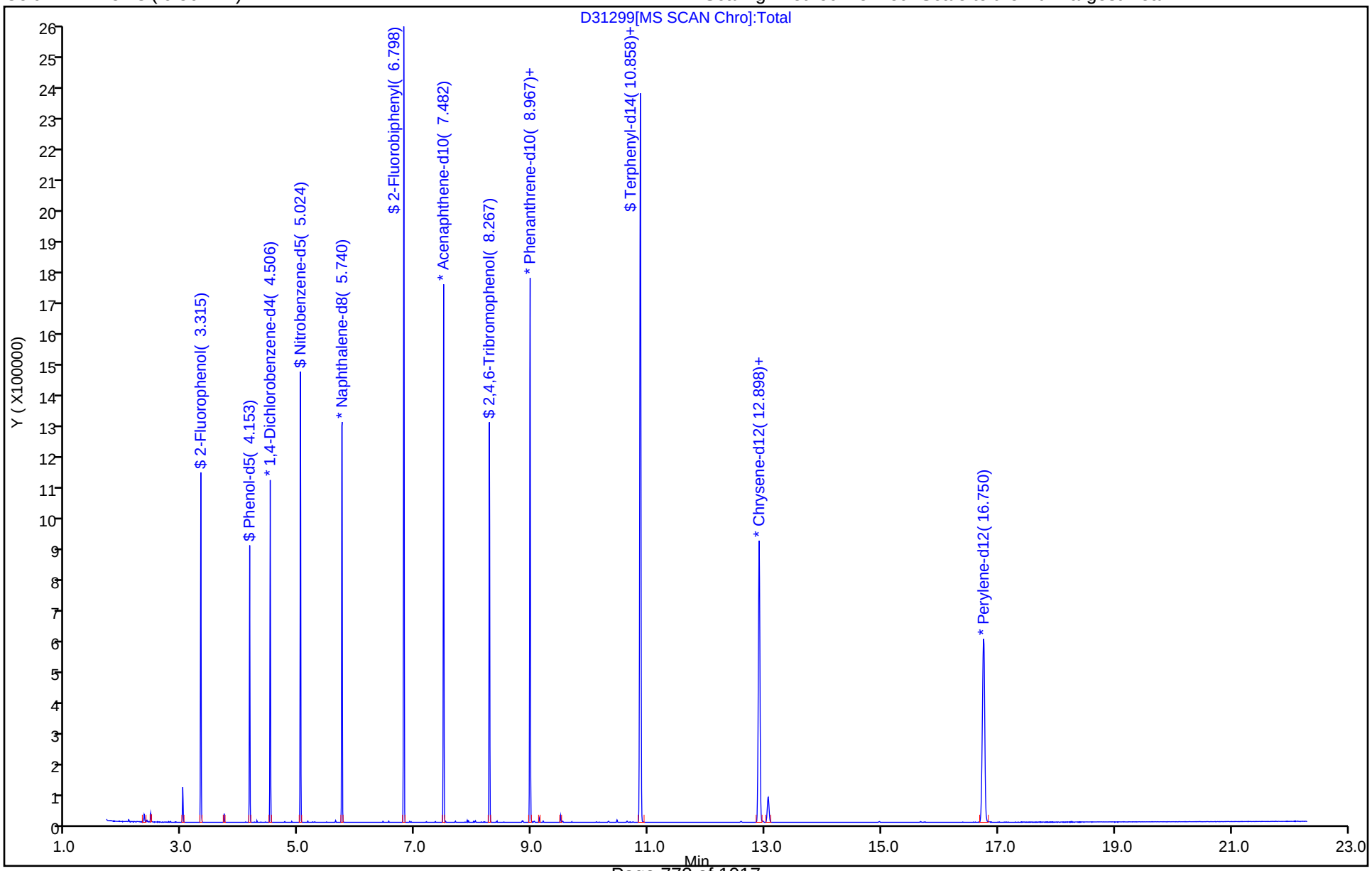
Report Date: 23-Jan-2019 10:44:49 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31299.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 22:36:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | 160-32649-F-1-A | Lab Sample ID: | 280-32649-1 | Worklist Smp#: | 22 |
| Client ID: | CRC-MW-1-011519 | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 20 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31299.D
Lims ID: 160-32649-F-1-A
Client ID: CRC-MW-1-011519
Sample Type: Client
Inject. Date: 22-Jan-2019 22:36:30 ALS Bottle#: 20 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 160-32649-F-1-A
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:40 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 23-Jan-2019 09:17:44

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 7 2-Fluorophenol | 100.0 | 48.6 | 48.59 |
| $ 8 Phenol-d5 | 100.0 | 34.1 | 34.11 |
| $ 9 Nitrobenzene-d5 | 100.0 | 66.7 | 66.72 |
| $ 10 2-Fluorobiphenyl | 100.0 | 64.9 | 64.92 |
| $ 11 2,4,6-Tribromophenol | 100.0 | 76.9 | 76.88 |
| $ 12 Terphenyl-d14 | 100.0 | 74.2 | 74.22 |

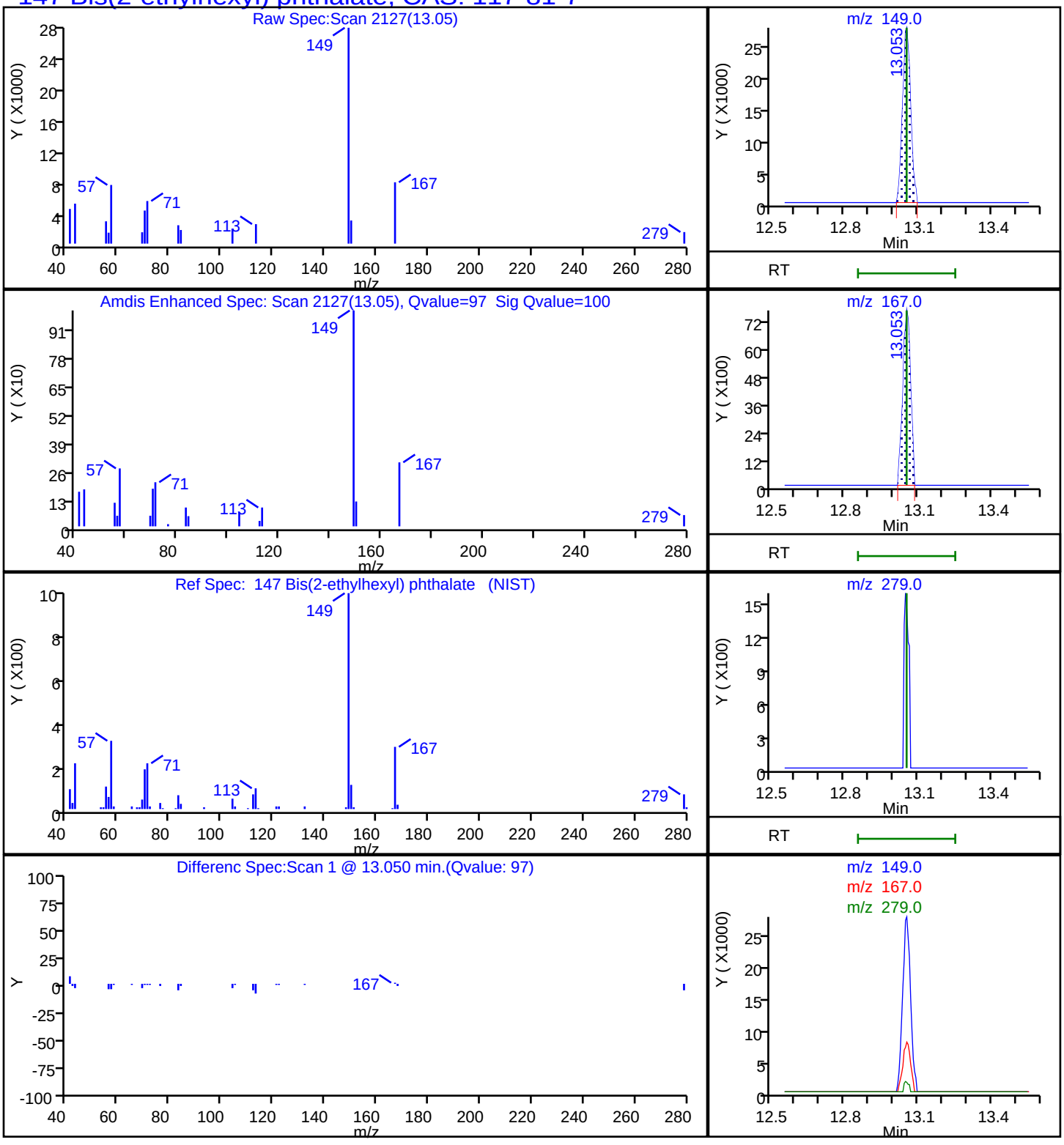
Report Date: 23-Jan-2019 10:44:49 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31299.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 22:36:30 | Instrument ID: | SMS_D | | |
| Lims ID: | 160-32649-F-1-A | Lab Sample ID: | 280-32649-1 | | |
| Client ID: | CRC-MW-1-011519 | | | | |
| Operator ID: | KIEKELD | ALS Bottle#: | 20 | Worklist Smp#: | 22 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |
| Column: | VF-5ms ( 0.50 mm) | Detector | MS SCAN | | |

## 147 Bis(2-ethylhexyl) phthalate, CAS: 117-81-7



Report Date: 23-Jan-2019 10:44:49 Chrom Revision: 2.3 15-Jan-2019 08:51:34

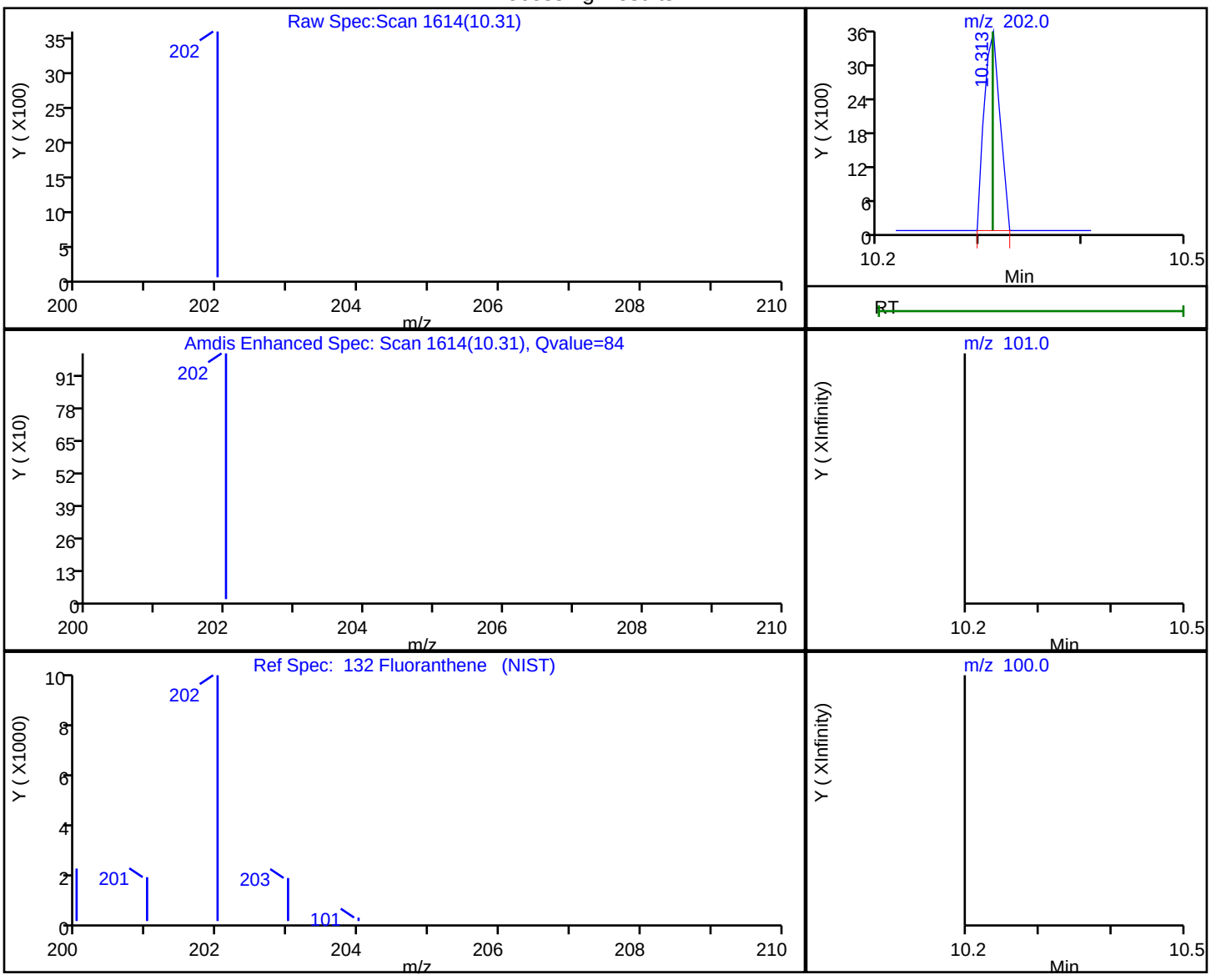
User Disabled Compound Report

TestAmerica Denver

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31299.D | | | | |
| Injection Date: | 22-Jan-2019 22:36:30 | Instrument ID: | SMS_D | | |
| Lims ID: | 160-32649-F-1-A | Lab Sample ID: | 280-32649-1 | | |
| Client ID: | CRC-MW-1-011519 | | | | |
| Operator ID: | KIEKELD | ALS Bottle#: | 20 | Worklist Smp#: | 22 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |
| Column: | VF-5ms ( 0.50 mm) | Detector | MS SCAN | | |

## 132 Fluoranthene, CAS: 206-44-0

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 10.31 | 202.00 | 3851 | 0.199158 |
| 10.31 | 101.00 | 0 | |
| 10.31 | 100.00 | 0 | |

Reviewer: kiekeld, 23-Jan-2019 09:17:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

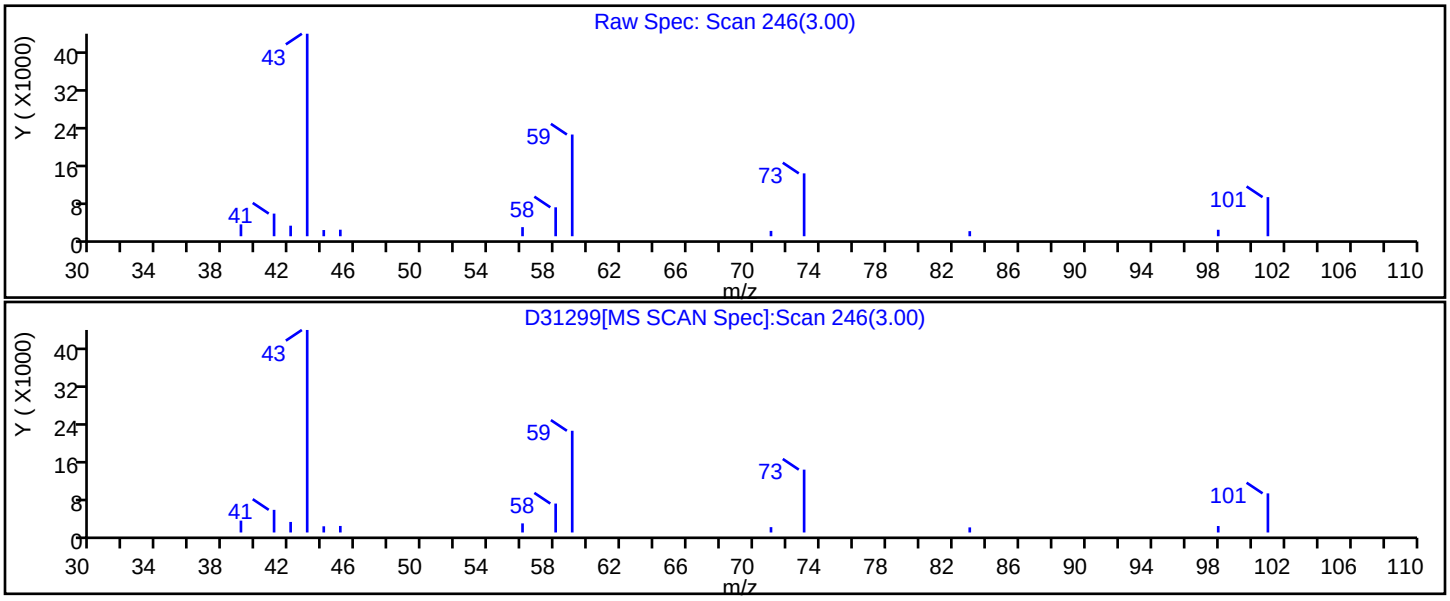
Report Date: 23-Jan-2019 10:44:50 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31299.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 22:36:30 | Instrument ID: | SMS_D | | |
| Lims ID: | 160-32649-F-1-A | Lab Sample ID: | 280-32649-1 | | |
| Client ID: | CRC-MW-1-011519 | | | | |
| Operator ID: | KIEKELD | ALS Bottle#: | 20 | Worklist Smp#: | 22 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |
| Column: | | Detector | MS SCAN | | |

No Library Matches Found above the Threshold: 80



FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 440161

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/05/2018 18:02 Calibration End Date: 12/05/2018 20:57 Calibration ID: 34483

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD004 280-440161/14 | D30613.D |
| Level 2 | STD010 280-440161/15 | D30614.D |
| Level 3 | STD020 280-440161/16 | D30615.D |
| Level 4 | STD050 280-440161/17 | D30616.D |
| Level 5 | STD080 280-440161/13 | D30612.D |
| Level 6 | STD120 280-440161/18 | D30617.D |
| Level 7 | STD160 280-440161/19 | D30618.D |
| Level 8 | STD200 280-440161/20 | D30619.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Famphur | 0.3816<br>0.4199 | 0.4013<br>0.4172 | 0.4168<br>0.4068 | 0.4266 | 0.4363 | Ave | | 0.4133 | | | | 4.1 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 440161

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/05/2018 18:02 Calibration End Date: 12/05/2018 20:57 Calibration ID: 34483

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD004 280-440161/14 | D30613.D |
| Level 2 | STD010 280-440161/15 | D30614.D |
| Level 3 | STD020 280-440161/16 | D30615.D |
| Level 4 | STD050 280-440161/17 | D30616.D |
| Level 5 | STD080 280-440161/13 | D30612.D |
| Level 6 | STD120 280-440161/18 | D30617.D |
| Level 7 | STD160 280-440161/19 | D30618.D |
| Level 8 | STD200 280-440161/20 | D30619.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| Famphur | CRY | Ave | 29972<br>1000982 | 79270<br>1347504 | 163981<br>1610368 | 430104 | 686828 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |

Curve Type Legend:
Ave = Average ISTD

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 440161

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/05/2018 18:02 Calibration End Date: 12/05/2018 20:57 Calibration ID: 34483

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD004 280-440161/14 | D30613.D |
| Level 2 | STD010 280-440161/15 | D30614.D |
| Level 3 | STD020 280-440161/16 | D30615.D |
| Level 4 | STD050 280-440161/17 | D30616.D |
| Level 5 | STD080 280-440161/13 | D30612.D |
| Level 6 | STD120 280-440161/18 | D30617.D |
| Level 7 | STD160 280-440161/19 | D30618.D |
| Level 8 | STD200 280-440161/20 | D30619.D |

| ANALYTE | PERCENT ERROR | | | | | | PERCENT ERROR LIMIT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 # LVL 7 # | LVL 2 # LVL 8 # | LVL 3 # | LVL 4 # | LVL 5 # | LVL 6 # | LVL 1 LVL 7 | LVL 2 LVL 8 | LVL 3 | LVL 4 | LVL 5 | LVL 6 |
| Famphur | -7.7 | | | | | | 30 | | | | | |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30612.D
Lims ID: STD080 FAM
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 05-Dec-2018 18:02:30 ALS Bottle#: 12 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD080 FAM
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub15

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:21 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:08:22

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.673 | 4.673 | 0.000 | 96 | 125461 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.896 | 5.896 | 0.000 | 99 | 508221 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.649 | 7.649 | 0.000 | 94 | 317822 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.139 | 9.139 | 0.000 | 97 | 688070 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.290 | 13.290 | 0.000 | 99 | 787183 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.280 | 17.280 | 0.000 | 98 | 832202 | 40.0 | 40.0 | |
| 139 Famphur | 218 | 11.917 | 11.917 | 0.000 | 99 | 686828 | 80.0 | 84.4 | |

## Reagents:

MS-FAM080_00001 Amount Added: 200.00 Units: uL

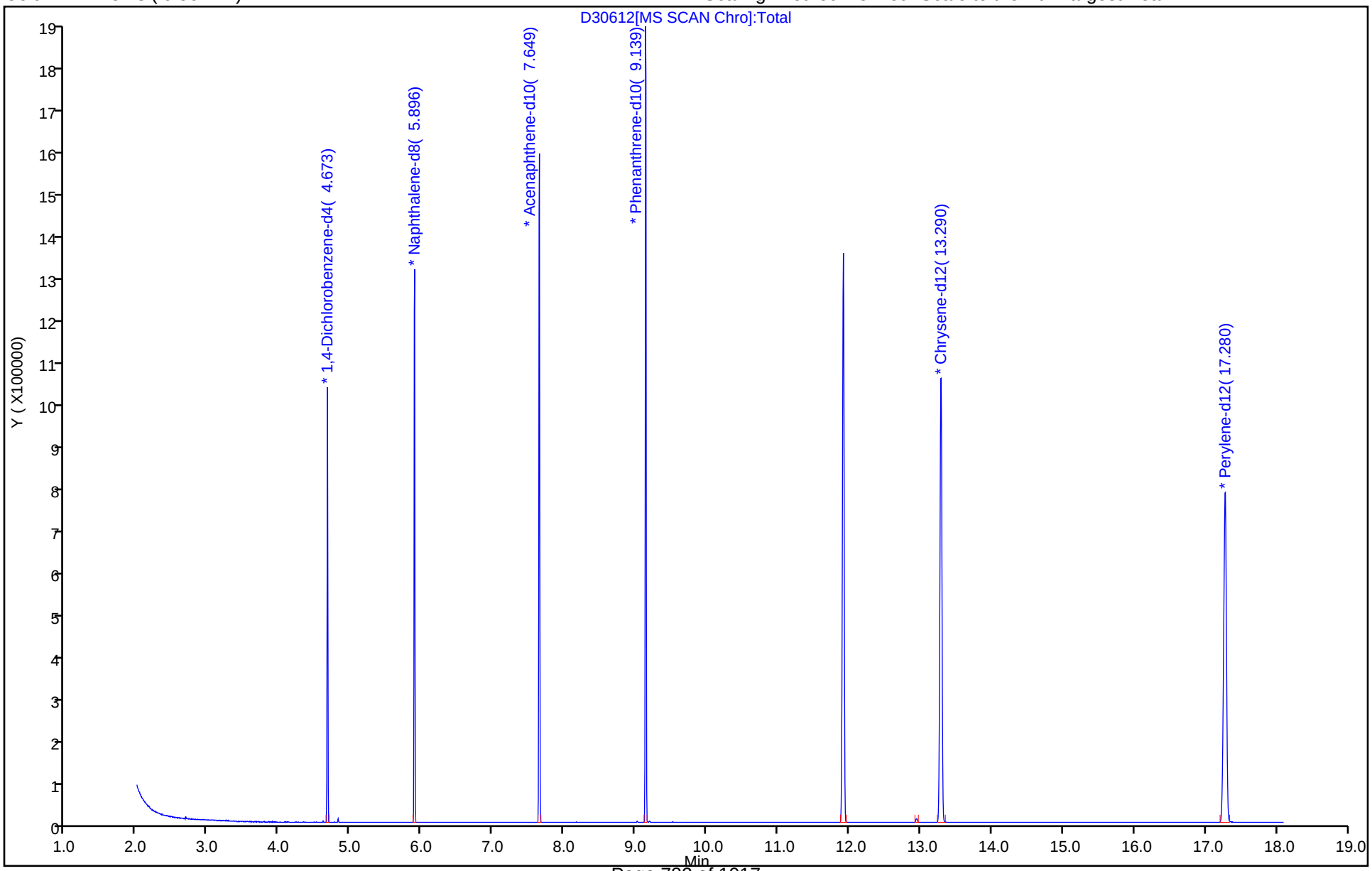
Report Date: 06-Dec-2018 12:13:22 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30612.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 18:02:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD080 FAM | | | Worklist Smp#: | 13 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 12 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30613.D
Lims ID: STD004 FAM
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 05-Dec-2018 18:27:30 ALS Bottle#: 13 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD004 FAM
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub15

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:23 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:08:30

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.675 | 4.673 | 0.002 | 96 | 124399 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.893 | 5.896 | -0.003 | 99 | 504832 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.645 | 7.649 | -0.004 | 94 | 317908 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.141 | 9.139 | 0.002 | 98 | 694656 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.286 | 13.290 | -0.004 | 99 | 785361 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.277 | 17.280 | -0.003 | 98 | 843216 | 40.0 | 40.0 | |
| 139 Famphur | 218 | 11.908 | 11.917 | -0.009 | 96 | 29972 | 4.00 | 3.69 | |

## Reagents:

MS-FAM004_00001 Amount Added: 200.00 Units: uL

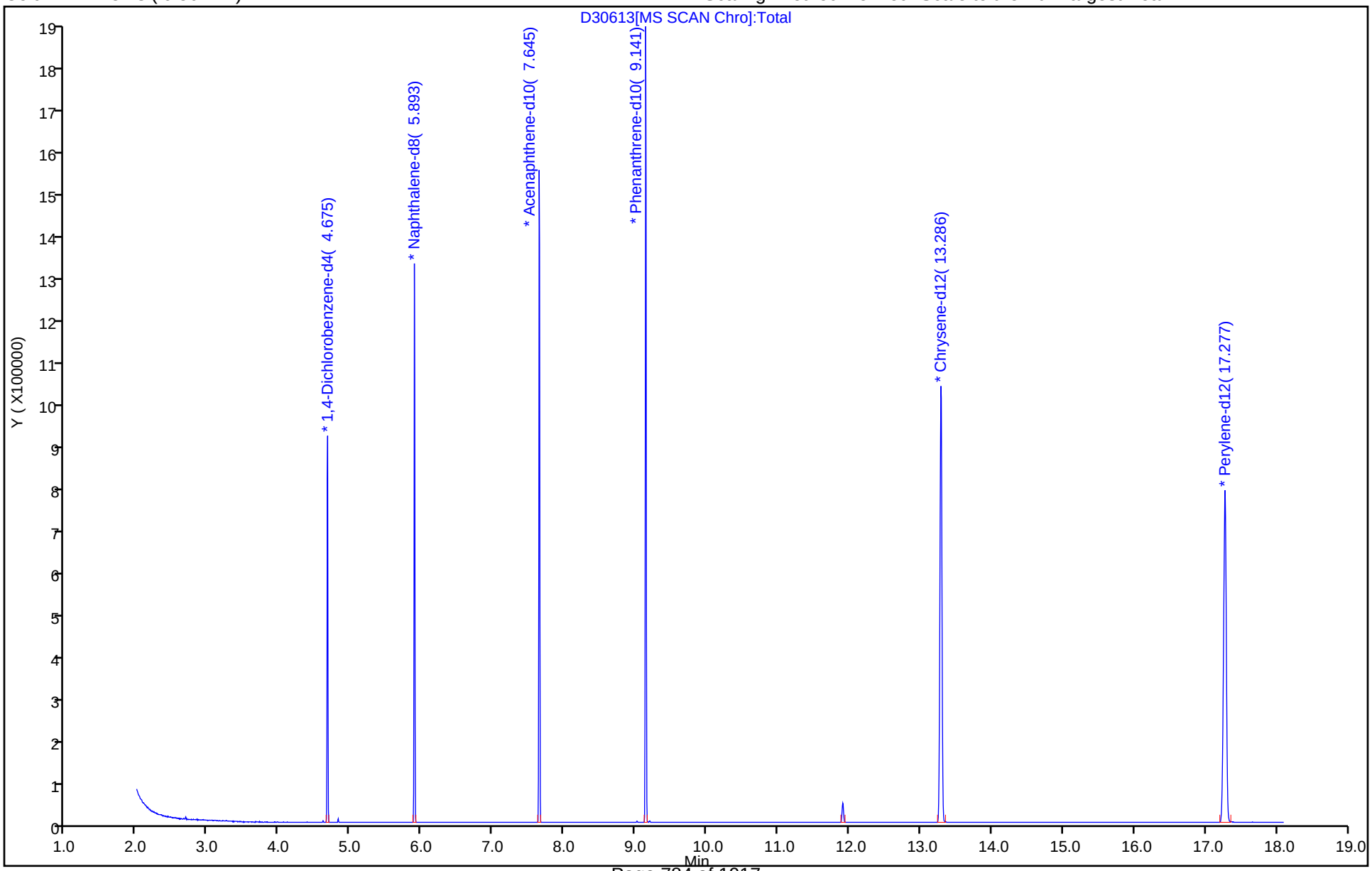
Report Date: 06-Dec-2018 12:13:23 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30613.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 18:27:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD004 FAM | | | Worklist Smp#: | 14 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 13 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30614.D
Lims ID: STD010 FAM
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 05-Dec-2018 18:52:30 ALS Bottle#: 14 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD010 FAM
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub15

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:24 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:08:36

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.674 | 4.673 | 0.001 | 96 | 124156 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.898 | 5.896 | 0.002 | 99 | 508496 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.644 | 7.649 | -0.005 | 95 | 312399 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.140 | 9.139 | 0.001 | 98 | 696445 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.286 | 13.290 | -0.004 | 99 | 790122 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.276 | 17.280 | -0.004 | 98 | 849419 | 40.0 | 40.0 | |
| 139 Famphur | 218 | 11.907 | 11.917 | -0.010 | 99 | 79270 | 10.0 | 9.71 | |

## Reagents:

MS-FAM010_00001 Amount Added: 200.00 Units: uL

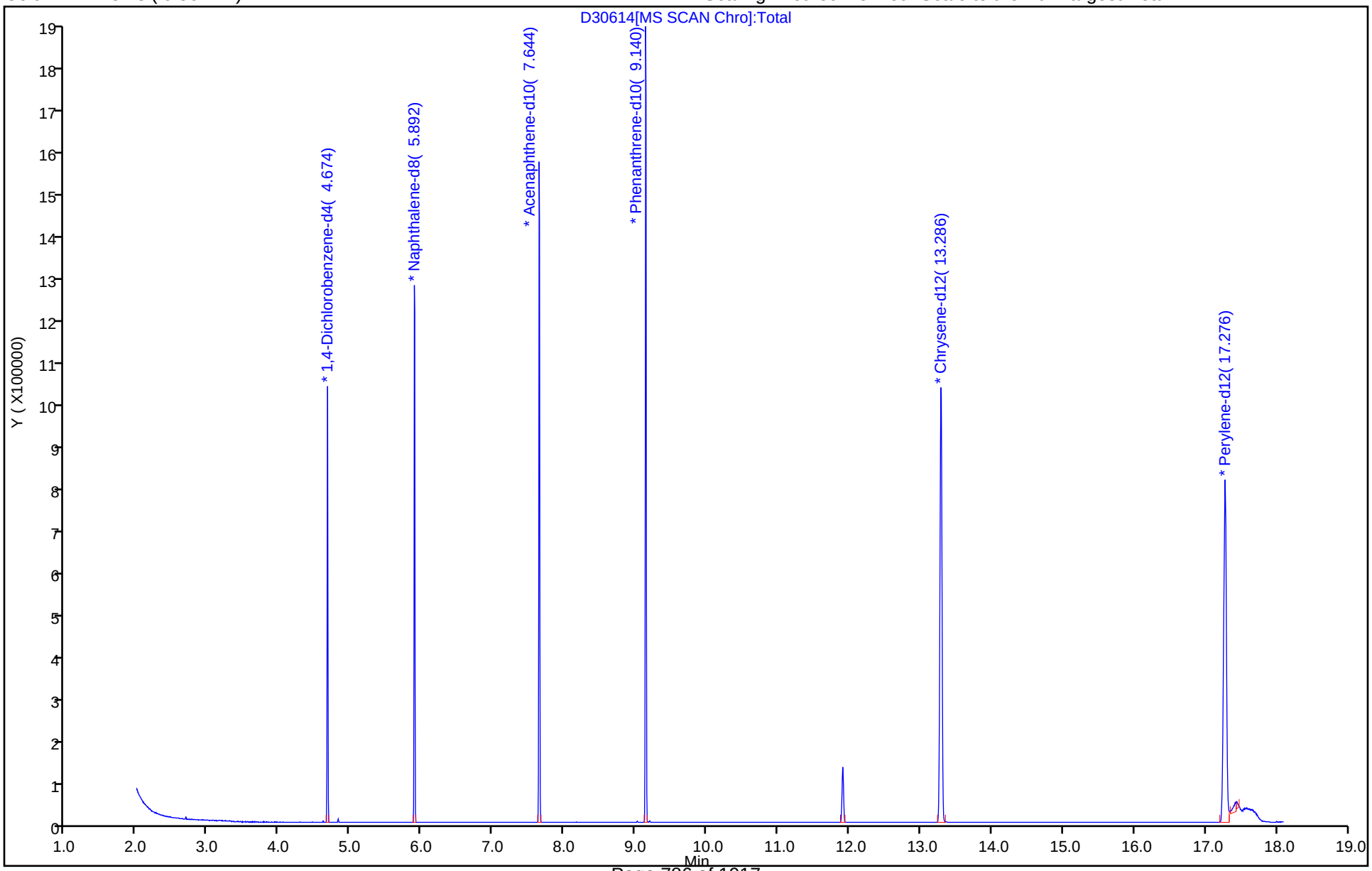
Report Date: 06-Dec-2018 12:13:24 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30614.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 18:52:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD010 FAM | | | Worklist Smp#: | 15 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 14 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30615.D
Lims ID: STD020 FAM
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 05-Dec-2018 19:17:30 ALS Bottle#: 15 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD020 FAM
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub15

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:25 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:08:45

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.671 | 4.673 | -0.002 | 96 | 122555 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.894 | 5.896 | -0.002 | 99 | 498974 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.647 | 7.649 | -0.003 | 95 | 310100 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.142 | 9.139 | 0.003 | 97 | 685360 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.288 | 13.290 | -0.002 | 99 | 786877 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.278 | 17.280 | -0.002 | 98 | 850259 | 40.0 | 40.0 | |
| 139 Famphur | 218 | 11.910 | 11.917 | -0.007 | 99 | 163981 | 20.0 | 20.2 | |

## Reagents:

MS-FAM020_00001 Amount Added: 200.00 Units: uL

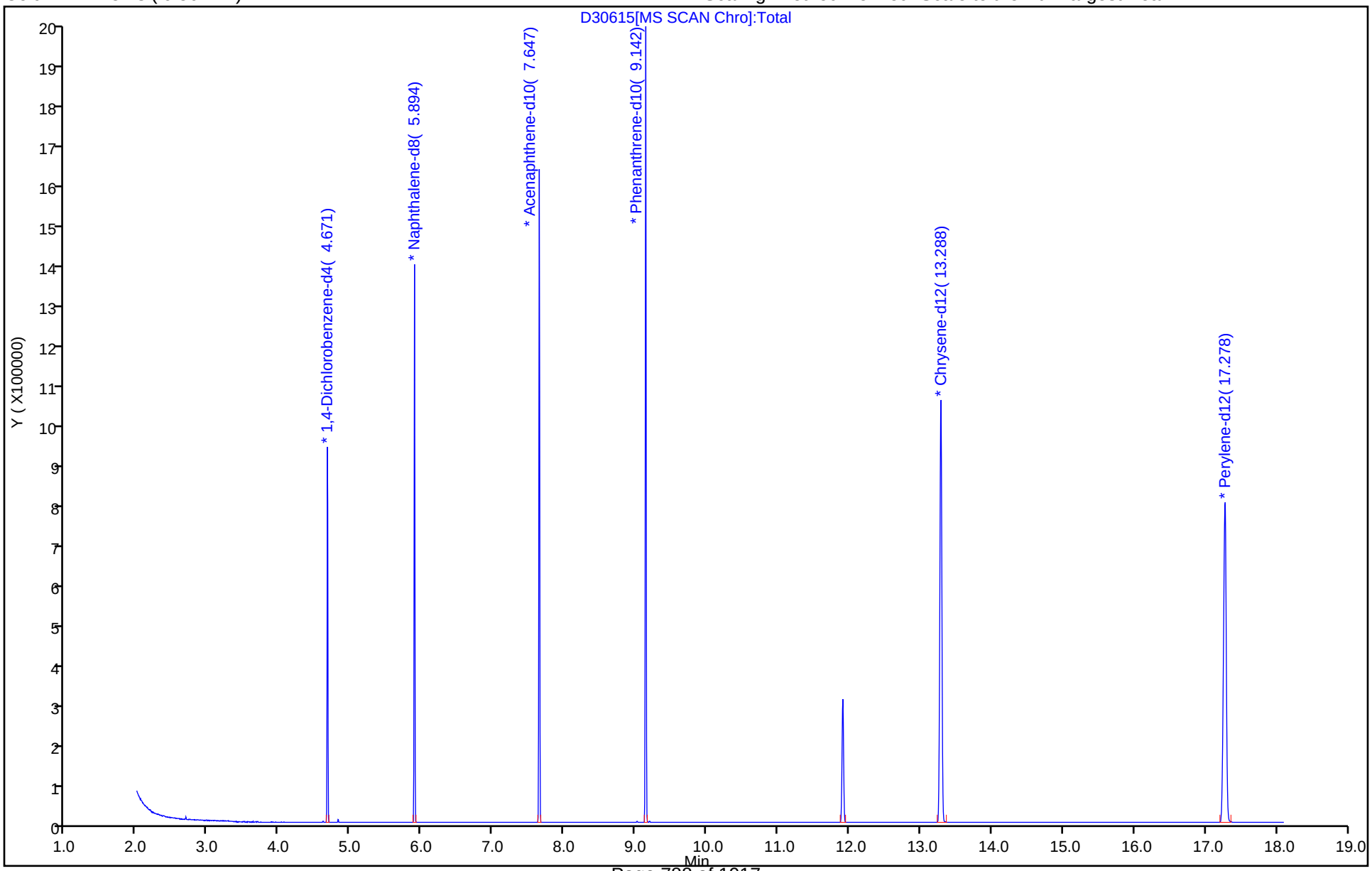
Report Date: 06-Dec-2018 12:13:25 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30615.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 19:17:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD020 FAM | | | Worklist Smp#: | 16 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 15 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30616.D
Lims ID: STD050 FAM
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 05-Dec-2018 19:42:30 ALS Bottle#: 16 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD050 FAM
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub15

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:26 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:08:55

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.676 | 4.673 | 0.003 | 96 | 123833 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.894 | 5.896 | -0.002 | 99 | 508054 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.646 | 7.649 | -0.003 | 95 | 319235 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.142 | 9.139 | 0.003 | 97 | 708677 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.287 | 13.290 | -0.003 | 99 | 806561 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.278 | 17.280 | -0.002 | 98 | 852960 | 40.0 | 40.0 | |
| 139 Famphur | 218 | 11.914 | 11.917 | -0.003 | 99 | 430104 | 50.0 | 51.6 | |

## Reagents:

MS-FAM050_00001 Amount Added: 200.00 Units: uL

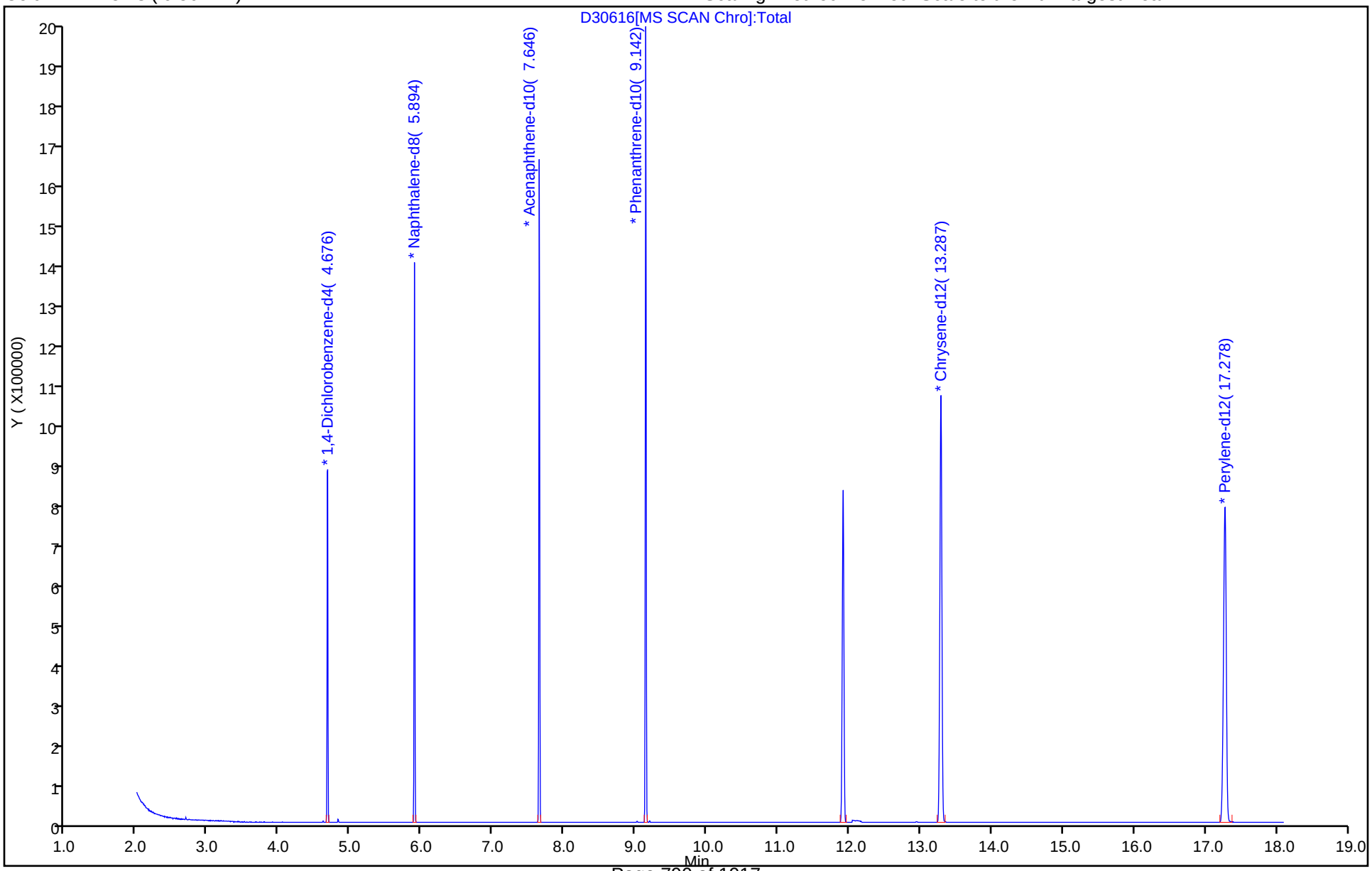
Report Date: 06-Dec-2018 12:13:27 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30616.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 19:42:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD050 FAM | | | Worklist Smp#: | 17 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 16 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30617.D
Lims ID: STD120 FAM
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 05-Dec-2018 20:07:30 ALS Bottle#: 17 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD120 FAM
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub15

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:27 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:09:08

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.673 | 4.673 | 0.000 | 96 | 123979 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.897 | 5.896 | 0.001 | 99 | 511305 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.649 | 7.649 | 0.000 | 94 | 325233 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.139 | 9.139 | 0.000 | 98 | 703967 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.285 | 13.290 | -0.005 | 99 | 794662 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.275 | 17.280 | -0.005 | 98 | 830802 | 40.0 | 40.0 | |
| 139 Famphur | 218 | 11.922 | 11.917 | 0.005 | 99 | 1000982 | 120.0 | 121.9 | |

## Reagents:

MS-FAM120_00001 Amount Added: 200.00 Units: uL

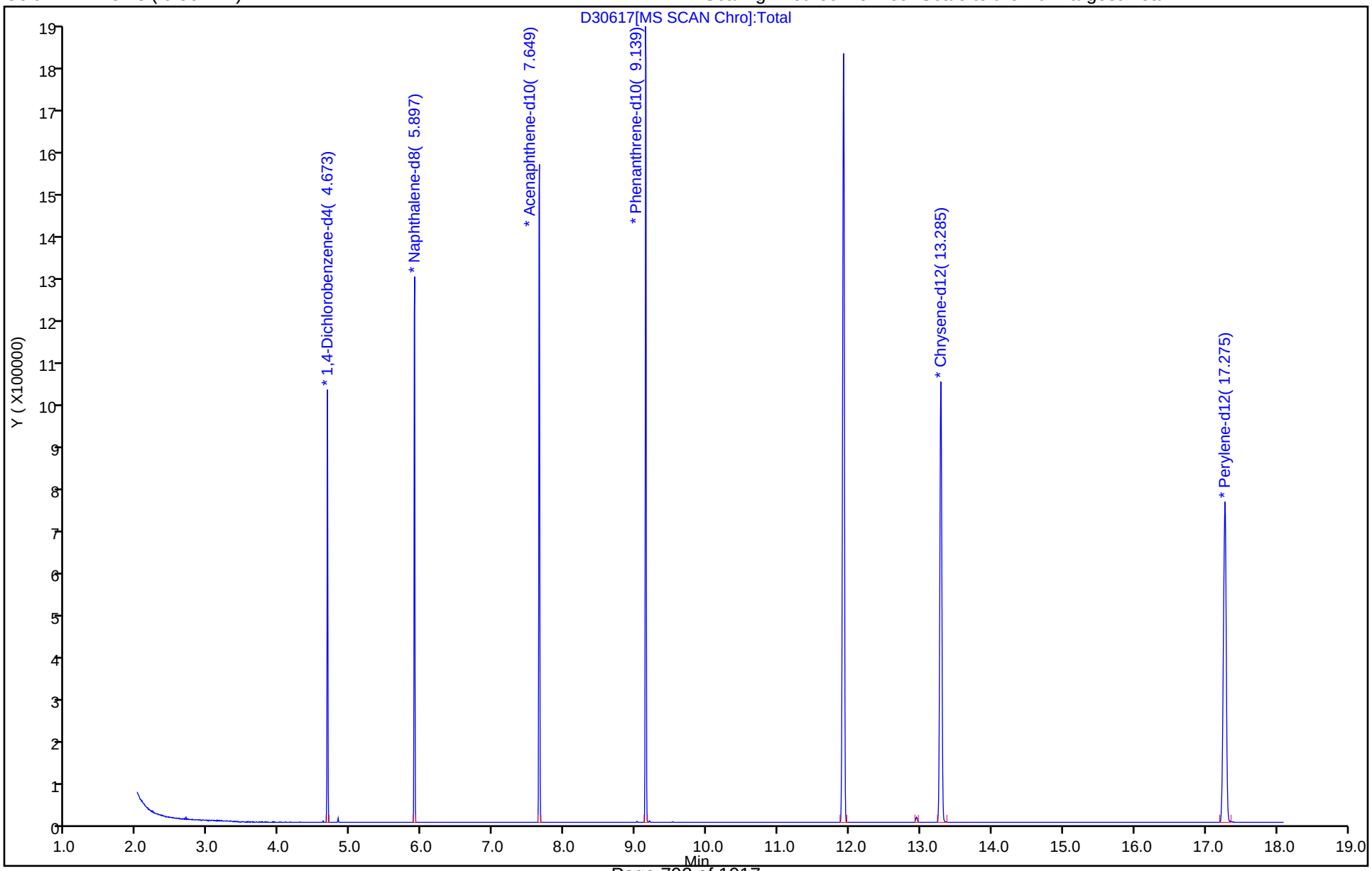
Report Date: 06-Dec-2018 12:13:28 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30617.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 20:07:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD120 FAM | | | Worklist Smp#: | 18 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 17 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30618.D
Lims ID: STD160 FAM
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 05-Dec-2018 20:32:30 ALS Bottle#: 18 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD160 FAM
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub15

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:29 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:09:19

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.675 | 4.673 | 0.002 | 96 | 125341 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.893 | 5.896 | -0.003 | 99 | 511458 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.645 | 7.649 | -0.004 | 95 | 321539 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.141 | 9.139 | 0.002 | 98 | 710203 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.286 | 13.290 | -0.004 | 99 | 807406 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.271 | 17.280 | -0.009 | 98 | 845587 | 40.0 | 40.0 | |
| 139 Famphur | 218 | 11.924 | 11.917 | 0.007 | 99 | 1347504 | 160.0 | 161.5 | |

## Reagents:

MS-FAM160_00001 Amount Added: 200.00 Units: uL

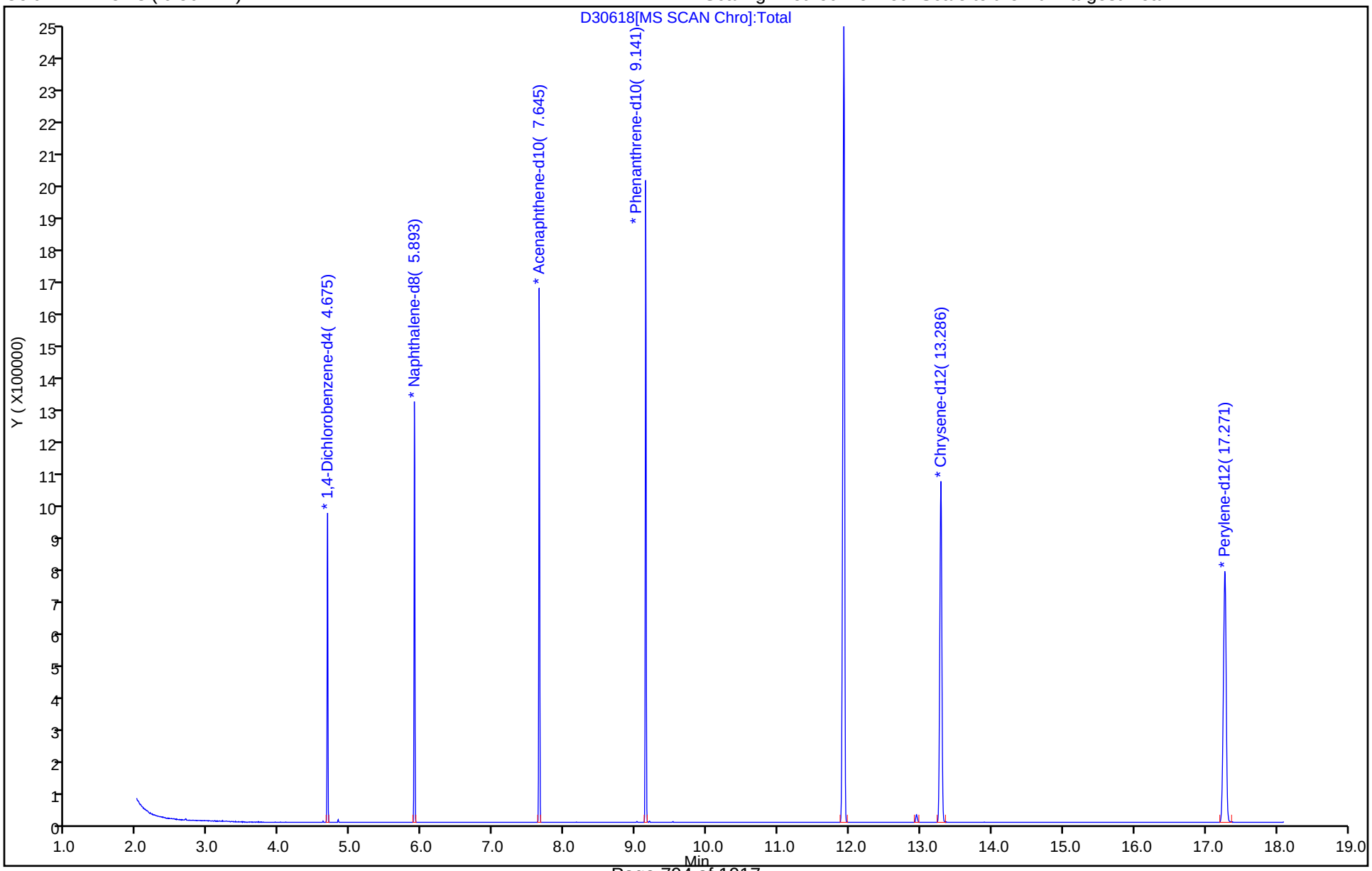
Report Date: 06-Dec-2018 12:13:29 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30618.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 20:32:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD160 FAM | | | Worklist Smp#: | 19 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 18 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30619.D
Lims ID: STD200 FAM
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 05-Dec-2018 20:57:30 ALS Bottle#: 19 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD200 FAM
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub15

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:30 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:09:52

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.671 | 4.673 | -0.002 | 96 | 124478 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.894 | 5.896 | -0.002 | 99 | 504134 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.646 | 7.649 | -0.003 | 95 | 315009 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.142 | 9.139 | 0.003 | 98 | 692601 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.288 | 13.290 | -0.002 | 99 | 791732 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.278 | 17.280 | -0.002 | 98 | 832154 | 40.0 | 40.0 | |
| 139 Famphur | 218 | 11.931 | 11.917 | 0.014 | 99 | 1610368 | 200.0 | 196.8 | |

## Reagents:

MS-FAM200_00001 Amount Added: 200.00 Units: uL

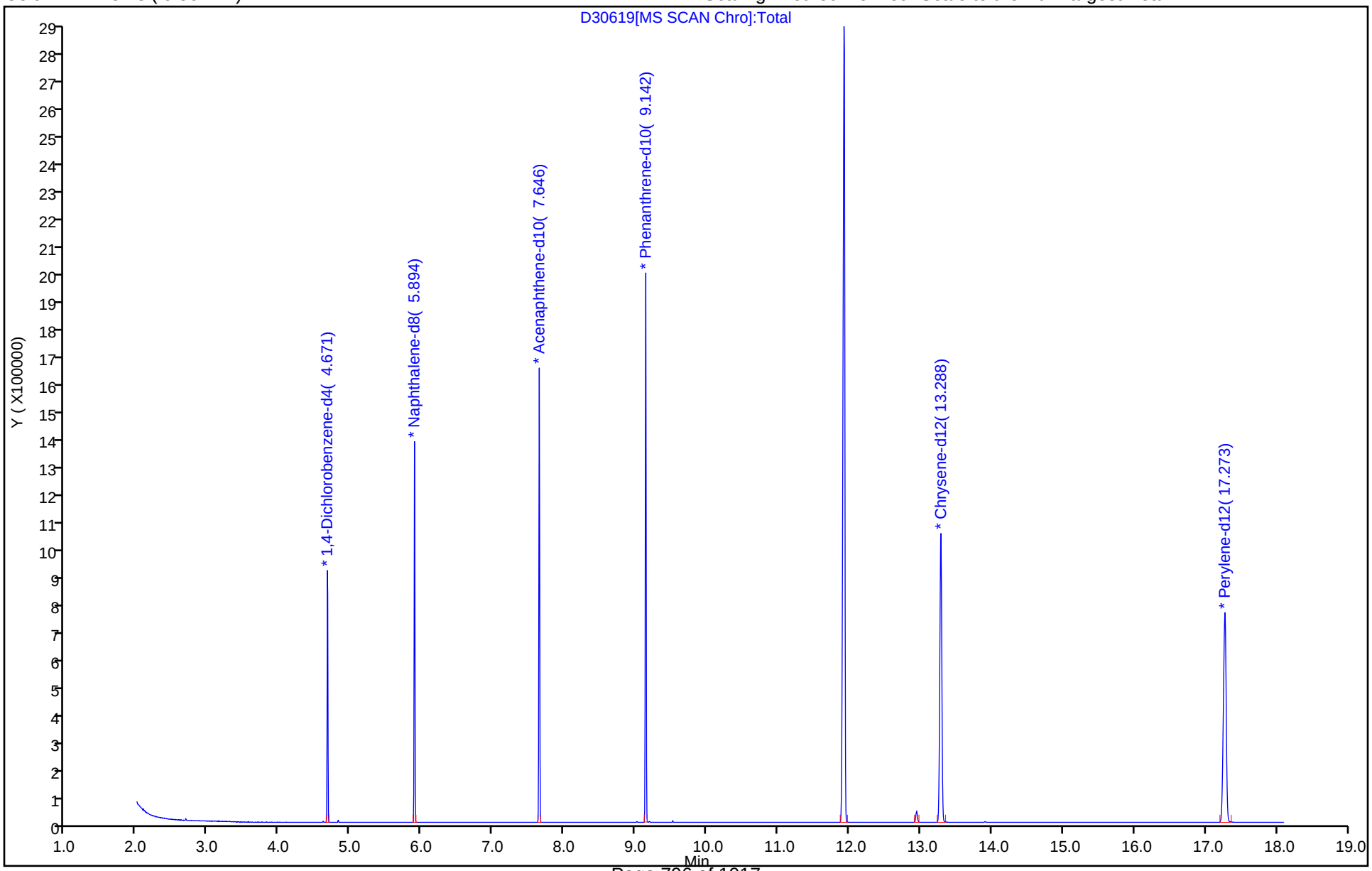
Report Date: 06-Dec-2018 12:13:30 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30619.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 20:57:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD200 FAM | | | Worklist Smp#: | 20 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 19 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 440162

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/05/2018 21:46 Calibration End Date: 12/06/2018 00:16 Calibration ID: 34484

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD010 280-440162/23 | D30622.D |
| Level 2 | STD020 280-440162/24 | D30623.D |
| Level 3 | STD050 280-440162/25 | D30624.D |
| Level 4 | STD080 280-440162/22 | D30621.D |
| Level 5 | STD120 280-440162/26 | D30625.D |
| Level 6 | STD160 280-440162/27 | D30626.D |
| Level 7 | STD200 280-440162/28 | D30627.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Benzidine | 0.7404<br>0.7915 | 0.7929<br>0.7601 | 0.8228 | 0.8226 | 0.8157 | Ave | | 0.7923 | | | | 4.0 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 440162

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/05/2018 21:46 Calibration End Date: 12/06/2018 00:16 Calibration ID: 34484

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD010 280-440162/23 | D30622.D |
| Level 2 | STD020 280-440162/24 | D30623.D |
| Level 3 | STD050 280-440162/25 | D30624.D |
| Level 4 | STD080 280-440162/22 | D30621.D |
| Level 5 | STD120 280-440162/26 | D30625.D |
| Level 6 | STD160 280-440162/27 | D30626.D |
| Level 7 | STD200 280-440162/28 | D30627.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Benzidine | CRY | Ave | 142664<br>2362565 | 285005<br>2944429 | 772950 | 1233636 | 1783090 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 | 120 |

Curve Type Legend:
Ave = Average ISTD

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 440162

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/05/2018 21:46 Calibration End Date: 12/06/2018 00:16 Calibration ID: 34484

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD010 280-440162/23 | D30622.D |
| Level 2 | STD020 280-440162/24 | D30623.D |
| Level 3 | STD050 280-440162/25 | D30624.D |
| Level 4 | STD080 280-440162/22 | D30621.D |
| Level 5 | STD120 280-440162/26 | D30625.D |
| Level 6 | STD160 280-440162/27 | D30626.D |
| Level 7 | STD200 280-440162/28 | D30627.D |

| ANALYTE | PERCENT ERROR | | | | | | PERCENT ERROR LIMIT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 # LVL 7 # | LVL 2 # | LVL 3 # | LVL 4 # | LVL 5 # | LVL 6 # | LVL 1 LVL 7 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | LVL 6 |
| Benzidine | -6.6 | | | | | | 30 | | | | | |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30621.D
Lims ID: STD080 AFC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 05-Dec-2018 21:46:30 ALS Bottle#: 21 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD080 AFC
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub10

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:32 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:10:59

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.673 | 4.673 | 0.000 | 96 | 121189 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.896 | 5.896 | 0.000 | 99 | 496642 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.648 | 7.648 | 0.000 | 94 | 308691 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.139 | 9.139 | 0.000 | 97 | 667461 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.290 | 13.290 | 0.000 | 99 | 749798 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.270 | 17.270 | 0.000 | 98 | 784277 | 40.0 | 40.0 | |
| 133 Benzidine | 184 | 10.725 | 10.725 | 0.000 | 100 | 1233636 | 80.0 | 83.1 | |

## Reagents:

MS-AFCA080_00022 Amount Added: 200.00 Units: uL

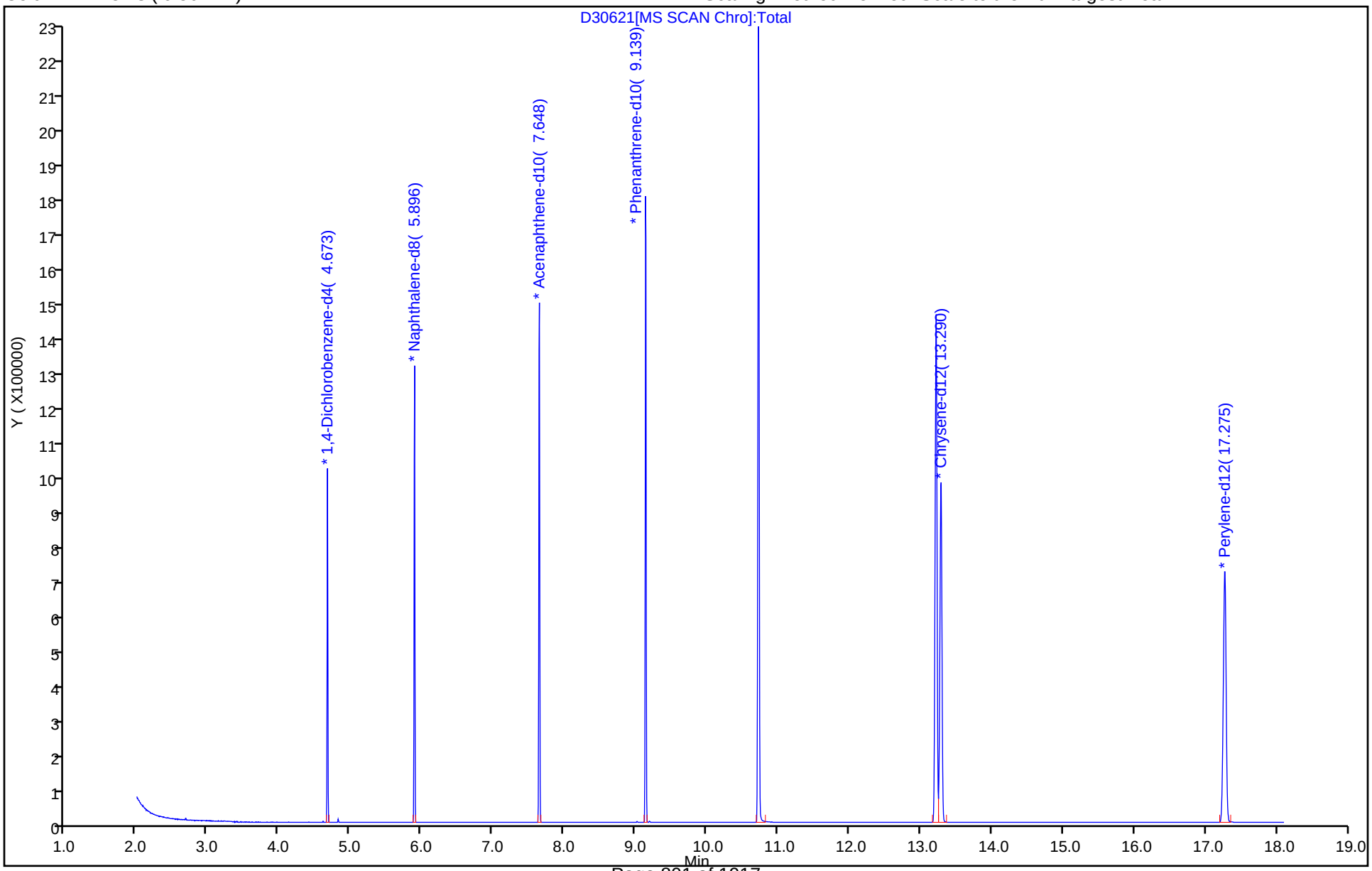
Report Date: 06-Dec-2018 12:13:32 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30621.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 21:46:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD080 AFC | | | Worklist Smp#: | 22 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 21 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30622.D
Lims ID: STD010 AFC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 05-Dec-2018 22:11:30 ALS Bottle#: 22 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD010 AFC
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub10

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:33 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:11:09

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.675 | 4.673 | 0.002 | 96 | 121592 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.893 | 5.896 | -0.003 | 99 | 499853 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.645 | 7.648 | -0.003 | 95 | 313544 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.141 | 9.139 | 0.002 | 97 | 687283 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.286 | 13.290 | -0.004 | 99 | 770767 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.272 | 17.270 | 0.002 | 98 | 810903 | 40.0 | 40.0 | |
| 133 Benzidine | 184 | 10.722 | 10.725 | -0.003 | 100 | 142664 | 10.0 | 9.34 | |

## Reagents:

MS-AFCA010_00017 Amount Added: 200.00 Units: uL

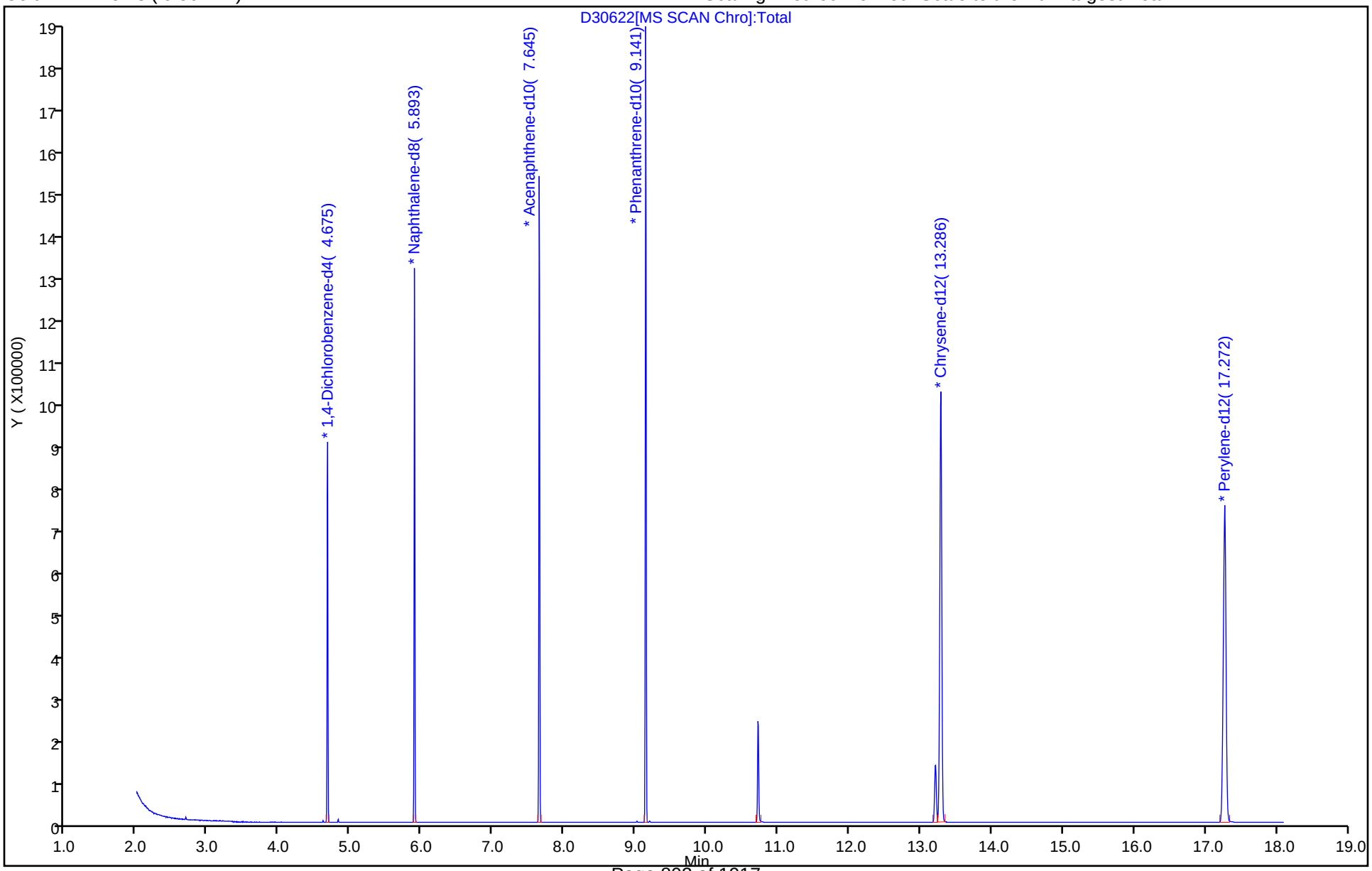
Report Date: 06-Dec-2018 12:13:33 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30622.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 22:11:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD010 AFC | | | Worklist Smp#: | 23 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 22 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30623.D
Lims ID: STD020 AFC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 05-Dec-2018 22:36:30 ALS Bottle#: 23 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD020 AFC
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub10

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:34 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:11:17

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.674 | 4.673 | 0.001 | 96 | 117051 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.892 | 5.896 | -0.004 | 99 | 474662 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.644 | 7.648 | -0.004 | 95 | 293155 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.140 | 9.139 | 0.001 | 98 | 649317 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.286 | 13.290 | -0.004 | 99 | 718877 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.271 | 17.270 | 0.001 | 98 | 762657 | 40.0 | 40.0 | |
| 133 Benzidine | 184 | 10.721 | 10.725 | -0.004 | 100 | 285005 | 20.0 | 20.0 | |

## Reagents:

MS-AFCA020_00018 Amount Added: 200.00 Units: uL

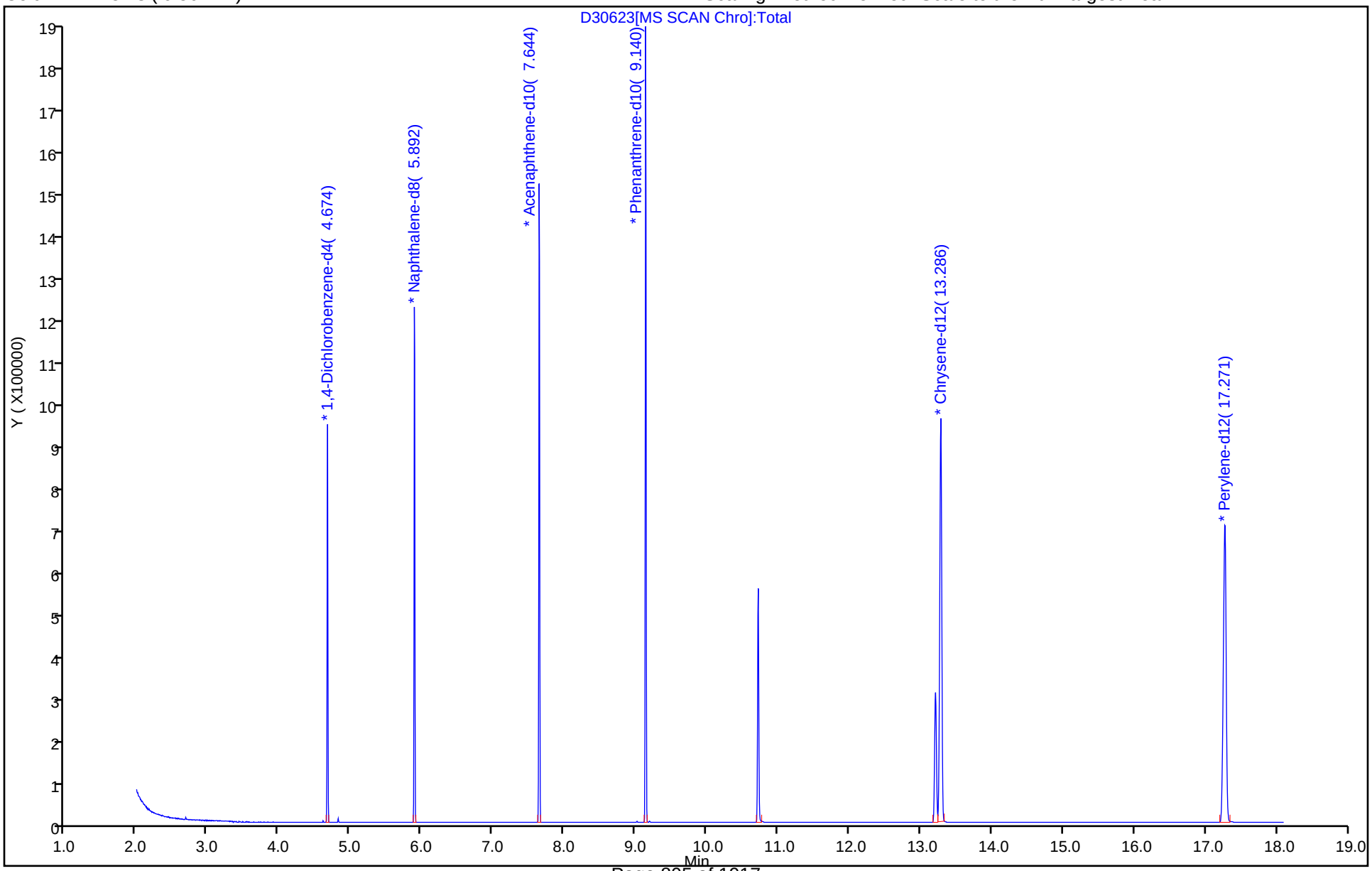
Report Date: 06-Dec-2018 12:13:34 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30623.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 22:36:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD020 AFC | | | Worklist Smp#: | 24 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 23 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30624.D
Lims ID: STD050 AFC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 05-Dec-2018 23:01:30 ALS Bottle#: 24 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD050 AFC
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub10

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:35 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:11:24

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.675 | 4.673 | 0.002 | 96 | 119338 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.893 | 5.896 | -0.003 | 99 | 485359 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.645 | 7.648 | -0.003 | 95 | 309586 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.141 | 9.139 | 0.002 | 97 | 667847 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.281 | 13.290 | -0.009 | 99 | 751526 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.272 | 17.270 | 0.002 | 99 | 780654 | 40.0 | 40.0 | |
| 133 Benzidine | 184 | 10.722 | 10.725 | -0.003 | 100 | 772950 | 50.0 | 51.9 | |

## Reagents:

MS-AFCA050_00017 Amount Added: 200.00 Units: uL

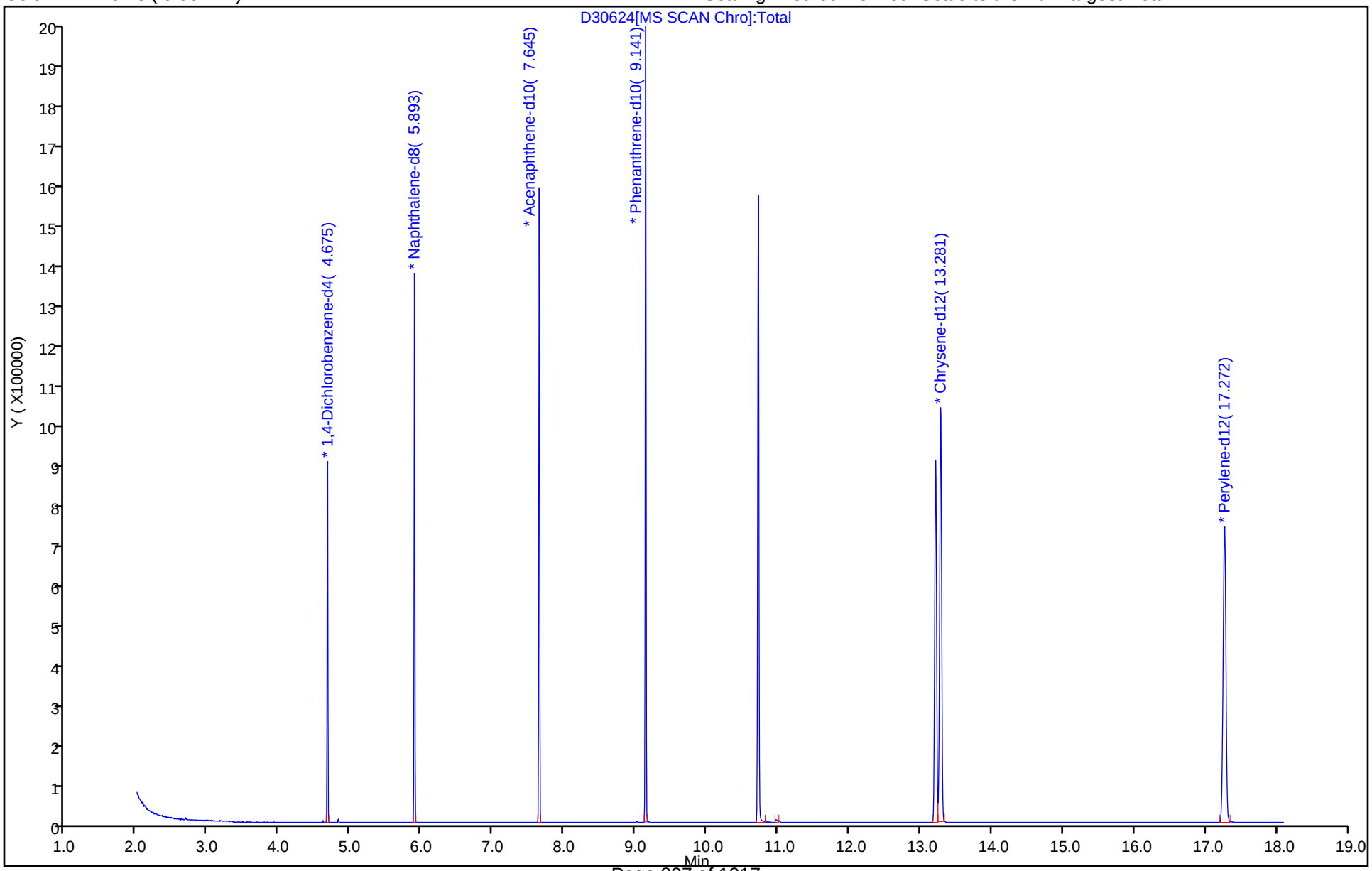
Report Date: 06-Dec-2018 12:13:36 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30624.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 23:01:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD050 AFC | | | Worklist Smp#: | 25 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 24 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30625.D
Lims ID: STD120 AFC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 05-Dec-2018 23:26:30 ALS Bottle#: 25 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD120 AFC
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub10

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:36 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:11:31

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.671 | 4.673 | -0.002 | 96 | 115964 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.895 | 5.896 | -0.001 | 99 | 482288 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.647 | 7.648 | -0.001 | 94 | 298920 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.143 | 9.139 | 0.004 | 97 | 647437 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.283 | 13.290 | -0.007 | 99 | 728612 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.273 | 17.270 | 0.003 | 98 | 759387 | 40.0 | 40.0 | |
| 133 Benzidine | 184 | 10.729 | 10.725 | 0.004 | 100 | 1783090 | 120.0 | 123.6 | |

## Reagents:

MS-AFCA120_00017 Amount Added: 200.00 Units: uL

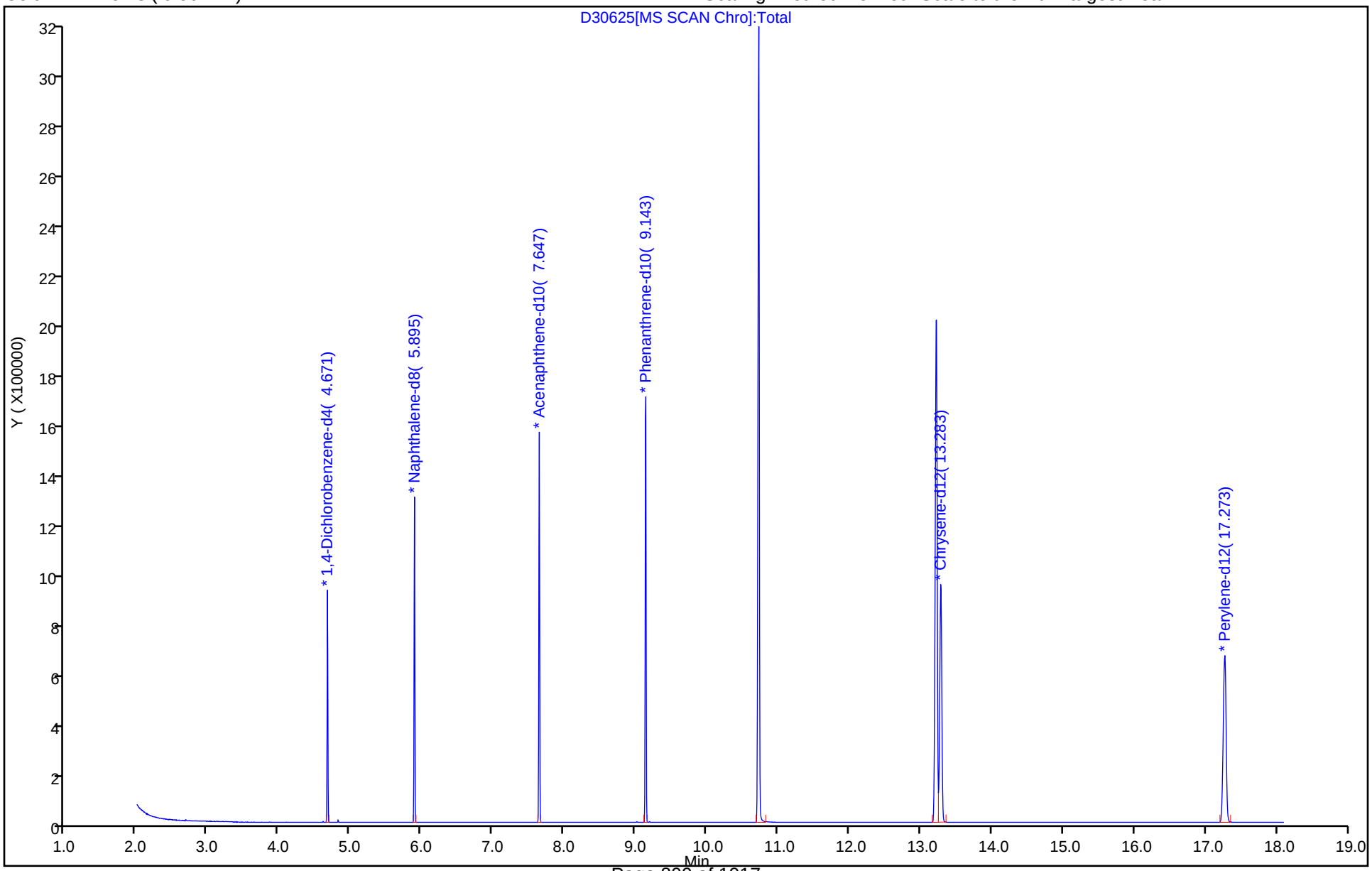
Report Date: 06-Dec-2018 12:13:37 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30625.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 23:26:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD120 AFC | | | Worklist Smp#: | 26 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 25 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30626.D
Lims ID: STD160 AFC
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 05-Dec-2018 23:51:30 ALS Bottle#: 26 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD160 AFC
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub10

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:37 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:11:40

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.672 | 4.673 | -0.001 | 96 | 117656 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.895 | 5.896 | -0.001 | 99 | 479673 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.647 | 7.648 | -0.001 | 94 | 305576 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.138 | 9.139 | -0.001 | 98 | 660353 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.289 | 13.290 | -0.001 | 99 | 746207 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.274 | 17.270 | 0.004 | 98 | 774937 | 40.0 | 40.0 | |
| 133 Benzidine | 184 | 10.730 | 10.725 | 0.005 | 100 | 2362565 | 160.0 | 159.8 | |

## Reagents:

MS-AFCA160_00018 Amount Added: 200.00 Units: uL

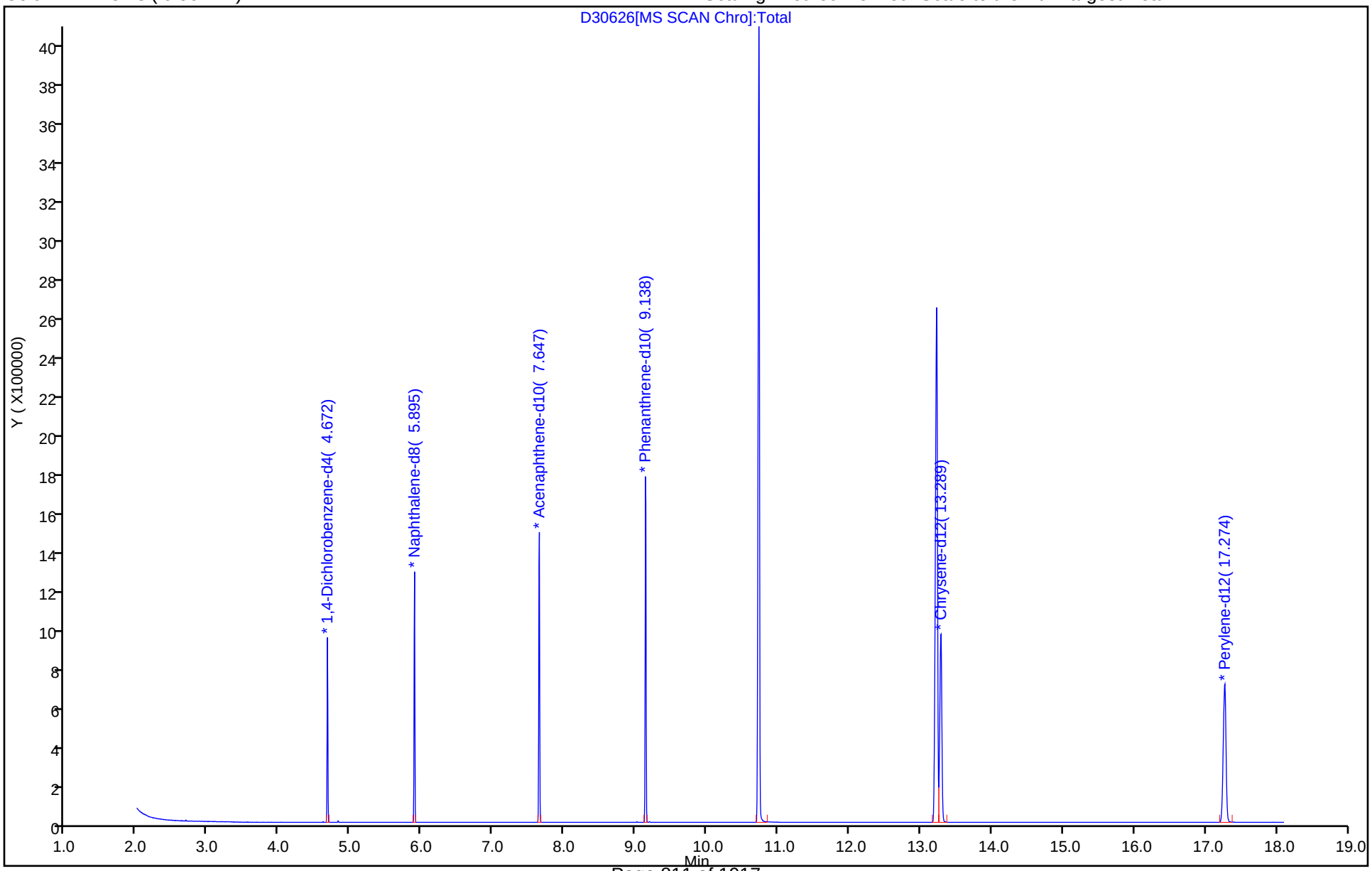
Report Date: 06-Dec-2018 12:13:38 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30626.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 23:51:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD160 AFC | | | Worklist Smp#: | 27 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 26 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D
Lims ID: STD200 AFC
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 06-Dec-2018 00:16:30 ALS Bottle#: 27 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD200 AFC
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub10

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:38 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:11:50

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.674 | 4.673 | 0.001 | 96 | 118922 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.892 | 5.896 | -0.004 | 99 | 494141 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.644 | 7.648 | -0.004 | 95 | 311171 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.140 | 9.139 | 0.001 | 98 | 669188 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.285 | 13.290 | -0.005 | 99 | 774783 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.270 | 17.270 | 0.000 | 98 | 795773 | 40.0 | 40.0 | |
| 133 Benzidine | 184 | 10.737 | 10.725 | 0.012 | 100 | 2944429 | 200.0 | 191.9 | |

## Reagents:

MS-AFCA200_00017 Amount Added: 200.00 Units: uL

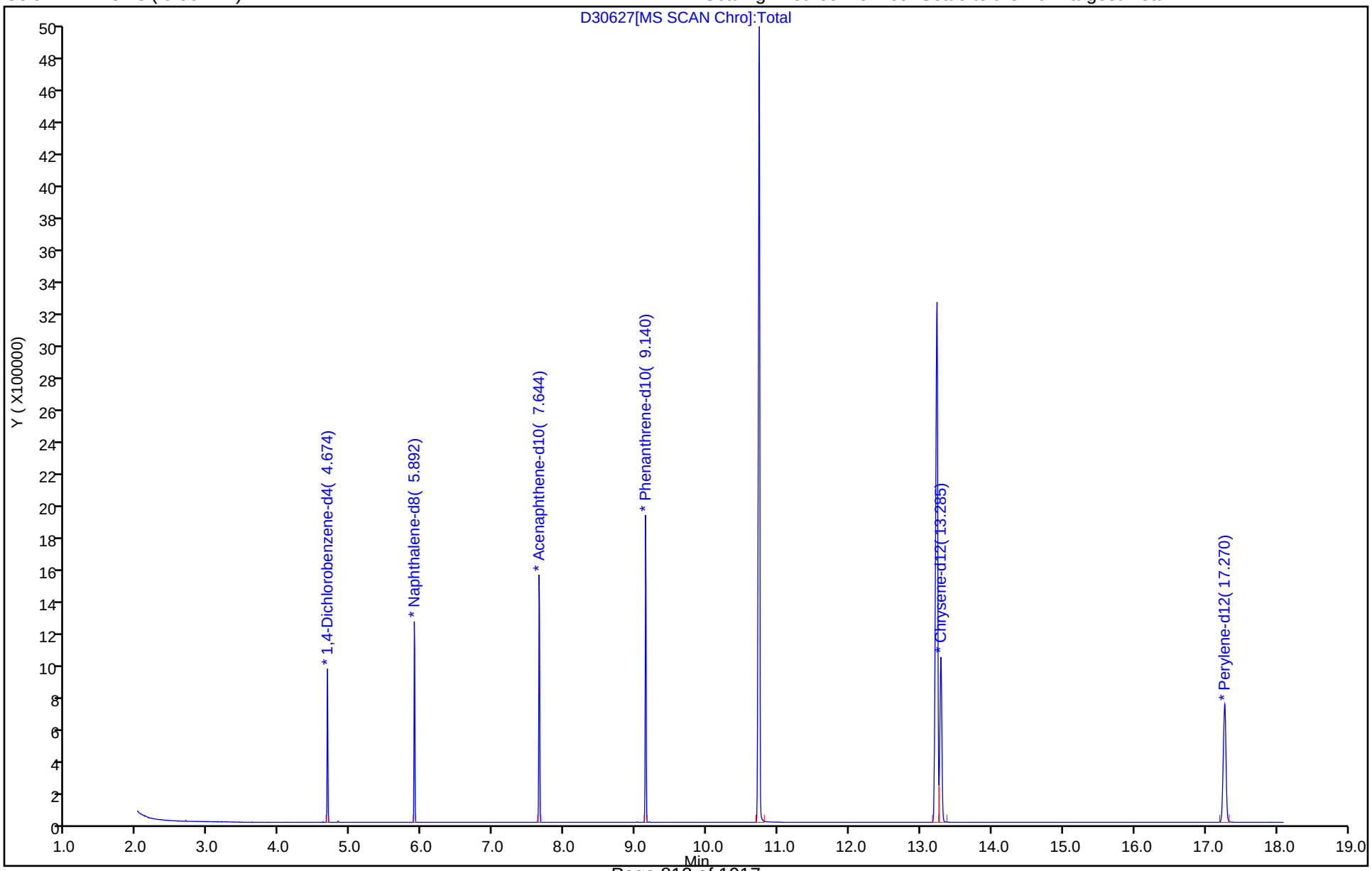
Report Date: 06-Dec-2018 12:13:39 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 06-Dec-2018 00:16:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD200 AFC | | | Worklist Smp#: | 28 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 27 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 440302

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/06/2018 08:53 Calibration End Date: 12/06/2018 11:21 Calibration ID: 34500

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD010 280-440302/4 | D30632.D |
| Level 2 | STD020 280-440302/5 | D30633.D |
| Level 3 | STD050 280-440302/6 | D30634.D |
| Level 4 | STD080 280-440302/3 | D30631.D |
| Level 5 | STD120 280-440302/7 | D30635.D |
| Level 6 | STD160 280-440302/8 | D30636.D |
| Level 7 | STD200 280-440302/9 | D30637.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Benzaldehyde | 1.1988<br>1.2212 | 1.2333<br>1.2134 | 1.2343 | 1.2462 | 1.2095 | Ave | | 1.2224 | | | | 1.3 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 440302

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/06/2018 08:53 Calibration End Date: 12/06/2018 11:21 Calibration ID: 34500

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD010 280-440302/4 | D30632.D |
| Level 2 | STD020 280-440302/5 | D30633.D |
| Level 3 | STD050 280-440302/6 | D30634.D |
| Level 4 | STD080 280-440302/3 | D30631.D |
| Level 5 | STD120 280-440302/7 | D30635.D |
| Level 6 | STD160 280-440302/8 | D30636.D |
| Level 7 | STD200 280-440302/9 | D30637.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Benzaldehyde | DCBd 4 | Ave | 36028<br>579635 | 74371<br>705350 | 190475 | 309338 | 451396 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 | 120 |

Curve Type Legend:
Ave = Average ISTD

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 440302

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/06/2018 08:53 Calibration End Date: 12/06/2018 11:21 Calibration ID: 34500

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD010 280-440302/4 | D30632.D |
| Level 2 | STD020 280-440302/5 | D30633.D |
| Level 3 | STD050 280-440302/6 | D30634.D |
| Level 4 | STD080 280-440302/3 | D30631.D |
| Level 5 | STD120 280-440302/7 | D30635.D |
| Level 6 | STD160 280-440302/8 | D30636.D |
| Level 7 | STD200 280-440302/9 | D30637.D |

| ANALYTE | PERCENT ERROR | | | | | | PERCENT ERROR LIMIT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 # LVL 7 # | LVL 2 # | LVL 3 # | LVL 4 # | LVL 5 # | LVL 6 # | LVL 1 LVL 7 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | LVL 6 |
| Benzaldehyde | -1.9 | | | | | | 30 | | | | | |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30631.D
Lims ID: STD080 BZHD
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Dec-2018 08:53:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD080 BZHD
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub6

Method: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 07-Dec-2018 08:57:40 Calib Date: 06-Dec-2018 18:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30653.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: kiekeld Date: 07-Dec-2018 07:54:06

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.673 | 4.673 | 0.000 | 96 | 124113 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.891 | 5.891 | 0.000 | 99 | 499862 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.644 | 7.644 | 0.000 | 95 | 313510 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.139 | 9.139 | 0.000 | 97 | 684843 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.274 | 13.274 | 0.000 | 99 | 747988 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.259 | 17.259 | 0.000 | 98 | 769804 | 40.0 | 40.0 | |
| 22 Benzaldehyde | 106 | 4.267 | 4.267 | 0.000 | 98 | 309338 | 80.0 | 81.6 | |

## Reagents:

MS-BZHDA080_00018 Amount Added: 200.00 Units: uL

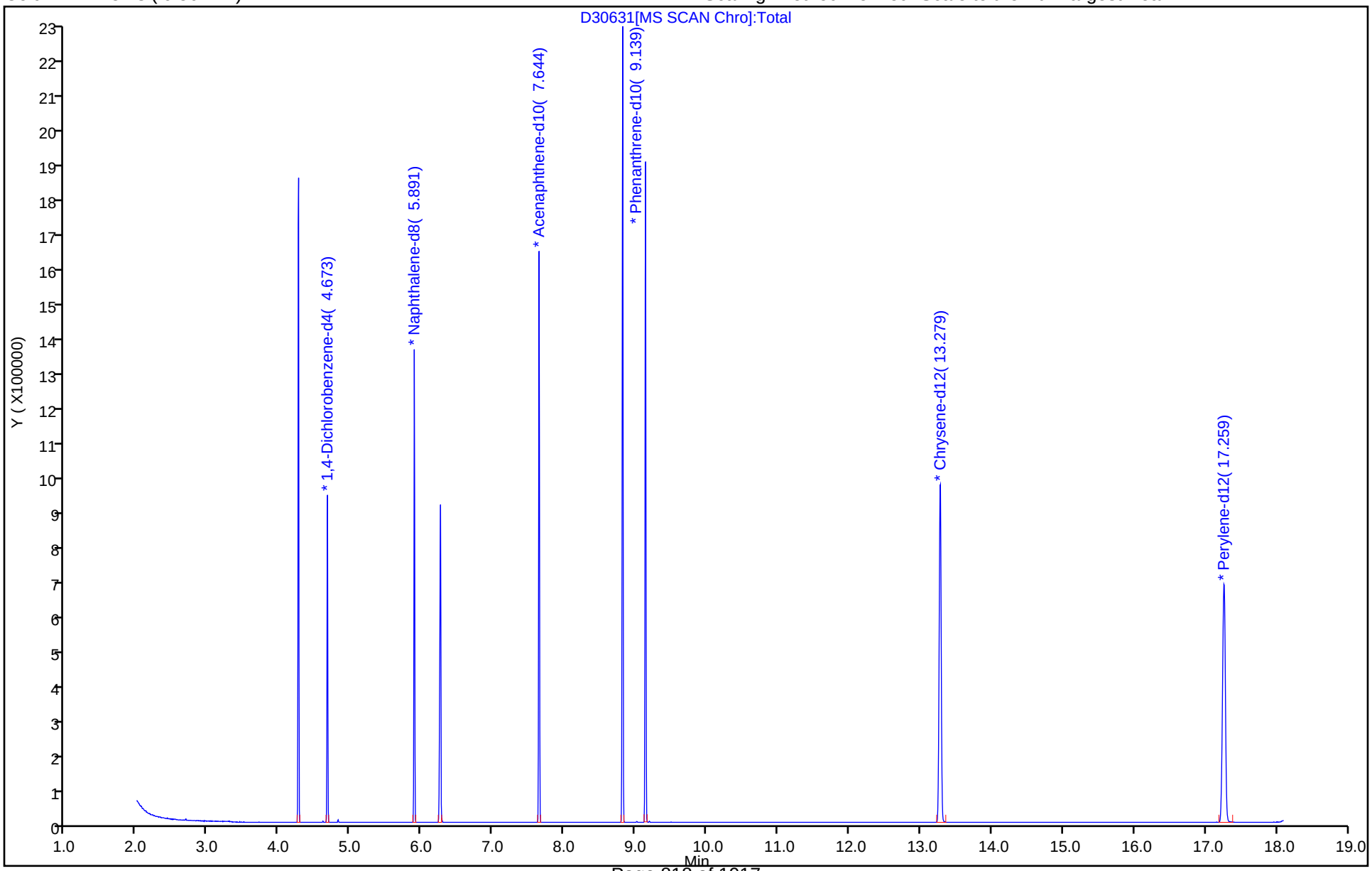
Report Date: 07-Dec-2018 08:57:40 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30631.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 06-Dec-2018 08:53:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD080 BZHD | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 07-Dec-2018 08:57:42 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30632.D
Lims ID: STD010 BZHD
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Dec-2018 09:17:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD010 BZHD
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub6

Method: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 07-Dec-2018 08:57:41 Calib Date: 06-Dec-2018 18:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30653.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: kiekeld Date: 07-Dec-2018 08:55:04

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.669 | 4.673 | -0.004 | 97 | 120213 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.892 | 5.891 | 0.001 | 99 | 490230 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.645 | 7.644 | 0.001 | 93 | 304811 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.135 | 9.139 | -0.004 | 98 | 670058 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.275 | 13.274 | 0.001 | 99 | 747931 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.260 | 17.259 | 0.001 | 98 | 773572 | 40.0 | 40.0 | |
| 22 Benzaldehyde | 106 | 4.263 | 4.267 | -0.004 | 97 | 36028 | 10.0 | 9.81 | |

## Reagents:

MS-BZHDA010_00019 Amount Added: 200.00 Units: uL

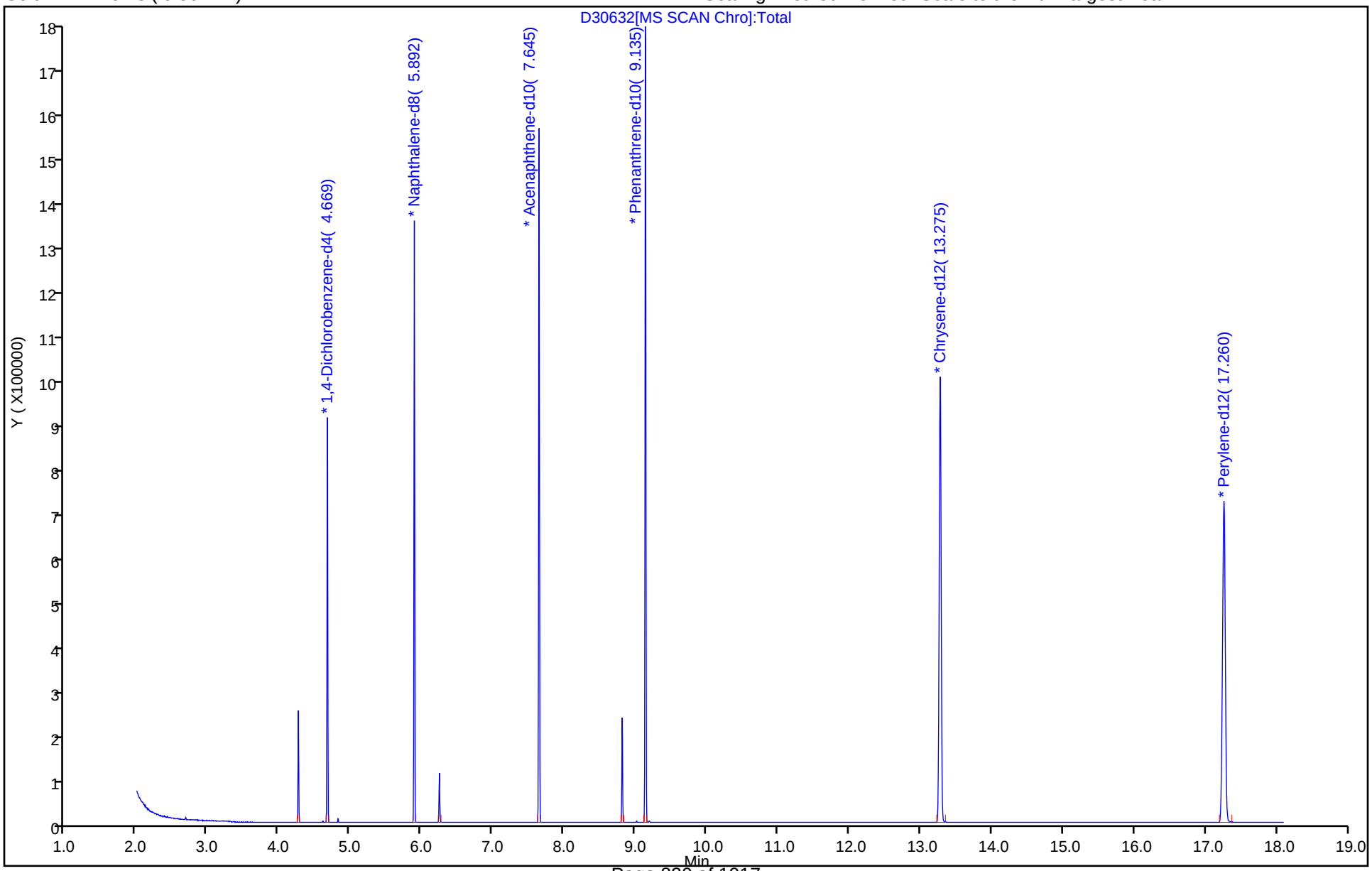
Report Date: 07-Dec-2018 08:57:42 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30632.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 06-Dec-2018 09:17:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD010 BZHD | | | Worklist Smp#: | 4 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 3 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 07-Dec-2018 08:57:43 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30633.D
Lims ID: STD020 BZHD
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Dec-2018 09:42:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD020 BZHD
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub6

Method: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 07-Dec-2018 08:57:42 Calib Date: 06-Dec-2018 18:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30653.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: kiekeld Date: 07-Dec-2018 08:55:19

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.670 | 4.673 | -0.003 | 97 | 120606 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.894 | 5.891 | 0.003 | 99 | 489540 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.646 | 7.644 | 0.002 | 95 | 301792 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.137 | 9.139 | -0.002 | 98 | 662058 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.277 | 13.274 | 0.003 | 99 | 741737 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.262 | 17.259 | 0.003 | 98 | 776431 | 40.0 | 40.0 | |
| 22 Benzaldehyde | 106 | 4.264 | 4.267 | -0.003 | 98 | 74371 | 20.0 | 20.2 | |

## Reagents:

MS-BZHDA020_00019 Amount Added: 200.00 Units: uL

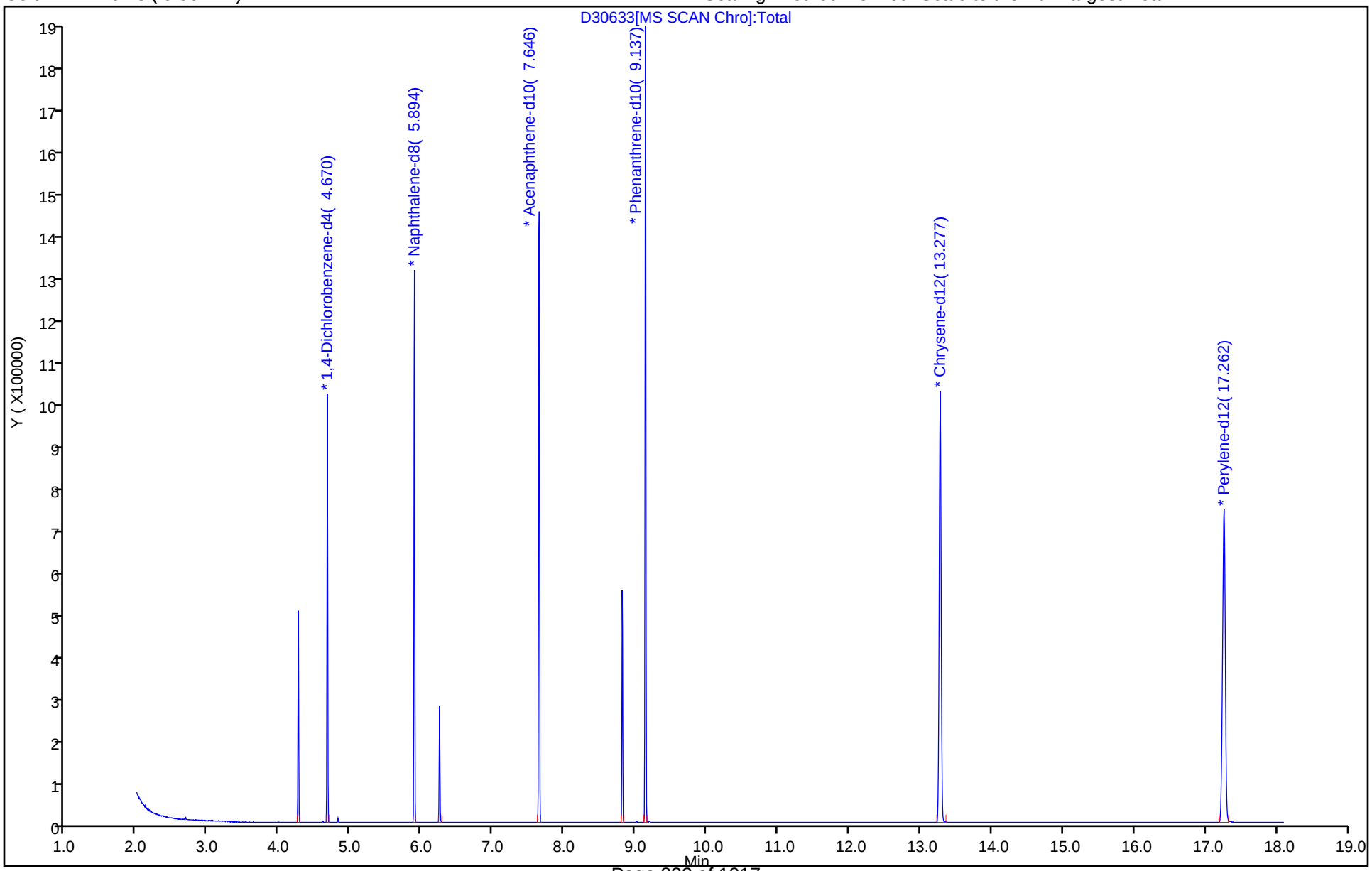
Report Date: 07-Dec-2018 08:57:43 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30633.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 06-Dec-2018 09:42:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD020 BZHD | | | Worklist Smp#: | 5 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 4 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30634.D
Lims ID: STD050 BZHD
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Dec-2018 10:07:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD050 BZHD
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub6

Method: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 07-Dec-2018 08:57:44 Calib Date: 06-Dec-2018 18:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30653.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: kiekeld Date: 07-Dec-2018 08:55:31

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.670 | 4.673 | -0.003 | 97 | 123451 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.893 | 5.891 | 0.002 | 99 | 493568 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.645 | 7.644 | 0.001 | 95 | 307227 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.136 | 9.139 | -0.003 | 98 | 678343 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.276 | 13.274 | 0.002 | 99 | 756851 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.267 | 17.259 | 0.008 | 98 | 792695 | 40.0 | 40.0 | |
| 22 Benzaldehyde | 106 | 4.264 | 4.267 | -0.003 | 98 | 190475 | 50.0 | 50.5 | |

## Reagents:

MS-BZHDA050_00018 Amount Added: 200.00 Units: uL

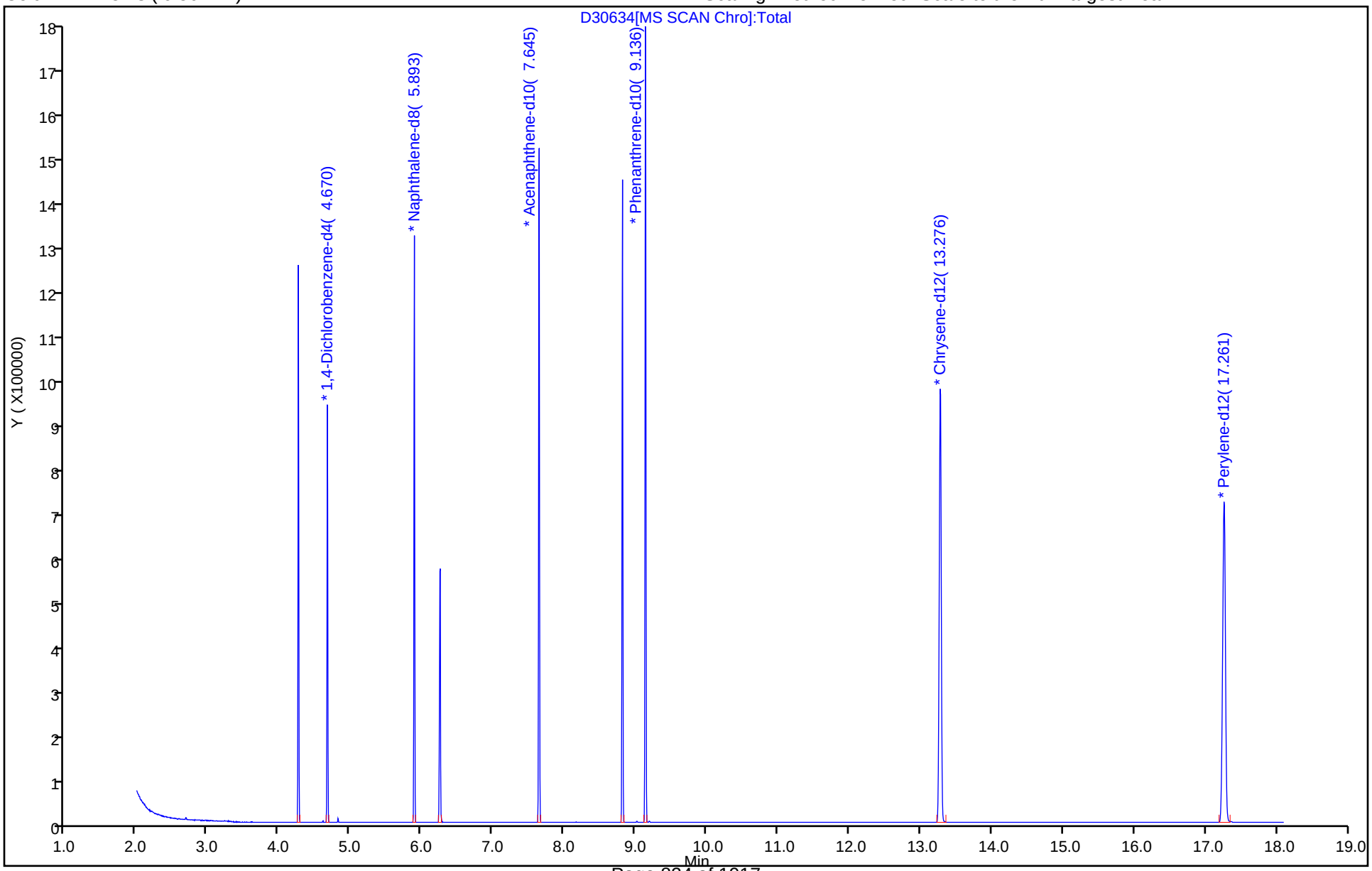
Report Date: 07-Dec-2018 08:57:44 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30634.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 06-Dec-2018 10:07:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD050 BZHD | | | Worklist Smp#: | 6 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 5 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 07-Dec-2018 08:57:46 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30635.D
Lims ID: STD120 BZHD
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Dec-2018 10:32:30 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD120 BZHD
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub6

Method: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 07-Dec-2018 08:57:45 Calib Date: 06-Dec-2018 18:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30653.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: kiekeld Date: 07-Dec-2018 08:55:39

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.670 | 4.673 | -0.003 | 96 | 124405 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.894 | 5.891 | 0.003 | 99 | 503647 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.646 | 7.644 | 0.002 | 94 | 308403 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.136 | 9.139 | -0.003 | 98 | 670988 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.277 | 13.274 | 0.002 | 99 | 750098 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.262 | 17.259 | 0.003 | 98 | 784707 | 40.0 | 40.0 | |
| 22 Benzaldehyde | 106 | 4.264 | 4.267 | -0.003 | 98 | 451396 | 120.0 | 118.7 | |

## Reagents:

MS-BZHDA120_00018 Amount Added: 200.00 Units: uL

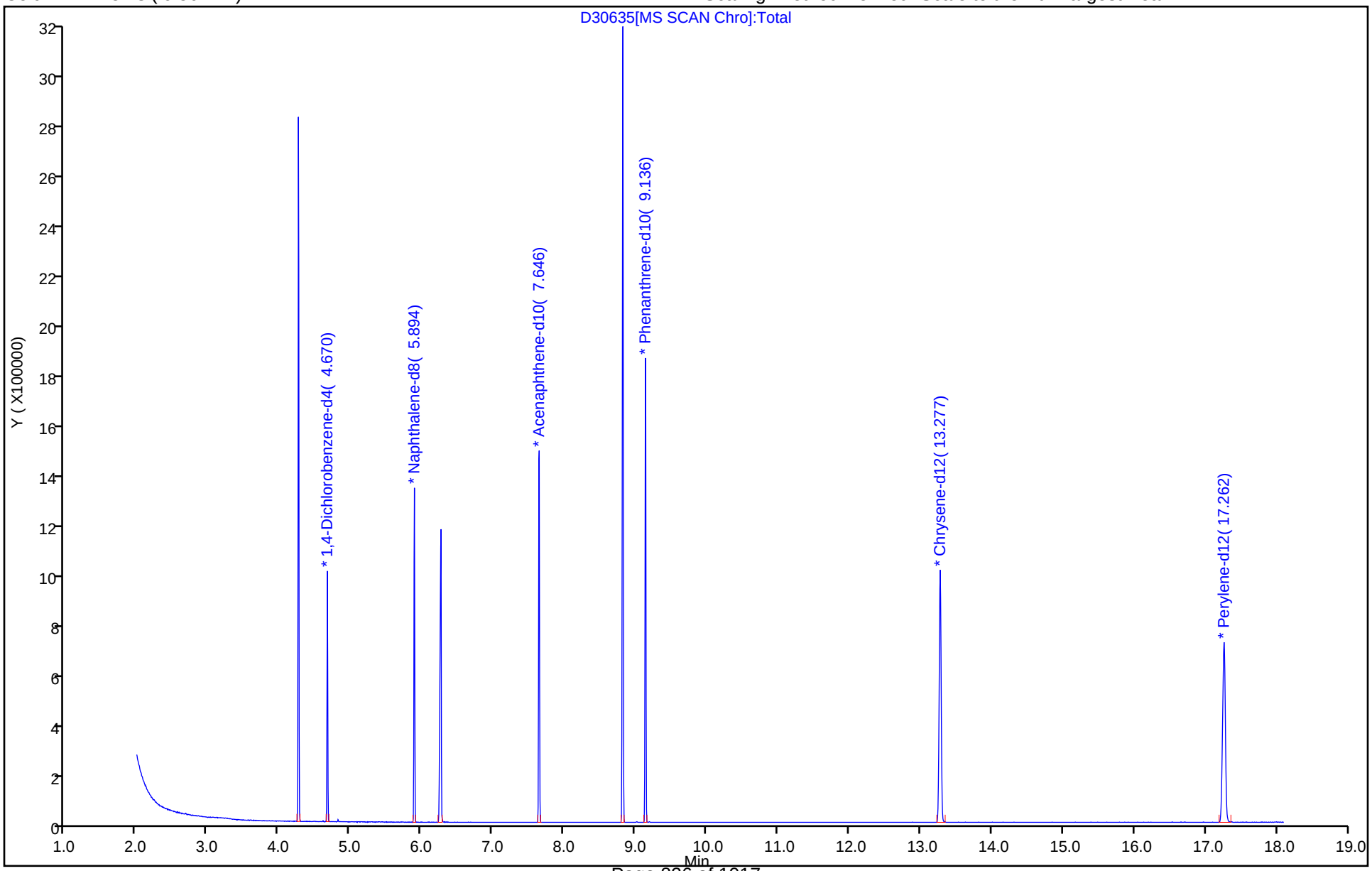
Report Date: 07-Dec-2018 08:57:46 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30635.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 06-Dec-2018 10:32:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD120 BZHD | | | Worklist Smp#: | 7 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 6 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30636.D
Lims ID: STD160 BZHD
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 06-Dec-2018 10:56:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD160 BZHD
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub6

Method: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 07-Dec-2018 08:57:46 Calib Date: 06-Dec-2018 18:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30653.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: kiekeld Date: 07-Dec-2018 08:55:48

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.670 | 4.673 | -0.003 | 96 | 118659 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.893 | 5.891 | 0.002 | 99 | 498789 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.645 | 7.644 | 0.001 | 94 | 312014 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.141 | 9.139 | 0.002 | 97 | 675500 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.276 | 13.274 | 0.002 | 99 | 736934 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.266 | 17.259 | 0.007 | 98 | 777220 | 40.0 | 40.0 | |
| 22 Benzaldehyde | 106 | 4.269 | 4.267 | 0.002 | 98 | 579635 | 160.0 | 159.8 | |

## Reagents:

MS-BZHDA160_00018 Amount Added: 200.00 Units: uL

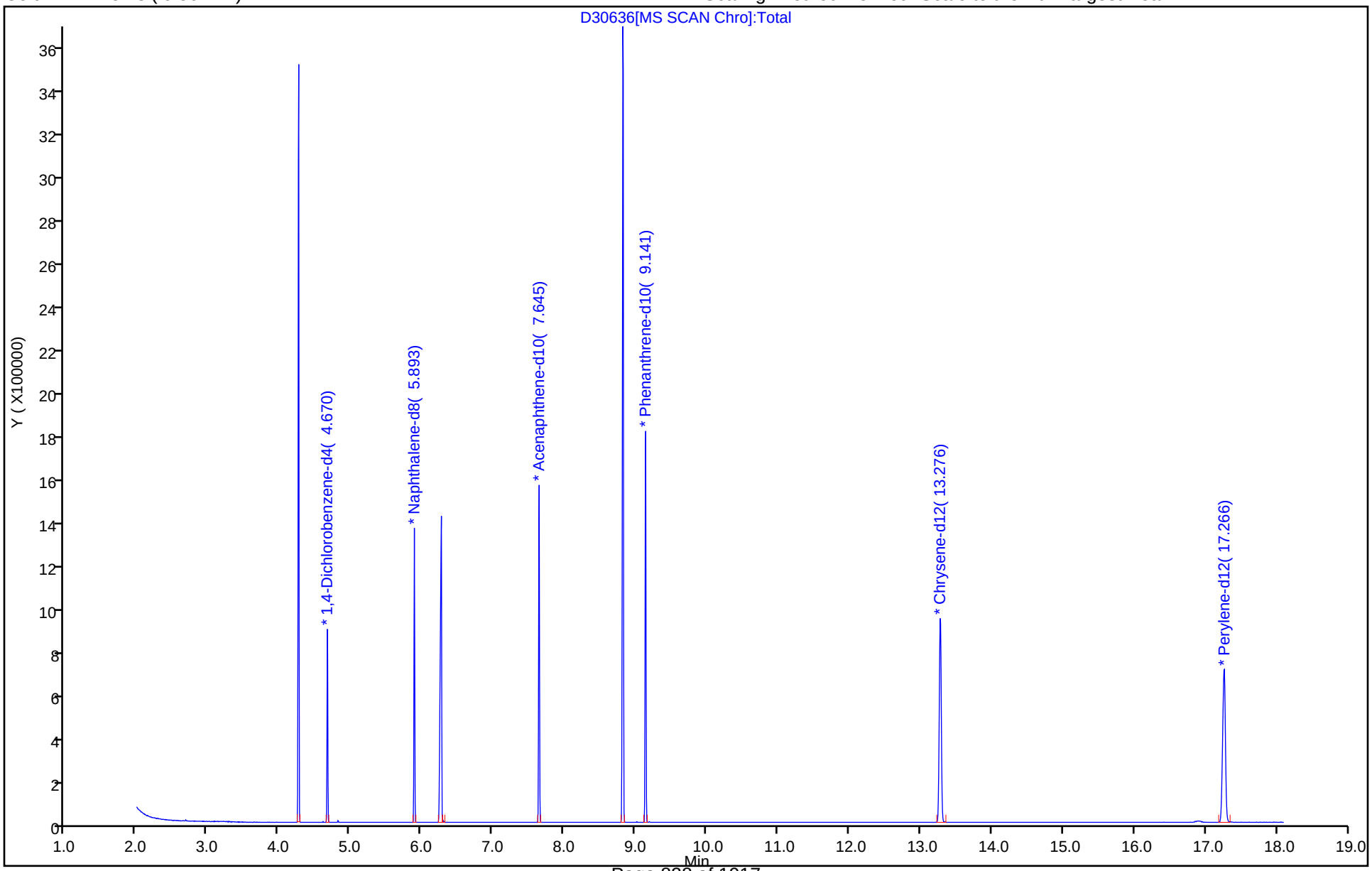
Report Date: 07-Dec-2018 08:57:47 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30636.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 06-Dec-2018 10:56:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD160 BZHD | | | Worklist Smp#: | 8 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 7 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 07-Dec-2018 08:57:48 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30637.D
Lims ID: STD200 BZHD
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 06-Dec-2018 11:21:30 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD200 BZHD
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub6

Method: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 07-Dec-2018 08:57:47 Calib Date: 06-Dec-2018 18:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30653.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: kiekeld Date: 07-Dec-2018 08:56:01

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.670 | 4.673 | -0.003 | 97 | 116257 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.893 | 5.891 | 0.002 | 99 | 485178 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.645 | 7.644 | 0.001 | 94 | 300556 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.141 | 9.139 | 0.002 | 98 | 655483 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.276 | 13.274 | 0.002 | 99 | 709435 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.261 | 17.259 | 0.002 | 98 | 733591 | 40.0 | 40.0 | |
| 22 Benzaldehyde | 106 | 4.269 | 4.267 | 0.002 | 98 | 705350 | 200.0 | 198.5 | |

## Reagents:

MS-BZHDA200_00018 Amount Added: 200.00 Units: uL

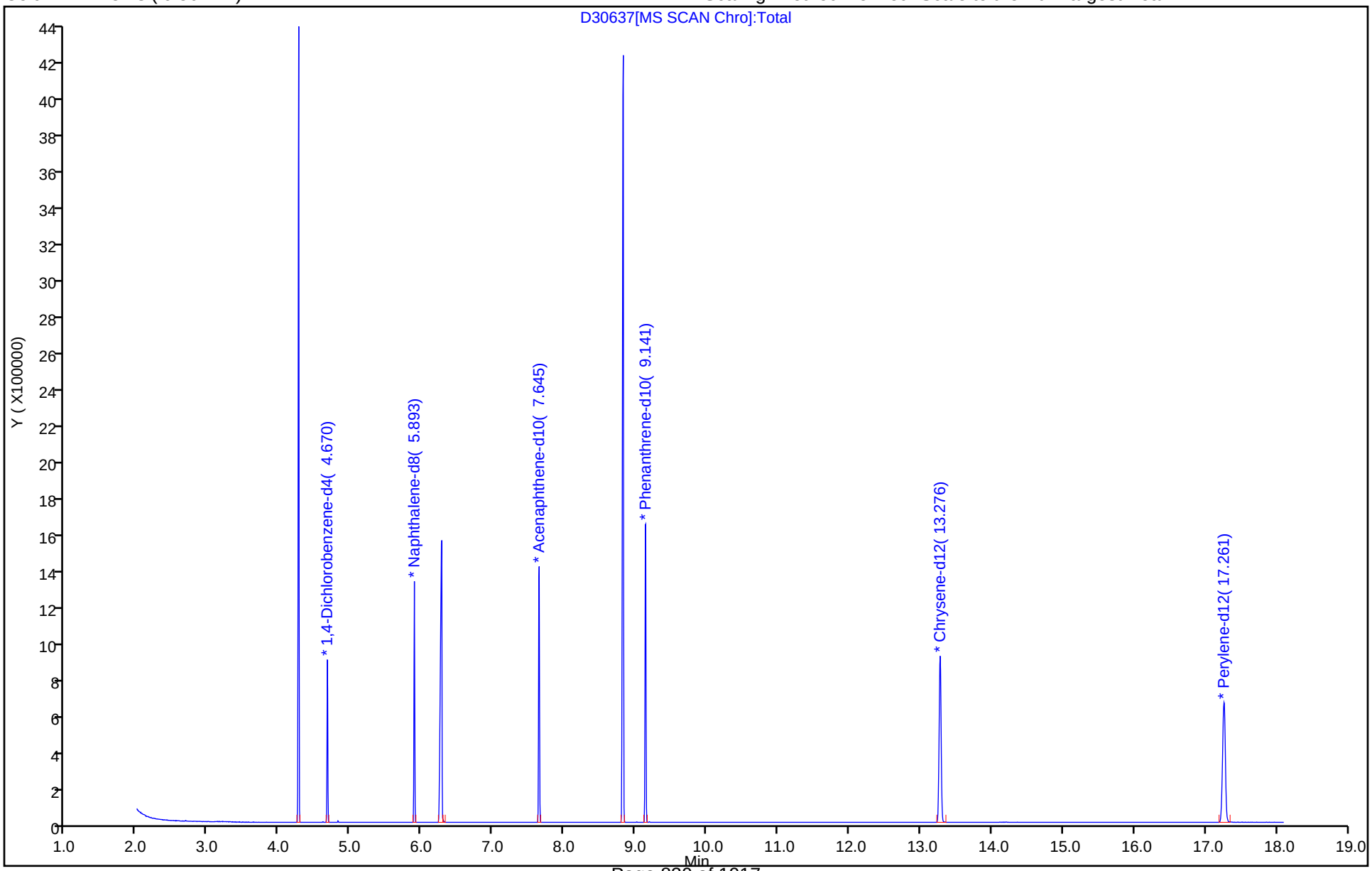
Report Date: 07-Dec-2018 08:57:48 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30637.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 06-Dec-2018 11:21:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD200 BZHD | | | Worklist Smp#: | 9 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 8 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD004 280-443607/4 | D31077.D |
| Level 2 | STD010 280-443607/5 | D31078.D |
| Level 3 | STD020 280-443607/6 | D31079.D |
| Level 4 | STD050 280-443607/7 | D31080.D |
| Level 5 | ICIS 280-443607/3 | D31076.D |
| Level 6 | STD120 280-443607/8 | D31081.D |
| Level 7 | STD160 280-443607/9 | D31082.D |
| Level 8 | STD200 280-443607/10 | D31083.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| 1,4-Dioxane | 0.7694<br>0.7108 | 0.7433<br>0.6959 | 0.7317<br>0.7015 | 0.7400 | 0.7248 | Ave | | 0.7272 | | | | 3.3 | | 20.0 | | | |
| N-Nitrosodimethylamine | 1.2038<br>1.1344 | 1.1336<br>1.1087 | 1.1671<br>1.1420 | 1.1704 | 1.1686 | Ave | | 1.1536 | | | | 2.6 | | 20.0 | | | |
| Pyridine | 1.9349<br>1.8176 | 1.8923<br>1.7524 | 1.8683<br>1.7817 | 1.8724 | 1.8734 | Ave | | 1.8491 | | | | 3.3 | | 20.0 | | | |
| Phenol | 2.1864<br>2.0316 | 2.1339<br>1.9832 | 2.1527<br>2.0291 | 2.1460 | 2.1282 | Ave | | 2.0989 | | | 0.8000 | 3.5 | | 20.0 | | | |
| Aniline | 2.6292<br>2.5609 | 2.6965<br>2.5057 | 2.6979<br>2.5710 | 2.6884 | 2.6475 | Ave | | 2.6246 | | | | 2.7 | | 20.0 | | | |
| Bis(2-chloroethyl)ether | 1.5967<br>1.4090 | 1.5839<br>1.3607 | 1.5797<br>1.3397 | 1.5533 | 1.5164 | Ave | | 1.4924 | | | 0.7000 | 7.1 | | 20.0 | | | |
| 2-Chlorophenol | 1.5113<br>1.4508 | 1.5421<br>1.4228 | 1.5560<br>1.4288 | 1.5073 | 1.5276 | Ave | | 1.4933 | | | 0.8000 | 3.5 | | 20.0 | | | |
| n-Decane | 1.6508<br>1.5288 | 1.6387<br>1.5097 | 1.5978<br>1.4643 | 1.6096 | 1.5785 | Ave | | 1.5723 | | | | 4.2 | | 20.0 | | | |
| 1,3-Dichlorobenzene | 1.6675<br>1.4747 | 1.6448<br>1.4297 | 1.6540<br>1.4232 | 1.6116 | 1.5795 | Ave | | 1.5606 | | | | 6.6 | | 20.0 | | | |
| 1,4-Dichlorobenzene | 1.6532<br>1.4972 | 1.6405<br>1.4517 | 1.6487<br>1.4383 | 1.6198 | 1.6040 | Ave | | 1.5692 | | | | 5.8 | | 20.0 | | | |
| Benzyl alcohol | 1.1051<br>1.0911 | 1.0886<br>1.0754 | 1.1446<br>1.1049 | 1.1364 | 1.1365 | Ave | | 1.1103 | | | | 2.3 | | 20.0 | | | |
| 1,2-Dichlorobenzene | 1.6306<br>1.4499 | 1.5595<br>1.4049 | 1.5804<br>1.3909 | 1.5565 | 1.5224 | Ave | | 1.5119 | | | | 5.8 | | 20.0 | | | |
| 2-Methylphenol | 1.5845<br>1.4945 | 1.5538<br>1.4538 | 1.5809<br>1.4839 | 1.5533 | 1.5675 | Ave | | 1.5340 | | | 0.7000 | 3.2 | | 20.0 | | | |
| bis (2-chloroisopropyl) ether | 2.1444<br>1.9204 | 2.0437<br>1.8656 | 2.1143<br>1.8246 | 2.0540 | 2.0230 | Ave | | 1.9988 | | | 0.0100 | 5.8 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| N-Nitrosodi-n-propylamine | 1.2318<br>1.0880 | 1.2246<br>1.0531 | 1.2295<br>1.0531 | 1.2261 | 1.1755 | Ave | | 1.1602 | | | 0.5000 | 7.0 | | 20.0 | | | |
| 3 & 4 Methylphenol | 1.6529<br>1.3942 | 1.6309<br>1.3203 | 1.6450<br>1.3179 | 1.5948 | 1.5688 | Ave | | 1.5156 | | | | 9.7 | | 20.0 | | | |
| 3-Methylphenol | 1.6529<br>1.3942 | 1.6309<br>1.3203 | 1.6450<br>1.3179 | 1.5948 | 1.5688 | Ave | | 1.5156 | | | | 9.7 | | 20.0 | | | |
| 4-Methylphenol | 1.6529<br>1.3942 | 1.6309<br>1.3203 | 1.6450<br>1.3179 | 1.5948 | 1.5688 | Ave | | 1.5156 | | | 0.6000 | 9.7 | | 20.0 | | | |
| Acetophenone | 2.3170<br>1.9549 | 2.2756<br>1.8547 | 2.2910<br>1.8377 | 2.2227 | 2.1501 | Ave | | 2.1129 | | | 0.0100 | 9.5 | | 20.0 | | | |
| Hexachloroethane | 0.6102<br>0.5757 | 0.6137<br>0.5728 | 0.6049<br>0.5512 | 0.6038 | 0.6069 | Ave | | 0.5924 | | | 0.3000 | 3.8 | | 20.0 | | | |
| Nitrobenzene | 0.4524<br>0.4273 | 0.4548<br>0.4268 | 0.4423<br>0.4056 | 0.4422 | 0.4502 | Ave | | 0.4377 | | | | 3.8 | | 20.0 | | | |
| Isophorone | 0.8362<br>0.7817 | 0.8333<br>0.7949 | 0.8304<br>0.7710 | 0.8213 | 0.8243 | Ave | | 0.8116 | | | 0.4000 | 3.1 | | 20.0 | | | |
| 2-Nitrophenol | 0.1898<br>0.1939 | 0.1967<br>0.1932 | 0.1959<br>0.1905 | 0.1968 | 0.2018 | Ave | | 0.1948 | | | 0.1000 | 2.0 | | 20.0 | | | |
| 2,4-Dimethylphenol | 0.4025<br>0.3716 | 0.4137<br>0.3693 | 0.3942<br>0.3568 | 0.3891 | 0.3985 | Ave | | 0.3870 | | | 0.2000 | 5.0 | | 20.0 | | | |
| Bis(2-chloroethoxy)methane | 0.4958<br>0.4425 | 0.4832<br>0.4520 | 0.4657<br>0.4275 | 0.4699 | 0.4673 | Ave | | 0.4630 | | | 0.3000 | 4.7 | | 20.0 | | | |
| Benzoic acid | +++++<br>0.3333 | 0.2633<br>0.3395 | 0.2804<br>0.3423 | 0.3171 | 0.3279 | Lin2 | -1.691 | 0.3392 | | | | | | | 0.9990 | | 0.9900 |
| 2,4-Dichlorophenol | 0.3289<br>0.2916 | 0.3109<br>0.2916 | 0.3148<br>0.2809 | 0.3092 | 0.3129 | Ave | | 0.3051 | | | 0.2000 | 5.1 | | 20.0 | | | |
| 1,2,4-Trichlorobenzene | 0.3632<br>0.3167 | 0.3569<br>0.3161 | 0.3429<br>0.2969 | 0.3392 | 0.3386 | Ave | | 0.3338 | | | | 6.7 | | 20.0 | | | |
| Naphthalene | 1.1779<br>0.9745 | 1.1244<br>0.9572 | 1.1114<br>0.9218 | 1.0680 | 1.0638 | Ave | | 1.0499 | | | 0.7000 | 8.6 | | 20.0 | | | |
| 4-Chloroaniline | 0.4632<br>0.4562 | 0.5028<br>0.4447 | 0.4963<br>0.4370 | 0.4831 | 0.4874 | Ave | | 0.4713 | | | 0.0100 | 5.2 | | 20.0 | | | |
| 2,6-Dichlorophenol | 0.3235<br>0.2848 | 0.3224<br>0.2844 | 0.3137<br>0.2712 | 0.3087 | 0.3112 | Ave | | 0.3025 | | | | 6.5 | | 20.0 | | | |
| Hexachlorobutadiene | 0.1803<br>0.1684 | 0.1858<br>0.1684 | 0.1826<br>0.1584 | 0.1812 | 0.1806 | Ave | | 0.1757 | | | 0.0100 | 5.4 | | 20.0 | | | |
| Caprolactam | 0.1863<br>0.1835 | 0.1782<br>0.1870 | 0.1877<br>0.1984 | 0.1884 | 0.1908 | Ave | | 0.1875 | | | | 3.1 | | 20.0 | | | |
| 4-Chloro-3-methylphenol | 0.3504<br>0.3267 | 0.3446<br>0.3339 | 0.3484<br>0.3234 | 0.3467 | 0.3492 | Ave | | 0.3404 | | | 0.2000 | 3.2 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| 2-Methylnaphthalene | 0.7975<br>0.6579 | 0.7717<br>0.6487 | 0.7413<br>0.6108 | 0.7250 | 0.7213 | Ave | | 0.7093 | | | 0.4000 | 9.1 | | 20.0 | | | |
| 1-Methylnaphthalene | 0.7132<br>0.6173 | 0.7217<br>0.6079 | 0.7018<br>0.5793 | 0.6827 | 0.6758 | Ave | | 0.6625 | | | | 8.1 | | 20.0 | | | |
| Hexachlorocyclopentadiene | 0.3371<br>0.3550 | 0.3505<br>0.3522 | 0.3578<br>0.3275 | 0.3710 | 0.3778 | Ave | | 0.3536 | | | 0.0500 | 4.6 | | 20.0 | | | |
| 1,2,4,5-Tetrachlorobenzene | 0.3647<br>0.2999 | 0.3549<br>0.2945 | 0.3572<br>0.2794 | 0.3330 | 0.3325 | Ave | | 0.3270 | | | 0.0100 | 9.8 | | 20.0 | | | |
| 2,4,6-Trichlorophenol | 0.4157<br>0.3642 | 0.4118<br>0.3516 | 0.3982<br>0.3353 | 0.3943 | 0.3926 | Ave | | 0.3830 | | | 0.2000 | 7.6 | | 20.0 | | | |
| 2,4,5-Trichlorophenol | 0.4296<br>0.4249 | 0.4406<br>0.4193 | 0.4333<br>0.4073 | 0.4411 | 0.4478 | Ave | | 0.4305 | | | 0.2000 | 3.1 | | 20.0 | | | |
| 1,1'-Biphenyl | 1.6605<br>1.3651 | 1.5944<br>1.3124 | 1.4980<br>1.2329 | 1.4715 | 1.4669 | Ave | | 1.4502 | | | | 9.8 | | 20.0 | | | |
| 2-Chloronaphthalene | 1.3013<br>1.1024 | 1.2410<br>1.0784 | 1.1709<br>1.0262 | 1.1598 | 1.1663 | Ave | | 1.1558 | | | 0.8000 | 7.6 | | 20.0 | | | |
| 2-Nitroaniline | 0.3940<br>0.4228 | 0.4111<br>0.4205 | 0.4166<br>0.4125 | 0.4235 | 0.4381 | Ave | | 0.4174 | | | 0.0100 | 3.0 | | 20.0 | | | |
| Dimethyl phthalate | 1.4077<br>1.2640 | 1.3826<br>1.2518 | 1.3740<br>1.2005 | 1.3316 | 1.3639 | Ave | | 1.3220 | | | 0.0100 | 5.6 | | 20.0 | | | |
| 1,3-Dinitrobenzene | 0.2129<br>0.2430 | 0.2125<br>0.2461 | 0.2319<br>0.2422 | 0.2370 | 0.2495 | Ave | | 0.2344 | | | | 6.1 | | 20.0 | | | |
| 2,6-Dinitrotoluene | 0.3106<br>0.3268 | 0.3259<br>0.3317 | 0.3297<br>0.3184 | 0.3369 | 0.3418 | Ave | | 0.3277 | | | 0.2000 | 3.0 | | 20.0 | | | |
| Acenaphthylene | 2.0608<br>1.7931 | 2.0425<br>1.7305 | 1.9844<br>1.6511 | 1.9239 | 1.9213 | Ave | | 1.8885 | | | 0.9000 | 7.9 | | 20.0 | | | |
| 3-Nitroaniline | 0.3651<br>0.3848 | 0.3822<br>0.3856 | 0.4012<br>0.3743 | 0.3904 | 0.3936 | Ave | | 0.3847 | | | 0.0100 | 2.9 | | 20.0 | | | |
| Acenaphthene | 1.2981<br>1.0479 | 1.2672<br>1.0175 | 1.2106<br>0.9635 | 1.1483 | 1.1315 | Ave | | 1.1356 | | | 0.9000 | 10.6 | | 20.0 | | | |
| 2,4-Dinitrophenol | +++++<br>0.2108 | 0.1555<br>0.2152 | 0.1827<br>0.2122 | 0.2074 | 0.2220 | Lin2 | -1.308 | 0.2197 | | | 0.0100 | | | | 0.9990 | | 0.9900 |
| 4-Nitrophenol | 0.1870<br>0.1945 | 0.1902<br>0.1958 | 0.2062<br>0.1927 | 0.1979 | 0.2028 | Ave | | 0.1959 | | | 0.0100 | 3.2 | | 20.0 | | | |
| 2,4-Dinitrotoluene | 0.4126<br>0.4474 | 0.4474<br>0.4544 | 0.4512<br>0.4416 | 0.4579 | 0.4704 | Ave | | 0.4479 | | | 0.2000 | 3.7 | | 20.0 | | | |
| Dibenzofuran | 1.9373<br>1.6304 | 1.8975<br>1.5969 | 1.8012<br>1.5223 | 1.7561 | 1.7486 | Ave | | 1.7363 | | | 0.8000 | 8.4 | | 20.0 | | | |
| 2,3,4,6-Tetrachlorophenol | 0.3357<br>0.3674 | 0.3605<br>0.3613 | 0.3653<br>0.3468 | 0.3750 | 0.3809 | Ave | | 0.3616 | | | 0.0100 | 4.0 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Diethyl phthalate | 1.3958<br>1.2418 | 1.4001<br>1.2270 | 1.3638<br>1.1349 | 1.3392 | 1.3389 | Ave | | 1.3052 | | | 0.0100 | 7.2 | | 20.0 | | | |
| Hexadecane | 0.8490<br>0.7959 | 0.8674<br>0.7881 | 0.8411<br>0.6998 | 0.8476 | 0.8263 | Ave | | 0.8144 | | | | 6.6 | | 20.0 | | | |
| 4-Chlorophenyl phenyl ether | 0.7209<br>0.6425 | 0.7193<br>0.6303 | 0.6997<br>0.5956 | 0.6875 | 0.6871 | Ave | | 0.6729 | | | 0.4000 | 6.7 | | 20.0 | | | |
| Fluorene | 1.5958<br>1.2638 | 1.5308<br>1.2360 | 1.4785<br>1.1671 | 1.3850 | 1.3757 | Ave | | 1.3791 | | | 0.9000 | 10.9 | | 20.0 | | | |
| 4-Nitroaniline | 0.3936<br>0.4015 | 0.4080<br>0.4115 | 0.4296<br>0.4048 | 0.4047 | 0.4265 | Ave | | 0.4100 | | | 0.0100 | 3.0 | | 20.0 | | | |
| 4,6-Dinitro-2-methylphenol | +++++<br>0.1297 | 0.1089<br>0.1299 | 0.1217<br>0.1260 | 0.1323 | 0.1322 | Lin2 | -0.443 | 0.1322 | | | 0.0100 | | | | 0.9990 | | 0.9900 |
| Diphenylamine | 1.3624<br>1.1723 | 1.3104<br>1.1494 | 1.2874<br>1.0915 | 1.2461 | 1.2515 | Ave | | 1.2339 | | | | 7.3 | | 20.0 | | | |
| N-Nitrosodiphenylamine | 0.5791<br>0.4885 | 0.5509<br>0.4745 | 0.5319<br>0.4460 | 0.5270 | 0.5131 | Ave | | 0.5139 | | | 0.0100 | 8.4 | | 20.0 | | | |
| 1,2-Diphenylhydrazine(as Azobenzene) | 1.6569<br>1.5275 | 1.6364<br>1.5257 | 1.6080<br>1.4536 | 1.6061 | 1.6054 | Ave | | 1.5774 | | | | 4.3 | | 20.0 | | | |
| Azobenzene | 1.6751<br>1.5443 | 1.6544<br>1.5425 | 1.6256<br>1.4695 | 1.6237 | 1.6230 | Ave | | 1.5948 | | | | 4.3 | | 20.0 | | | |
| 4-Bromophenyl phenyl ether | 0.2198<br>0.1957 | 0.2150<br>0.1958 | 0.2091<br>0.1831 | 0.2074 | 0.2027 | Ave | | 0.2036 | | | 0.1000 | 5.8 | | 20.0 | | | |
| Hexachlorobenzene | 0.2066<br>0.1886 | 0.2110<br>0.1886 | 0.2021<br>0.1799 | 0.1993 | 0.1964 | Ave | | 0.1966 | | | 0.1000 | 5.3 | | 20.0 | | | |
| Atrazine | 0.2058<br>0.1861 | 0.2037<br>0.1854 | 0.2116<br>0.1697 | 0.2051 | 0.2017 | Ave | | 0.1961 | | | | 7.3 | | 20.0 | | | |
| Pentachlorophenol | +++++<br>0.1223 | 0.1103<br>0.1232 | 0.1201<br>0.1178 | 0.1268 | 0.1252 | Lin2 | -0.246 | 0.1244 | | | 0.0500 | | | | 0.9990 | | 0.9900 |
| Phenanthrene | 1.1763<br>0.9495 | 1.1120<br>0.9096 | 1.1009<br>0.8549 | 1.0511 | 1.0256 | Ave | | 1.0225 | | | 0.7000 | 10.8 | | 20.0 | | | |
| Anthracene | 1.1935<br>0.9786 | 1.1502<br>0.9544 | 1.1379<br>0.8940 | 1.0981 | 1.0593 | Ave | | 1.0583 | | | 0.7000 | 10.0 | | 20.0 | | | |
| Carbazole | 1.1519<br>0.9579 | 1.1002<br>0.9287 | 1.0996<br>0.8682 | 1.0461 | 1.0194 | Ave | | 1.0215 | | | 0.0100 | 9.5 | | 20.0 | | | |
| Di-n-butyl phthalate | 1.1603<br>1.0831 | 1.1849<br>1.0750 | 1.1937<br>0.9980 | 1.1706 | 1.1565 | Ave | | 1.1278 | | | 0.0100 | 6.1 | | 20.0 | | | |
| Fluoranthene | 1.3018<br>1.1246 | 1.2781<br>1.1200 | 1.2945<br>1.0400 | 1.2293 | 1.2133 | Ave | | 1.2002 | | | 0.6000 | 8.0 | | 20.0 | | | |
| Pyrene | 1.3094<br>1.2346 | 1.3240<br>1.2338 | 1.2944<br>1.1620 | 1.2830 | 1.3004 | Ave | | 1.2677 | | | 0.6000 | 4.3 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Butyl benzyl phthalate | 0.4924<br>0.5485 | 0.5264<br>0.5614 | 0.5349<br>0.5349 | 0.5483 | 0.5663 | Ave | | 0.5391 | | | 0.0100 | 4.3 | | 20.0 | | | |
| 3,3'-Dichlorobenzidine | 0.3948<br>0.4135 | 0.4255<br>0.4112 | 0.4297<br>0.3984 | 0.4392 | 0.4422 | Ave | | 0.4193 | | | 0.0100 | 4.2 | | 20.0 | | | |
| Benzo[a]anthracene | 1.3221<br>1.2361 | 1.3165<br>1.2371 | 1.2861<br>1.1802 | 1.2807 | 1.2871 | Ave | | 1.2682 | | | 0.8000 | 3.7 | | 20.0 | | | |
| Chrysene | 1.3201<br>1.1720 | 1.2325<br>1.1724 | 1.2339<br>1.1250 | 1.2033 | 1.2265 | Ave | | 1.2107 | | | 0.7000 | 4.8 | | 20.0 | | | |
| Bis(2-ethylhexyl) phthalate | 0.6461<br>0.7531 | 0.7202<br>0.7864 | 0.7250<br>0.7369 | 0.7388 | 0.7583 | Ave | | 0.7331 | | | 0.0100 | 5.6 | | 20.0 | | | |
| Di-n-octyl phthalate | 1.0875<br>1.3160 | 1.2067<br>1.3479 | 1.2532<br>1.2859 | 1.2963 | 1.3387 | Ave | | 1.2665 | | | 0.0100 | 6.8 | | 20.0 | | | |
| Benzo[b]fluoranthene | 1.1207<br>1.1963 | 1.1666<br>1.2198 | 1.1800<br>1.1840 | 1.1883 | 1.2289 | Ave | | 1.1856 | | | 0.7000 | 2.8 | | 20.0 | | | |
| Benzo[k]fluoranthene | 1.2521<br>1.1931 | 1.2081<br>1.1799 | 1.2377<br>1.1361 | 1.2201 | 1.2471 | Ave | | 1.2093 | | | 0.7000 | 3.2 | | 20.0 | | | |
| Benzo[a]pyrene | 1.1611<br>1.1727 | 1.1762<br>1.1723 | 1.1845<br>1.1501 | 1.1912 | 1.2303 | Ave | | 1.1798 | | | 0.7000 | 2.0 | | 20.0 | | | |
| Indeno[1,2,3-cd]pyrene | 1.0819<br>1.0796 | 1.0480<br>1.0751 | 1.0025<br>1.0764 | 1.0467 | 1.0872 | Ave | | 1.0622 | | | 0.5000 | 2.7 | | 20.0 | | | |
| Dibenz(a,h)anthracene | 0.9920<br>1.0714 | 1.0233<br>1.0764 | 1.0162<br>1.0394 | 1.0425 | 1.0782 | Ave | | 1.0424 | | | 0.4000 | 3.0 | | 20.0 | | | |
| Benzo[g,h,i]perylene | 1.1244<br>1.1084 | 1.1012<br>1.1074 | 1.0773<br>1.0831 | 1.1020 | 1.1370 | Ave | | 1.1051 | | | 0.5000 | 1.8 | | 20.0 | | | |
| 2-Fluorophenol (Surr) | 1.5997<br>1.4483 | 1.5348<br>1.4278 | 1.5011<br>1.4495 | 1.5281 | 1.5345 | Ave | | 1.5030 | | | | 3.9 | | 20.0 | | | |
| Phenol-d5 (Surr) | 2.1132<br>1.9433 | 2.0540<br>1.8919 | 2.0492<br>1.9277 | 2.0113 | 2.0244 | Ave | | 2.0019 | | | | 3.7 | | 20.0 | | | |
| Nitrobenzene-d5 (Surr) | 0.4374<br>0.4195 | 0.4452<br>0.4230 | 0.4377<br>0.4091 | 0.4408 | 0.4355 | Ave | | 0.4310 | | | | 2.9 | | 20.0 | | | |
| 2-Fluorobiphenyl | 1.5586<br>1.3213 | 1.5200<br>1.2728 | 1.4417<br>1.1802 | 1.4140 | 1.4181 | Ave | | 1.3908 | | | | 9.1 | | 20.0 | | | |
| 2,4,6-Tribromophenol (Surr) | 0.1711<br>0.1960 | 0.1850<br>0.2037 | 0.1907<br>0.1943 | 0.1990 | 0.2060 | Ave | | 0.1932 | | | | 5.8 | | 20.0 | | | |
| Terphenyl-d14 (Surr) | 0.9507<br>0.9011 | 0.9316<br>0.9129 | 0.9312<br>0.8614 | 0.9318 | 0.9348 | Ave | | 0.9194 | | | | 3.0 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD004 280-443607/4 | D31077.D |
| Level 2 | STD010 280-443607/5 | D31078.D |
| Level 3 | STD020 280-443607/6 | D31079.D |
| Level 4 | STD050 280-443607/7 | D31080.D |
| Level 5 | ICIS 280-443607/3 | D31076.D |
| Level 6 | STD120 280-443607/8 | D31081.D |
| Level 7 | STD160 280-443607/9 | D31082.D |
| Level 8 | STD200 280-443607/10 | D31083.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 LVL 8 | LVL 4 | LVL 5 | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 LVL 8 | LVL 4 | LVL 5 |
| 1,4-Dioxane | DCBd 4 | Ave | 9913<br>307587 | 25732<br>402332 | 47765<br>460538 | 129073 | 190702 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| N-Nitrosodimethylamine | DCBd 4 | Ave | 15509<br>490898 | 39244<br>641059 | 76181<br>749726 | 204140 | 307486 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Pyridine | DCBd 4 | Ave | 49857<br>1573082 | 131018<br>2026462 | 243905<br>2339362 | 653155 | 985834 | 8.00<br>240 | 20.0<br>320 | 40.0<br>400 | 100 | 160 |
| Phenol | DCBd 4 | Ave | 28169<br>879157 | 73873<br>1146631 | 140519<br>1332114 | 374311 | 559962 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Aniline | DCBd 4 | Ave | 33873<br>1108208 | 93349<br>1448745 | 176106<br>1687895 | 468907 | 696599 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Bis(2-chloroethyl)ether | DCBd 4 | Ave | 20571<br>609707 | 54832<br>786709 | 103116<br>879541 | 270922 | 398994 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2-Chlorophenol | DCBd 4 | Ave | 19471<br>627808 | 53385<br>822639 | 101568<br>938018 | 262909 | 401940 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| n-Decane | DCBd 4 | Ave | 21268<br>661555 | 56729<br>872874 | 104301<br>961365 | 280752 | 415332 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 1,3-Dichlorobenzene | DCBd 4 | Ave | 21484<br>638164 | 56943<br>826606 | 107968<br>934356 | 281103 | 415596 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 1,4-Dichlorobenzene | DCBd 4 | Ave | 21299<br>647894 | 56791<br>839330 | 107619<br>944233 | 282534 | 422029 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Benzyl alcohol | DCBd 4 | Ave | 14238<br>472179 | 37687<br>621774 | 74713<br>725360 | 198218 | 299024 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 1,2-Dichlorobenzene | DCBd 4 | Ave | 21008<br>627435 | 53989<br>812271 | 103159<br>913128 | 271479 | 400569 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2-Methylphenol | DCBd 4 | Ave | 20414<br>646730 | 53791<br>840546 | 103193<br>974233 | 270929 | 412432 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| bis (2-chloroisopropyl) ether | DCBd 4 | Ave | 27628<br>831030 | 70752<br>1078662 | 138014<br>1197893 | 358264 | 532283 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| N-Nitrosodi-n-propylamine | DCBd 4 | Ave | 15870<br>470824 | 42394<br>608898 | 80260<br>691357 | 213856 | 309288 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| 3 & 4 Methylphenol | DCBd 4 | Ave | 21295<br>603319 | 56460<br>763356 | 107378<br>865249 | 278158 | 412775 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 3-Methylphenol | DCBd 4 | Ave | 21295<br>603319 | 56460<br>763356 | 107378<br>865249 | 278158 | 412775 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 4-Methylphenol | DCBd 4 | Ave | 21295<br>603319 | 56460<br>763356 | 107378<br>865249 | 278158 | 412775 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Acetophenone | DCBd 4 | Ave | 29851<br>845945 | 78778<br>1072369 | 149547<br>1206469 | 387677 | 565720 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Hexachloroethane | DCBd 4 | Ave | 7861<br>249146 | 21247<br>331194 | 39487<br>361877 | 105311 | 159699 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Nitrobenzene | NPT | Ave | 23298<br>763607 | 62301<br>1003108 | 118803<br>1140969 | 318957 | 483963 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Isophorone | NPT | Ave | 43063<br>1396991 | 114150<br>1868434 | 223051<br>2168836 | 592446 | 886069 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2-Nitrophenol | NPT | Ave | 9772<br>346493 | 26949<br>454068 | 52612<br>535947 | 141945 | 216905 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2,4-Dimethylphenol | NPT | Ave | 20728<br>664096 | 56677<br>867946 | 105883<br>1003685 | 280702 | 428352 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Bis(2-chloroethoxy)methane | NPT | Ave | 25533<br>790735 | 66195<br>1062320 | 125080<br>1202706 | 338951 | 502339 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Benzoic acid | NPT | Lin2 | +++++<br>1191150 | 72139<br>1595917 | 150617<br>1925795 | 457487 | 705029 | +++++<br>240 | 20.0<br>320 | 40.0<br>400 | 100 | 160 |
| 2,4-Dichlorophenol | NPT | Ave | 16936<br>521067 | 42597<br>685342 | 84548<br>790157 | 223022 | 336336 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 1,2,4-Trichlorobenzene | NPT | Ave | 18703<br>565994 | 48896<br>742865 | 92112<br>835054 | 244722 | 363917 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Naphthalene | NPT | Ave | 60659<br>1741390 | 154038<br>2249718 | 298523<br>2592923 | 770453 | 1143456 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 4-Chloroaniline | NPT | Ave | 23855<br>815232 | 68875<br>1045234 | 133302<br>1229395 | 348487 | 523895 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2,6-Dichlorophenol | NPT | Ave | 16661<br>508954 | 44164<br>668568 | 84253<br>762902 | 222681 | 334463 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Hexachlorobutadiene | NPT | Ave | 9283<br>300849 | 25455<br>395890 | 49060<br>445542 | 130741 | 194139 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Caprolactam | NPT | Ave | 9595<br>327857 | 24412<br>439583 | 50417<br>558175 | 135910 | 205112 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 4-Chloro-3-methylphenol | NPT | Ave | 18045<br>583877 | 47211<br>784920 | 93587<br>909647 | 250093 | 375337 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2-Methylnaphthalene | NPT | Ave | 41071<br>1175767 | 105716<br>1524783 | 199129<br>1718227 | 522992 | 775340 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 1-Methylnaphthalene | NPT | Ave | 36726<br>1103154 | 98870<br>1428935 | 188521<br>1629454 | 492503 | 726449 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| Hexachlorocyclopentadiene | ANT | Ave | 9729<br>360132 | 27518<br>476920 | 56652<br>536926 | 156135 | 235549 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 1,2,4,5-Tetrachlorobenzene | NPT | Ave | 18779<br>535974 | 48622<br>692087 | 95949<br>786079 | 240223 | 357396 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2,4,6-Trichlorophenol | ANT | Ave | 11999<br>369412 | 32334<br>476142 | 63046<br>549679 | 165935 | 244736 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2,4,5-Trichlorophenol | ANT | Ave | 12399<br>431027 | 34596<br>567790 | 68602<br>667655 | 185648 | 279195 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 1,1'-Biphenyl | ANT | Ave | 47930<br>1384712 | 125190<br>1777024 | 237170<br>2020940 | 619252 | 914529 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2-Chloronaphthalene | ANT | Ave | 37562<br>1118198 | 97441<br>1460257 | 185382<br>1682156 | 488099 | 727151 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2-Nitroaniline | ANT | Ave | 11373<br>428814 | 32281<br>569403 | 65961<br>676229 | 178212 | 273107 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Dimethyl phthalate | ANT | Ave | 40633<br>1282083 | 108559<br>1695013 | 217533<br>1967810 | 560364 | 850298 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 1,3-Dinitrobenzene | ANT | Ave | 6145<br>246481 | 16683<br>333184 | 36720<br>396998 | 99719 | 155520 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2,6-Dinitrotoluene | ANT | Ave | 8964<br>331501 | 25586<br>449143 | 52194<br>521853 | 141761 | 213079 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Acenaphthylene | ANT | Ave | 59485<br>1818824 | 160369<br>2343276 | 314177<br>2706501 | 809651 | 1197798 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 3-Nitroaniline | ANT | Ave | 10537<br>390295 | 30013<br>522141 | 63526<br>613589 | 164285 | 245400 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Acenaphthene | ANT | Ave | 37468<br>1062915 | 99494<br>1377704 | 191660<br>1579408 | 483257 | 705420 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2,4-Dinitrophenol | ANT | Lin2 | +++++<br>427561 | 24423<br>582678 | 57850<br>695834 | 174556 | 276839 | +++++<br>240 | 20.0<br>320 | 40.0<br>400 | 100 | 160 |
| 4-Nitrophenol | ANT | Ave | 10796<br>394623 | 29874<br>530260 | 65307<br>631866 | 166566 | 252882 | 8.00<br>240 | 20.0<br>320 | 40.0<br>400 | 100 | 160 |
| 2,4-Dinitrotoluene | ANT | Ave | 11910<br>453779 | 35129<br>615236 | 71435<br>723911 | 192684 | 293273 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Dibenzofuran | ANT | Ave | 55918<br>1653754 | 148989<br>2162251 | 285162<br>2495330 | 739019 | 1090175 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2,3,4,6-Tetrachlorophenol | ANT | Ave | 9690<br>372644 | 28309<br>489234 | 57836<br>568410 | 157807 | 237469 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Diethyl phthalate | ANT | Ave | 40289<br>1259638 | 109935<br>1661414 | 215915<br>1860367 | 563588 | 834700 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Hexadecane | ANT | Ave | 24507<br>807349 | 68108<br>1067159 | 133171<br>1147152 | 356700 | 515159 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 4-Chlorophenyl phenyl ether | ANT | Ave | 20808<br>651732 | 56477<br>853450 | 110775<br>976269 | 289327 | 428354 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| Fluorene | ANT | Ave | 46063<br>1281942 | 120198<br>1673571 | 234082<br>1913056 | 582856 | 857693 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 4-Nitroaniline | ANT | Ave | 11362<br>407250 | 32038<br>557221 | 68008<br>663634 | 170293 | 265875 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 4,6-Dinitro-2-methylphenol | PHN | Lin2 | +++++<br>536894 | 34574<br>724181 | 79305<br>859529 | 223780 | 341878 | +++++<br>240 | 20.0<br>320 | 40.0<br>400 | 100 | 160 |
| Diphenylamine | ANT | Ave | 33425<br>1010725 | 87454<br>1322951 | 173256<br>1520758 | 445731 | 663216 | 3.40<br>102 | 8.50<br>136 | 17.0<br>170 | 42.5 | 68.0 |
| N-Nitrosodiphenylamine | PHN | Ave | 33425<br>1010725 | 87454<br>1322951 | 173256<br>1520758 | 445731 | 663216 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 1,2-Diphenylhydrazine(as Azobenzene) | ANT | Ave | 48350<br>1566448 | 129897<br>2088645 | 257374<br>2408873 | 683303 | 1011827 | 4.04<br>121 | 10.1<br>162 | 20.2<br>202 | 50.5 | 80.9 |
| Azobenzene | ANT | Ave | 48350<br>1566448 | 129897<br>2088645 | 257374<br>2408873 | 683303 | 1011827 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 4-Bromophenyl phenyl ether | PHN | Ave | 12687<br>404951 | 34133<br>546023 | 68109<br>624404 | 175399 | 261980 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Hexachlorobenzene | PHN | Ave | 11927<br>390256 | 33492<br>525800 | 65840<br>613523 | 168529 | 253903 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Atrazine | PHN | Ave | 11880<br>385072 | 32333<br>516950 | 68922<br>578521 | 173466 | 260650 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Pentachlorophenol | PHN | Lin2 | +++++<br>505960 | 35005<br>687005 | 78241<br>803355 | 214569 | 323650 | +++++<br>240 | 20.0<br>320 | 40.0<br>400 | 100 | 160 |
| Phenanthrene | PHN | Ave | 67900<br>1964379 | 176527<br>2536109 | 358582<br>2914974 | 889037 | 1325631 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Anthracene | PHN | Ave | 68893<br>2024606 | 182594<br>2661233 | 370647<br>3048557 | 928800 | 1369181 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Carbazole | PHN | Ave | 66491<br>1981809 | 174644<br>2589574 | 358158<br>2960303 | 884804 | 1317674 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Di-n-butyl phthalate | PHN | Ave | 66977<br>2240806 | 188100<br>2997486 | 388821<br>3403027 | 990118 | 1494854 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Fluoranthene | PHN | Ave | 75143<br>2326683 | 202884<br>3122903 | 421659<br>3546381 | 1039769 | 1568241 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Pyrene | CRY | Ave | 78114<br>2458283 | 214875<br>3265650 | 446655<br>3747222 | 1094905 | 1651677 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Butyl benzyl phthalate | CRY | Ave | 29374<br>1092153 | 85437<br>1486074 | 184563<br>1724832 | 467884 | 719289 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 3,3'-Dichlorobenzidine | CRY | Ave | 23553<br>823380 | 69062<br>1088511 | 148285<br>1284759 | 374819 | 561666 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Benzo[a]anthracene | CRY | Ave | 78873<br>2461177 | 213650<br>3274513 | 443781<br>3805757 | 1092871 | 1634853 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Chrysene | CRY | Ave | 78755<br>2333671 | 200025<br>3103122 | 425783<br>3627777 | 1026819 | 1557877 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| Bis(2-ethylhexyl) phthalate | CRY | Ave | 38544<br>1499559 | 116885<br>2081456 | 250170<br>2376408 | 630472 | 963191 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Di-n-octyl phthalate | CRY | Ave | 64878<br>2620290 | 195842<br>3567745 | 432437<br>4146803 | 1106216 | 1700342 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Benzo[b]fluoranthene | PRY | Ave | 70562<br>2385522 | 194845<br>3220136 | 409054<br>3864797 | 1014014 | 1549112 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Benzo[k]fluoranthene | PRY | Ave | 78834<br>2379166 | 201769<br>3114890 | 429051<br>3708496 | 1041209 | 1572108 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Benzo[a]pyrene | PRY | Ave | 73104<br>2338543 | 196452<br>3094828 | 410594<br>3754449 | 1016514 | 1550874 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Indeno[1,2,3-cd]pyrene | CRY | Ave | 64545<br>2149619 | 170084<br>2845711 | 345952<br>3471270 | 893181 | 1380975 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Dibenz(a,h)anthracene | PRY | Ave | 62461<br>2136529 | 170901<br>2841429 | 352280<br>3393012 | 889641 | 1359159 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Benzo[g,h,i]perylene | PRY | Ave | 70796<br>2210276 | 183928<br>2923519 | 373458<br>3535561 | 940354 | 1433293 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2-Fluorophenol (Surr) | DCBd 4 | Ave | 20610<br>626732 | 53134<br>825503 | 97986<br>951610 | 266536 | 403762 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Phenol-d5 (Surr) | DCBd 4 | Ave | 27225<br>840930 | 71107<br>1093895 | 133764<br>1265556 | 350818 | 532668 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Nitrobenzene-d5 (Surr) | NPT | Ave | 22526<br>749742 | 60983<br>994187 | 117579<br>1150946 | 318001 | 468170 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2-Fluorobiphenyl | ANT | Ave | 44988<br>1340250 | 119349<br>1723413 | 228257<br>1934642 | 595059 | 884115 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| 2,4,6-Tribromophenol (Surr) | ANT | Ave | 4939<br>198814 | 14527<br>275770 | 30193<br>318553 | 83751 | 128434 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |
| Terphenyl-d14 (Surr) | CRY | Ave | 56716<br>1794275 | 151186<br>2416263 | 321347<br>2777694 | 795196 | 1187408 | 4.00<br>120 | 10.0<br>160 | 20.0<br>200 | 50.0 | 80.0 |

Curve Type Legend:

| |
|---|
| Ave = Average ISTD |
| Lin2 = Linear 1/conc^2 ISTD |

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD004 280-443607/4 | D31077.D |
| Level 2 | STD010 280-443607/5 | D31078.D |
| Level 3 | STD020 280-443607/6 | D31079.D |
| Level 4 | STD050 280-443607/7 | D31080.D |
| Level 5 | ICIS 280-443607/3 | D31076.D |
| Level 6 | STD120 280-443607/8 | D31081.D |
| Level 7 | STD160 280-443607/9 | D31082.D |
| Level 8 | STD200 280-443607/10 | D31083.D |

| ANALYTE | PERCENT ERROR | | | | | | PERCENT ERROR LIMIT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 # LVL 7 # | LVL 2 # LVL 8 # | LVL 3 # | LVL 4 # | LVL 5 # | LVL 6 # | LVL 1 LVL 7 | LVL 2 LVL 8 | LVL 3 | LVL 4 | LVL 5 | LVL 6 |
| 1,4-Dioxane | 5.8 | | | | | | 30 | | | | | |
| N-Nitrosodimethylamine | 4.4 | | | | | | 30 | | | | | |
| Pyridine | 4.6 | | | | | | 30 | | | | | |
| Phenol | 4.2 | | | | | | 30 | | | | | |
| Aniline | 0.2 | | | | | | 30 | | | | | |
| Bis(2-chloroethyl)ether | 7.0 | | | | | | 30 | | | | | |
| 2-Chlorophenol | 1.2 | | | | | | 30 | | | | | |
| n-Decane | 5.0 | | | | | | 30 | | | | | |
| 1,3-Dichlorobenzene | 6.8 | | | | | | 30 | | | | | |
| 1,4-Dichlorobenzene | 5.4 | | | | | | 30 | | | | | |
| Benzyl alcohol | -0.5 | | | | | | 30 | | | | | |
| 1,2-Dichlorobenzene | 7.9 | | | | | | 30 | | | | | |
| 2-Methylphenol | 3.3 | | | | | | 30 | | | | | |
| bis (2-chloroisopropyl) ether | 7.3 | | | | | | 30 | | | | | |
| N-Nitrosodi-n-propylamine | 6.2 | | | | | | 30 | | | | | |

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | PERCENT ERROR | | | | | | PERCENT ERROR LIMIT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 # LVL 7 # | LVL 2 # LVL 8 # | LVL 3 # | LVL 4 # | LVL 5 # | LVL 6 # | LVL 1 LVL 7 | LVL 2 LVL 8 | LVL 3 | LVL 4 | LVL 5 | LVL 6 |
| 3 & 4 Methylphenol | 9.1 | | | | | | 30 | | | | | |
| 3-Methylphenol | 9.1 | | | | | | 30 | | | | | |
| 4-Methylphenol | 9.1 | | | | | | 30 | | | | | |
| Acetophenone | 9.7 | | | | | | 30 | | | | | |
| Hexachloroethane | 3.0 | | | | | | 30 | | | | | |
| Nitrobenzene | 3.4 | | | | | | 30 | | | | | |
| Isophorone | 3.0 | | | | | | 30 | | | | | |
| 2-Nitrophenol | -2.6 | | | | | | 30 | | | | | |
| 2,4-Dimethylphenol | 4.0 | | | | | | 30 | | | | | |
| Bis(2-chloroethoxy)methane | 7.1 | | | | | | 30 | | | | | |
| Benzoic acid | +++++ | 2.5 | | | | | | 30 | | | | |
| 2,4-Dichlorophenol | 7.8 | | | | | | 30 | | | | | |
| 1,2,4-Trichlorobenzene | 8.8 | | | | | | 30 | | | | | |
| Naphthalene | 12.2 | | | | | | 30 | | | | | |
| 4-Chloroaniline | -1.7 | | | | | | 30 | | | | | |
| 2,6-Dichlorophenol | 7.0 | | | | | | 30 | | | | | |
| Hexachlorobutadiene | 2.6 | | | | | | 30 | | | | | |
| Caprolactam | -0.7 | | | | | | 30 | | | | | |
| 4-Chloro-3-methylphenol | 2.9 | | | | | | 30 | | | | | |
| 2-Methylnaphthalene | 12.4 | | | | | | 30 | | | | | |
| 1-Methylnaphthalene | 7.7 | | | | | | 30 | | | | | |

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | PERCENT ERROR | | | | | | PERCENT ERROR LIMIT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 # LVL 7 # | LVL 2 # LVL 8 # | LVL 3 # | LVL 4 # | LVL 5 # | LVL 6 # | LVL 1 LVL 7 | LVL 2 LVL 8 | LVL 3 | LVL 4 | LVL 5 | LVL 6 |
| Hexachlorocyclopentadiene | -4.7 | | | | | | 30 | | | | | |
| 1,2,4,5-Tetrachlorobenzene | 11.5 | | | | | | 30 | | | | | |
| 2,4,6-Trichlorophenol | 8.5 | | | | | | 30 | | | | | |
| 2,4,5-Trichlorophenol | -0.2 | | | | | | 30 | | | | | |
| 1,1'-Biphenyl | 14.5 | | | | | | 30 | | | | | |
| 2-Chloronaphthalene | 12.6 | | | | | | 30 | | | | | |
| 2-Nitroaniline | -5.6 | | | | | | 30 | | | | | |
| Dimethyl phthalate | 6.5 | | | | | | 30 | | | | | |
| 1,3-Dinitrobenzene | -9.2 | | | | | | 30 | | | | | |
| 2,6-Dinitrotoluene | -5.2 | | | | | | 30 | | | | | |
| Acenaphthylene | 9.1 | | | | | | 30 | | | | | |
| 3-Nitroaniline | -5.1 | | | | | | 30 | | | | | |
| Acenaphthene | 14.3 | | | | | | 30 | | | | | |
| 2,4-Dinitrophenol | +++++ | 0.6 | | | | | | 30 | | | | |
| 4-Nitrophenol | -4.5 | | | | | | 30 | | | | | |
| 2,4-Dinitrotoluene | -7.9 | | | | | | 30 | | | | | |
| Dibenzofuran | 11.6 | | | | | | 30 | | | | | |
| 2,3,4,6-Tetrachlorophenol | -7.2 | | | | | | 30 | | | | | |
| Diethyl phthalate | 6.9 | | | | | | 30 | | | | | |
| Hexadecane | 4.3 | | | | | | 30 | | | | | |
| 4-Chlorophenyl phenyl ether | 7.1 | | | | | | 30 | | | | | |

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | PERCENT ERROR | | | | | | PERCENT ERROR LIMIT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 # LVL 7 # | LVL 2 # LVL 8 # | LVL 3 # | LVL 4 # | LVL 5 # | LVL 6 # | LVL 1 LVL 7 | LVL 2 LVL 8 | LVL 3 | LVL 4 | LVL 5 | LVL 6 |
| Fluorene | 15.7 | | | | | | 30 | | | | | |
| 4-Nitroaniline | -4.0 | | | | | | 30 | | | | | |
| 4,6-Dinitro-2-methylphenol | +++++ | -0.9 | | | | | | 30 | | | | |
| Diphenylamine | 10.4 | | | | | | 30 | | | | | |
| N-Nitrosodiphenylamine | 12.7 | | | | | | 30 | | | | | |
| 1,2-Diphenylhydrazine(as Azobenzene) | 5.0 | | | | | | 30 | | | | | |
| Azobenzene | 5.0 | | | | | | 30 | | | | | |
| 4-Bromophenyl phenyl ether | 8.0 | | | | | | 30 | | | | | |
| Hexachlorobenzene | 5.1 | | | | | | 30 | | | | | |
| Atrazine | 4.9 | | | | | | 30 | | | | | |
| Pentachlorophenol | +++++ | -1.5 | | | | | | 30 | | | | |
| Phenanthrene | 15.0 | | | | | | 30 | | | | | |
| Anthracene | 12.8 | | | | | | 30 | | | | | |
| Carbazole | 12.8 | | | | | | 30 | | | | | |
| Di-n-butyl phthalate | 2.9 | | | | | | 30 | | | | | |
| Fluoranthene | 8.5 | | | | | | 30 | | | | | |
| Pyrene | 3.3 | | | | | | 30 | | | | | |
| Butyl benzyl phthalate | -8.7 | | | | | | 30 | | | | | |
| 3,3'-Dichlorobenzidine | -5.9 | | | | | | 30 | | | | | |
| Benzo[a]anthracene | 4.2 | | | | | | 30 | | | | | |
| Chrysene | 9.0 | | | | | | 30 | | | | | |

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 443607

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 14:43 Calibration End Date: 01/08/2019 18:08 Calibration ID: 34752

| ANALYTE | PERCENT ERROR | | | | | | PERCENT ERROR LIMIT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 # LVL 7 # | LVL 2 # LVL 8 # | LVL 3 # | LVL 4 # | LVL 5 # | LVL 6 # | LVL 1 LVL 7 | LVL 2 LVL 8 | LVL 3 | LVL 4 | LVL 5 | LVL 6 |
| Bis(2-ethylhexyl) phthalate | -11.9 | | | | | | 30 | | | | | |
| Di-n-octyl phthalate | -14.1 | | | | | | 30 | | | | | |
| Benzo[b]fluoranthene | -5.5 | | | | | | 30 | | | | | |
| Benzo[k]fluoranthene | 3.5 | | | | | | 30 | | | | | |
| Benzo[a]pyrene | -1.6 | | | | | | 30 | | | | | |
| Indeno[1,2,3-cd]pyrene | 1.9 | | | | | | 30 | | | | | |
| Dibenz(a,h)anthracene | -4.8 | | | | | | 30 | | | | | |
| Benzo[g,h,i]perylene | 1.7 | | | | | | 30 | | | | | |
| 2-Fluorophenol (Surr) | 6.4 | | | | | | 30 | | | | | |
| Phenol-d5 (Surr) | 5.6 | | | | | | 30 | | | | | |
| Nitrobenzene-d5 (Surr) | 1.5 | | | | | | 30 | | | | | |
| 2-Fluorobiphenyl | 12.1 | | | | | | 30 | | | | | |
| 2,4,6-Tribromophenol (Surr) | -11.4 | | | | | | 30 | | | | | |
| Terphenyl-d14 (Surr) | 3.4 | | | | | | 30 | | | | | |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D
Lims ID: ICIS HSL
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 08-Jan-2019 14:43:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICIS HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub14

Method: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 09-Jan-2019 10:19:56 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 08-Jan-2019 15:51:11

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.592 | 4.592 | 0.000 | 96 | 131559 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.832 | 5.832 | 0.000 | 99 | 537462 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.578 | 7.578 | 0.000 | 95 | 311721 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.069 | 9.069 | 0.000 | 98 | 646286 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.129 | 13.129 | 0.000 | 98 | 635088 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.050 | 17.050 | 0.000 | 97 | 630299 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.396 | 3.396 | 0.000 | 93 | 403762 | 80.0 | 81.7 | |
| $ 8 Phenol-d5 | 99 | 4.234 | 4.234 | 0.000 | 98 | 532668 | 80.0 | 80.9 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.116 | 5.116 | 0.000 | 87 | 468170 | 80.0 | 80.8 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.889 | 6.889 | 0.000 | 99 | 884115 | 80.0 | 81.6 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.369 | 8.369 | 0.000 | 93 | 128434 | 80.0 | 85.3 | |
| $ 12 Terphenyl-d14 | 244 | 11.008 | 11.008 | 0.000 | 98 | 1187408 | 80.0 | 81.3 | |
| 13 1,4-Dioxane | 88 | 1.953 | 1.953 | 0.000 | 92 | 190702 | 80.0 | 79.7 | |
| 14 N-Nitrosodimethylamine | 74 | 2.194 | 2.194 | 0.000 | 93 | 307486 | 80.0 | 81.0 | |
| 15 Pyridine | 79 | 2.247 | 2.247 | 0.000 | 98 | 985834 | 160.0 | 162.1 | |
| 23 n-Decane | 57 | 4.432 | 4.432 | 0.000 | 98 | 415332 | 80.0 | 80.3 | |
| 24 Phenol | 94 | 4.245 | 4.245 | 0.000 | 98 | 559962 | 80.0 | 81.1 | a |
| 25 Aniline | 93 | 4.277 | 4.277 | 0.000 | 98 | 696599 | 80.0 | 80.7 | a |
| 27 Bis(2-chloroethyl)ether | 93 | 4.320 | 4.320 | 0.000 | 95 | 398994 | 80.0 | 81.3 | a |
| 28 2-Chlorophenol | 128 | 4.400 | 4.400 | 0.000 | 97 | 401940 | 80.0 | 81.8 | |
| 29 1,3-Dichlorobenzene | 146 | 4.544 | 4.544 | 0.000 | 97 | 415596 | 80.0 | 81.0 | |
| 30 1,4-Dichlorobenzene | 146 | 4.608 | 4.608 | 0.000 | 93 | 422029 | 80.0 | 81.8 | |
| 31 Benzyl alcohol | 108 | 4.710 | 4.710 | 0.000 | 93 | 299024 | 80.0 | 81.9 | |
| 32 1,2-Dichlorobenzene | 146 | 4.758 | 4.758 | 0.000 | 95 | 400569 | 80.0 | 80.6 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.833 | 4.833 | 0.000 | 92 | 532283 | 80.0 | 81.0 | |
| 35 2-Methylphenol | 108 | 4.817 | 4.817 | 0.000 | 94 | 412432 | 80.0 | 81.7 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.961 | 4.961 | 0.000 | 80 | 309288 | 80.0 | 81.1 | |
| 39 Acetophenone | 105 | 4.966 | 4.966 | 0.000 | 92 | 565720 | 80.0 | 81.4 | |
| 40 4-Methylphenol | 108 | 4.961 | 4.961 | 0.000 | 89 | 412775 | 80.0 | 82.8 | |
| 41 3-Methylphenol | 108 | 4.961 | 4.961 | 0.000 | 85 | 412775 | 80.0 | 82.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.961 | 4.961 | 0.000 | 88 | 412775 | 80.0 | 82.8 | a |
| 44 Hexachloroethane | 117 | 5.089 | 5.089 | 0.000 | 94 | 159699 | 80.0 | 82.0 | |
| 45 Nitrobenzene | 77 | 5.132 | 5.132 | 0.000 | 86 | 483963 | 80.0 | 82.3 | |
| 47 Isophorone | 82 | 5.361 | 5.361 | 0.000 | 98 | 886069 | 80.0 | 81.2 | a |
| 48 2-Nitrophenol | 139 | 5.447 | 5.447 | 0.000 | 95 | 216905 | 80.0 | 82.9 | |
| 49 2,4-Dimethylphenol | 107 | 5.479 | 5.479 | 0.000 | 96 | 428352 | 80.0 | 82.4 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.559 | 5.559 | 0.000 | 99 | 502339 | 80.0 | 80.8 | a |
| 52 Benzoic acid | 105 | 5.607 | 5.607 | 0.000 | 64 | 705029 | 160.0 | 159.7 | a |
| 53 2,4-Dichlorophenol | 162 | 5.687 | 5.687 | 0.000 | 95 | 336336 | 80.0 | 82.0 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.773 | 5.773 | 0.000 | 93 | 363917 | 80.0 | 81.1 | |
| 56 Naphthalene | 128 | 5.853 | 5.853 | 0.000 | 97 | 1143456 | 80.0 | 81.1 | a |
| 57 4-Chloroaniline | 127 | 5.890 | 5.890 | 0.000 | 96 | 523895 | 80.0 | 82.7 | |
| 58 2,6-Dichlorophenol | 162 | 5.906 | 5.906 | 0.000 | 97 | 334463 | 80.0 | 82.3 | |
| 60 Hexachlorobutadiene | 225 | 5.976 | 5.976 | 0.000 | 95 | 194139 | 80.0 | 82.2 | |
| 63 Caprolactam | 55 | 6.232 | 6.232 | 0.000 | 83 | 205112 | 80.0 | 81.4 | |
| 64 4-Chloro-3-methylphenol | 107 | 6.371 | 6.371 | 0.000 | 97 | 375337 | 80.0 | 82.1 | |
| 66 2-Methylnaphthalene | 142 | 6.537 | 6.537 | 0.000 | 93 | 775340 | 80.0 | 81.4 | |
| 67 1-Methylnaphthalene | 142 | 6.633 | 6.633 | 0.000 | 94 | 726449 | 80.0 | 81.6 | a |
| 68 Hexachlorocyclopentadiene | 237 | 6.702 | 6.702 | 0.000 | 95 | 235549 | 80.0 | 85.5 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.708 | 6.708 | 0.000 | 97 | 357396 | 80.0 | 81.3 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.815 | 6.815 | 0.000 | 93 | 244736 | 80.0 | 82.0 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.857 | 6.857 | 0.000 | 95 | 279195 | 80.0 | 83.2 | |
| 74 1,1'-Biphenyl | 154 | 6.996 | 6.996 | 0.000 | 95 | 914529 | 80.0 | 80.9 | |
| 75 2-Chloronaphthalene | 162 | 7.023 | 7.023 | 0.000 | 96 | 727151 | 80.0 | 80.7 | |
| 77 2-Nitroaniline | 65 | 7.108 | 7.108 | 0.000 | 83 | 273107 | 80.0 | 84.0 | |
| 80 Dimethyl phthalate | 163 | 7.285 | 7.285 | 0.000 | 98 | 850298 | 80.0 | 82.5 | |
| 81 1,3-Dinitrobenzene | 168 | 7.311 | 7.311 | 0.000 | 86 | 155520 | 80.0 | 85.1 | |
| 82 2,6-Dinitrotoluene | 165 | 7.343 | 7.343 | 0.000 | 96 | 213079 | 80.0 | 83.4 | |
| 83 Acenaphthylene | 152 | 7.440 | 7.440 | 0.000 | 99 | 1197798 | 80.0 | 81.4 | |
| 84 3-Nitroaniline | 138 | 7.520 | 7.520 | 0.000 | 94 | 245400 | 80.0 | 81.9 | |
| 85 Acenaphthene | 153 | 7.611 | 7.611 | 0.000 | 95 | 705420 | 80.0 | 79.7 | |
| 86 2,4-Dinitrophenol | 184 | 7.621 | 7.621 | 0.000 | 82 | 276839 | 160.0 | 167.6 | a |
| 88 4-Nitrophenol | 109 | 7.696 | 7.696 | 0.000 | 93 | 252882 | 160.0 | 165.6 | a |
| 89 2,4-Dinitrotoluene | 165 | 7.749 | 7.749 | 0.000 | 93 | 293273 | 80.0 | 84.0 | |
| 90 Dibenzofuran | 168 | 7.787 | 7.787 | 0.000 | 98 | 1090175 | 80.0 | 80.6 | |
| 92 Hexadecane | 57 | 8.006 | 8.006 | 0.000 | 97 | 515159 | 80.0 | 81.2 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.910 | 7.910 | 0.000 | 71 | 237469 | 80.0 | 84.3 | |
| 95 Diethyl phthalate | 149 | 7.990 | 7.990 | 0.000 | 98 | 834700 | 80.0 | 82.1 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.113 | 8.113 | 0.000 | 92 | 428354 | 80.0 | 81.7 | |
| 99 Fluorene | 166 | 8.129 | 8.129 | 0.000 | 94 | 857693 | 80.0 | 79.8 | |
| 100 4-Nitroaniline | 138 | 8.134 | 8.134 | 0.000 | 86 | 265875 | 80.0 | 83.2 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.171 | 8.171 | 0.000 | 91 | 341878 | 160.0 | 163.4 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.230 | 8.230 | 0.000 | 62 | 663216 | 80.0 | 79.9 | |
| 103 Diphenylamine | 169 | 8.230 | 8.230 | 0.000 | 96 | 663216 | 68.0 | 69.0 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.273 | 8.273 | 0.000 | 98 | 1011827 | 80.9 | 82.3 | |
| 106 Azobenzene | 77 | 8.273 | 8.273 | 0.000 | 98 | 1011827 | 80.0 | 81.4 | |
| 112 Atrazine | 200 | 8.754 | 8.754 | 0.000 | 95 | 260650 | 80.0 | 82.3 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.604 | 8.604 | 0.000 | 66 | 261980 | 80.0 | 79.6 | |
| 116 Hexachlorobenzene | 284 | 8.695 | 8.695 | 0.000 | 95 | 253903 | 80.0 | 79.9 | |
| 119 Pentachlorophenol | 266 | 8.882 | 8.882 | 0.000 | 94 | 323650 | 160.0 | 163.1 | |
| 123 Phenanthrene | 178 | 9.096 | 9.096 | 0.000 | 98 | 1325631 | 80.0 | 80.2 | |
| 124 Anthracene | 178 | 9.144 | 9.144 | 0.000 | 98 | 1369181 | 80.0 | 80.1 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.293 | 9.293 | 0.000 | 95 | 1317674 | 80.0 | 79.8 | |
| 127 Di-n-butyl phthalate | 149 | 9.630 | 9.630 | 0.000 | 100 | 1494854 | 80.0 | 82.0 | |
| 132 Fluoranthene | 202 | 10.453 | 10.453 | 0.000 | 99 | 1568241 | 80.0 | 80.9 | |
| 134 Pyrene | 202 | 10.789 | 10.789 | 0.000 | 97 | 1651677 | 80.0 | 82.1 | |
| 141 Butyl benzyl phthalate | 149 | 11.900 | 11.900 | 0.000 | 97 | 719289 | 80.0 | 84.0 | |
| 144 3,3'-Dichlorobenzidine | 252 | 13.059 | 13.059 | 0.000 | 74 | 561666 | 80.0 | 84.4 | |
| 145 Benzo[a]anthracene | 228 | 13.102 | 13.102 | 0.000 | 99 | 1634853 | 80.0 | 81.2 | a |
| 146 Chrysene | 228 | 13.193 | 13.193 | 0.000 | 98 | 1557877 | 80.0 | 81.0 | a |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.268 | 13.268 | 0.000 | 97 | 963191 | 80.0 | 82.8 | |
| 148 Di-n-octyl phthalate | 149 | 15.073 | 15.073 | 0.000 | 99 | 1700342 | 80.0 | 84.6 | |
| 150 Benzo[b]fluoranthene | 252 | 15.966 | 15.966 | 0.000 | 98 | 1549112 | 80.0 | 82.9 | |
| 151 Benzo[k]fluoranthene | 252 | 16.046 | 16.046 | 0.000 | 99 | 1572108 | 80.0 | 82.5 | |
| 153 Benzo[a]pyrene | 252 | 16.895 | 16.895 | 0.000 | 78 | 1550874 | 80.0 | 83.4 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 20.175 | 20.175 | 0.000 | 98 | 1380975 | 80.0 | 81.9 | a |
| 157 Dibenz(a,h)anthracene | 278 | 20.271 | 20.271 | 0.000 | 93 | 1359159 | 80.0 | 82.7 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.918 | 20.918 | 0.000 | 97 | 1433293 | 80.0 | 82.3 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

MS-HSLA080_00040 Amount Added: 200.00 Units: uL

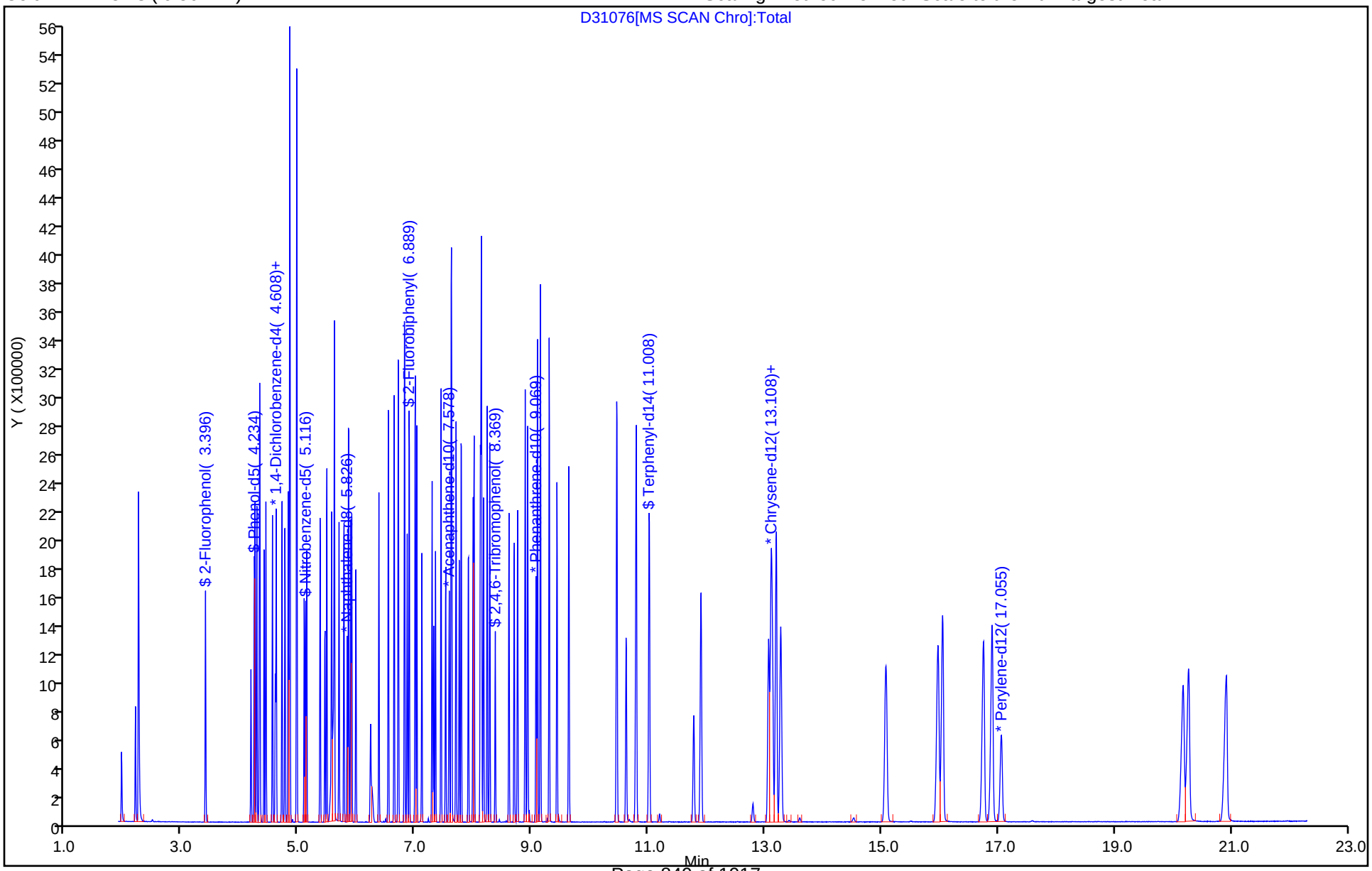
Report Date: 09-Jan-2019 10:19:57 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 14:43:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | ICIS HSL | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

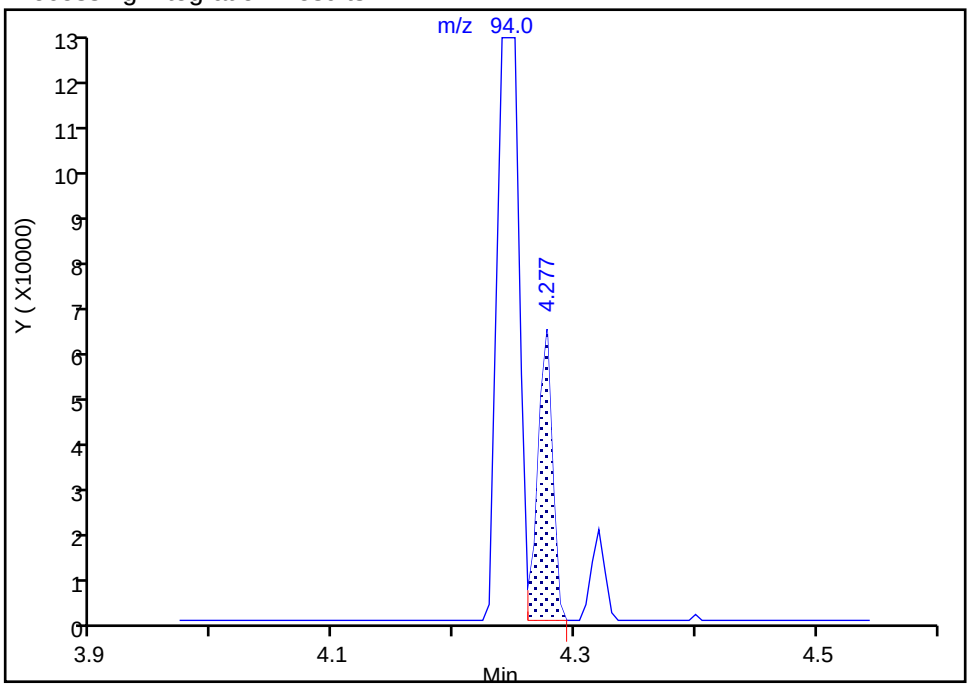
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D
Injection Date: 08-Jan-2019 14:43:30 Instrument ID: SMS_D
Lims ID: ICIS HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 24 Phenol, CAS: 108-95-2

Signal: 1

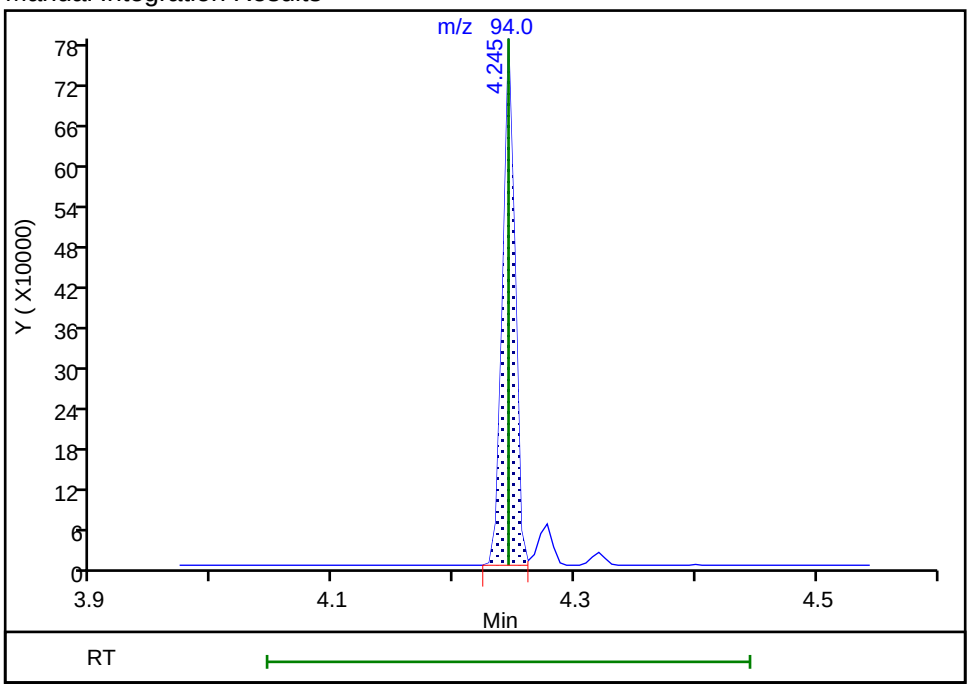
Processing Integration Results

RT: 4.28
Area: 52048
Amount: 80.000000
Amount Units: ug/ml




Manual Integration Results

RT: 4.24
Area: 559962
Amount: 81.116656
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:47:45
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

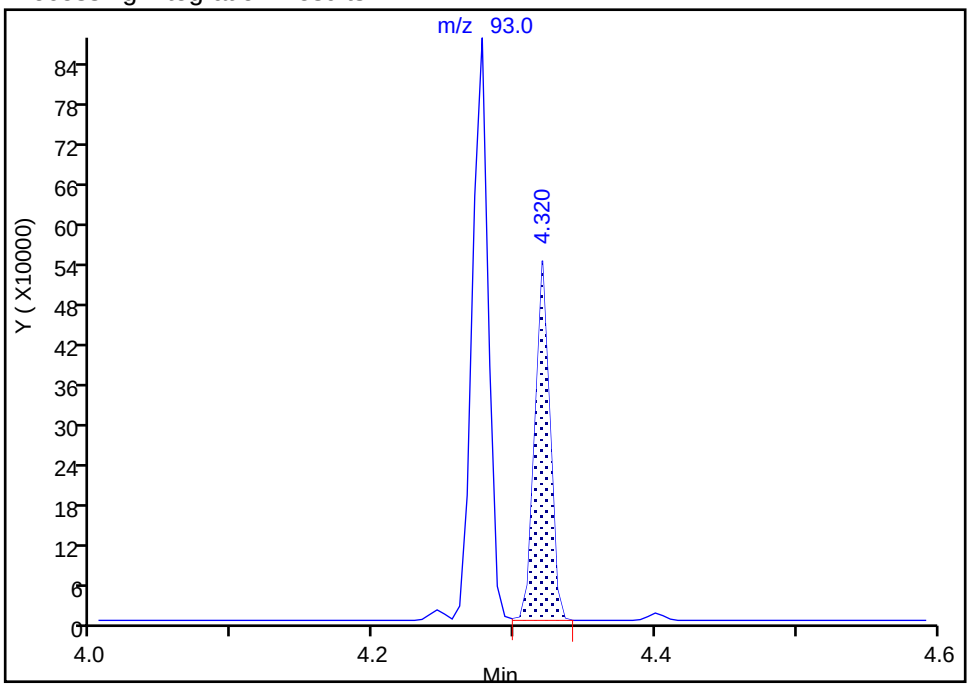
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D | | | | |
| Injection Date: | 08-Jan-2019 14:43:30 | Instrument ID: | SMS_D | | |
| Lims ID: | ICIS HSL | | | | |
| Client ID: | | | | | |
| Operator ID: | KIEKELD | ALS Bottle#: | 2 | Worklist Smp#: | 3 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |
| Column: | VF-5ms ( 0.50 mm) | Detector | MS SCAN | | |

## 25 Aniline, CAS: 62-53-3

Signal: 1

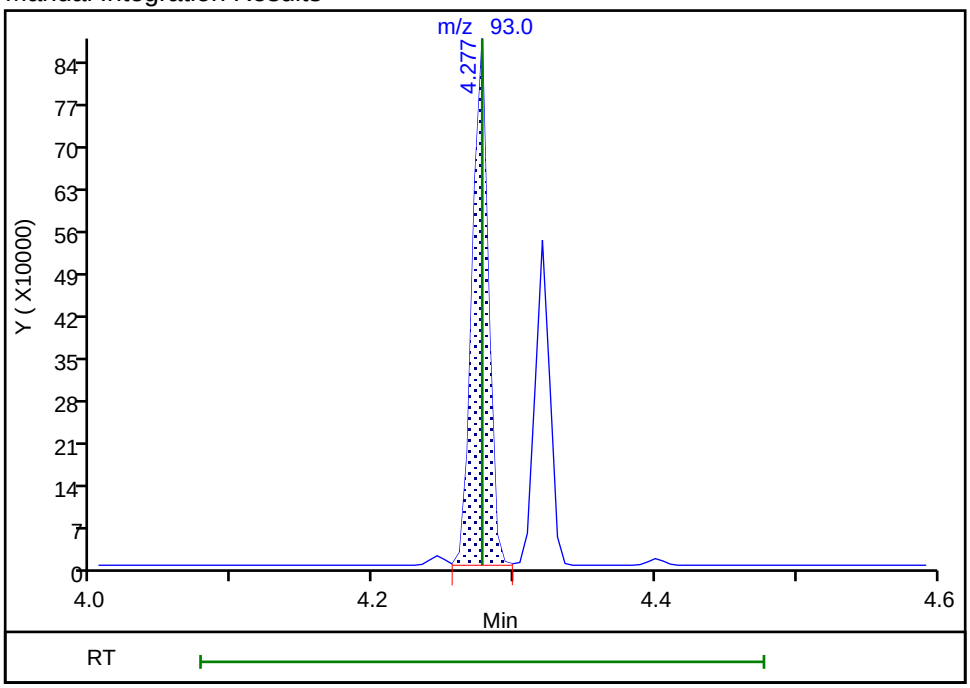
Processing Integration Results

RT: 4.32
Area: 398994
Amount: 80.000000
Amount Units: ug/ml




Manual Integration Results

RT: 4.28
Area: 696599
Amount: 80.696779
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:47:51
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

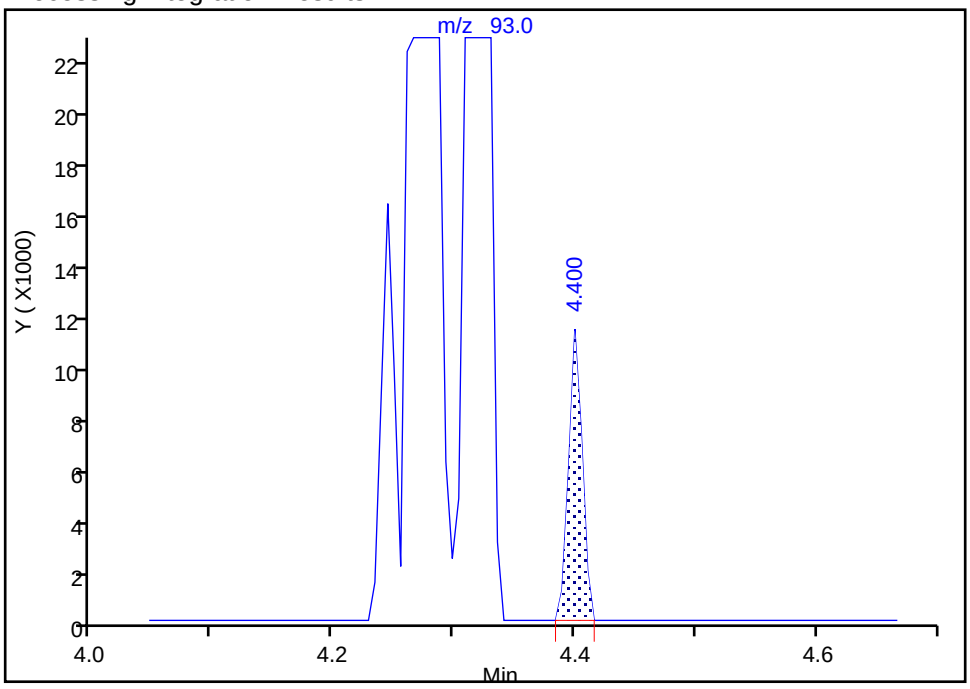
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D
Injection Date: 08-Jan-2019 14:43:30 Instrument ID: SMS_D
Lims ID: ICIS HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 27 Bis(2-chloroethyl)ether, CAS: 111-44-4

Signal: 1

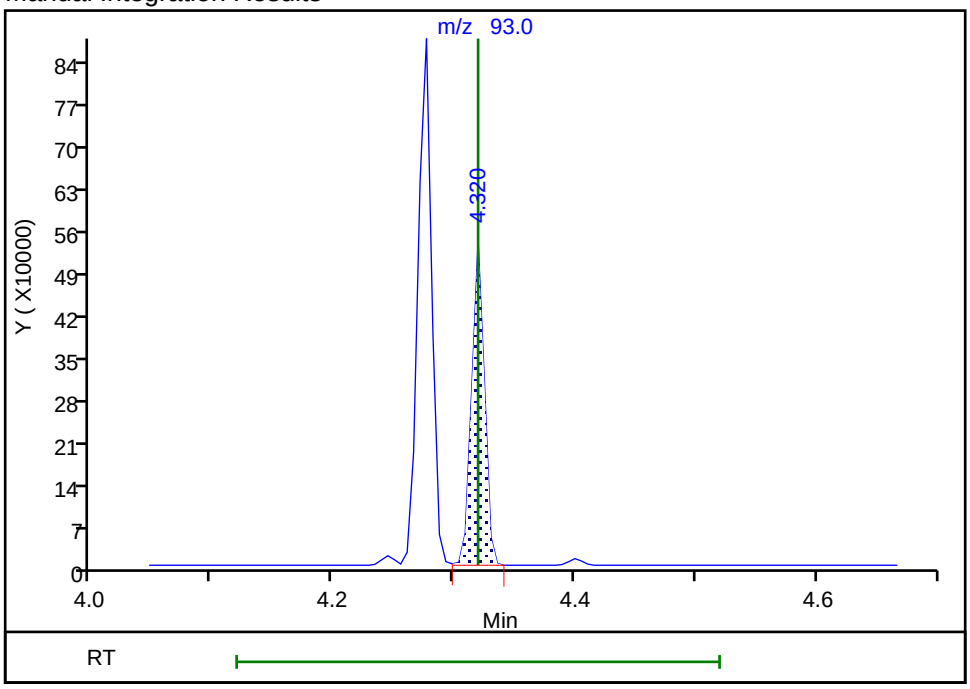
Processing Integration Results

RT: 4.40
Area: 8619
Amount: 80.000000
Amount Units: ug/ml




Manual Integration Results

RT: 4.32
Area: 398994
Amount: 81.286604
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:47:57
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

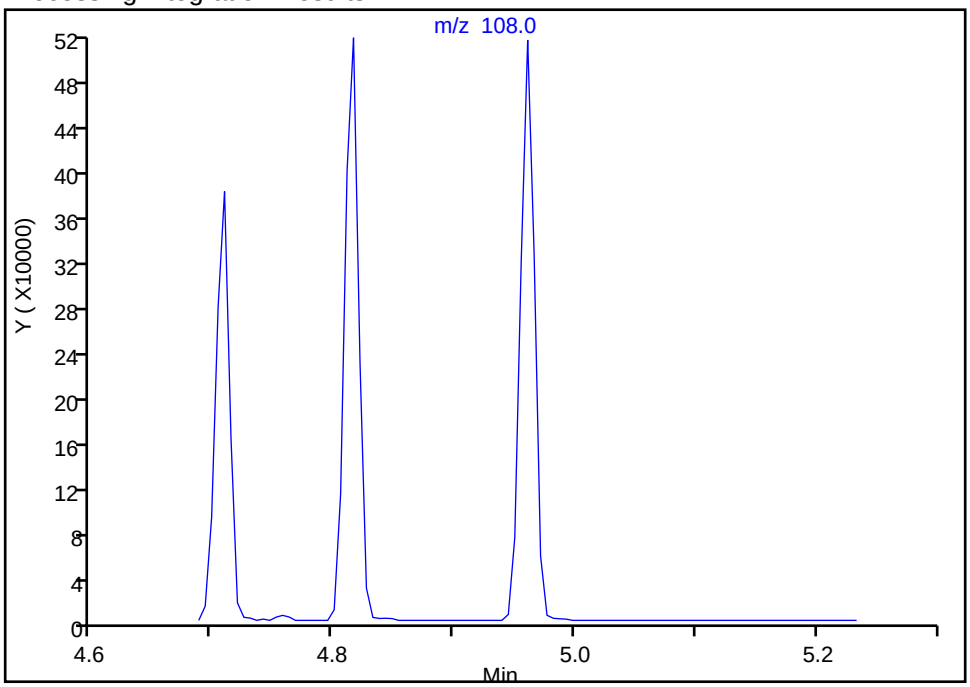
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D
Injection Date: 08-Jan-2019 14:43:30 Instrument ID: SMS_D
Lims ID: ICIS HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 42 3 & 4 Methylphenol, CAS: 15831-10-4

Signal: 1

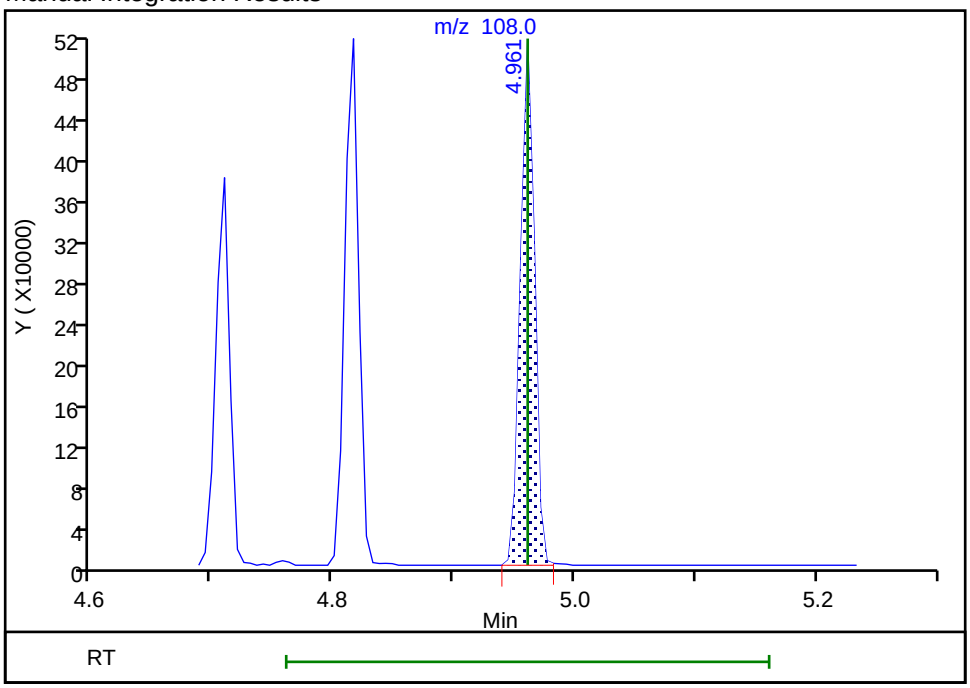
Not Detected
Expected RT: 4.96

Processing Integration Results




Manual Integration Results

RT: 4.96
Area: 412775
Amount: 82.807925
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:48:12
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

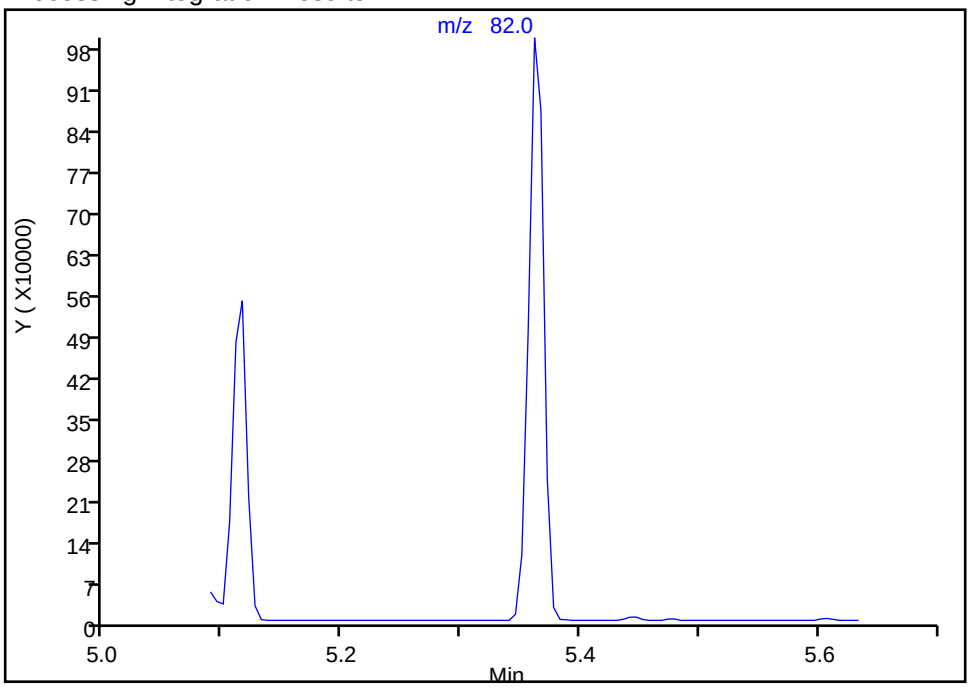
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D | | | | |
| Injection Date: | 08-Jan-2019 14:43:30 | Instrument ID: | SMS_D | | |
| Lims ID: | ICIS HSL | | | | |
| Client ID: | | | | | |
| Operator ID: | KIEKELD | ALS Bottle#: | 2 | Worklist Smp#: | 3 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |
| Column: | VF-5ms ( 0.50 mm) | Detector | MS SCAN | | |

## 47 Isophorone, CAS: 78-59-1

Signal: 1

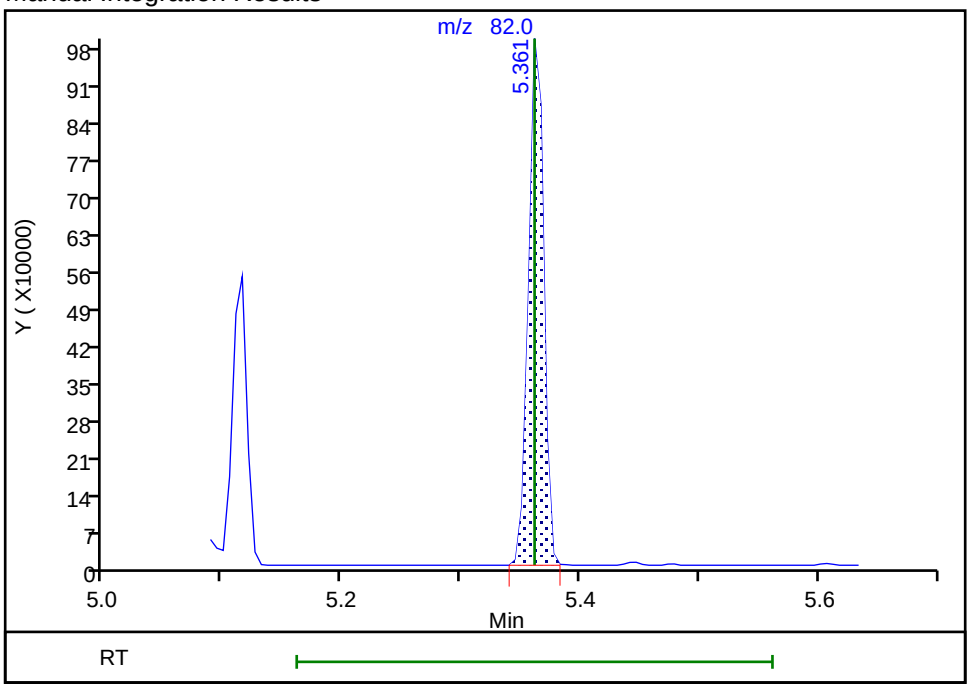
Not Detected
Expected RT: 5.36

Processing Integration Results




Manual Integration Results

RT: 5.36
Area: 886069
Amount: 81.248985
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:48:28
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

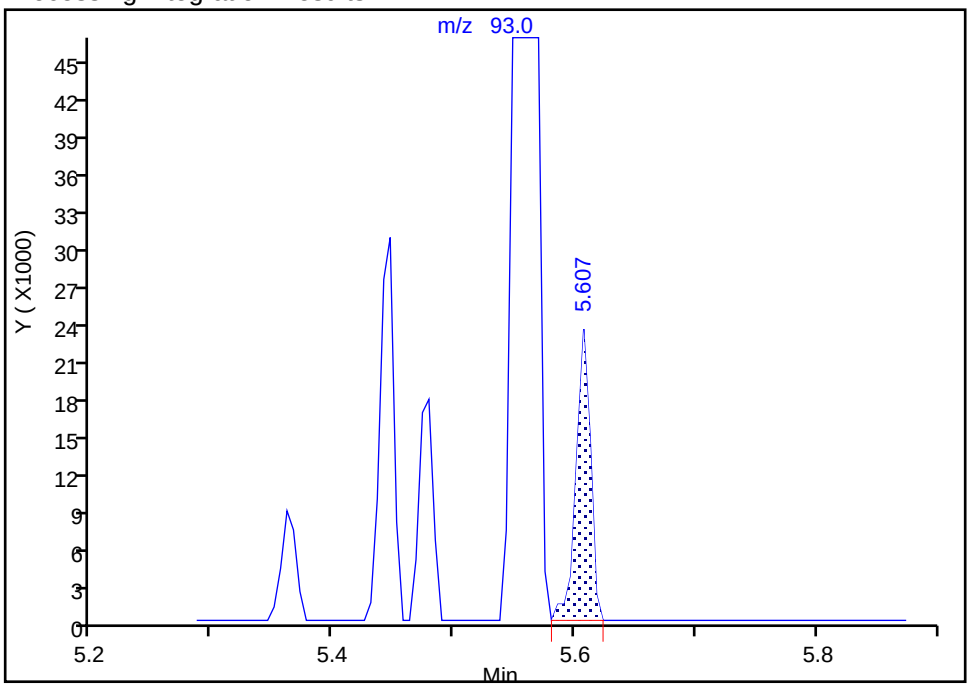
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D
Injection Date: 08-Jan-2019 14:43:30 Instrument ID: SMS_D
Lims ID: ICIS HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 51 Bis(2-chloroethoxy)methane, CAS: 111-91-1

Signal: 1

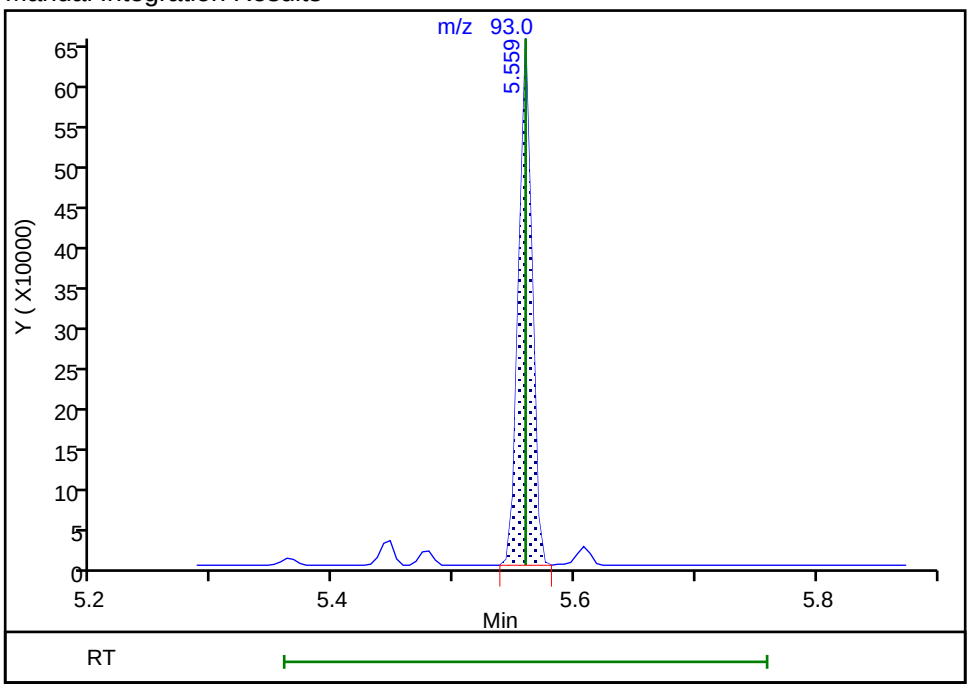
Processing Integration Results

RT: 5.61
Area: 19220
Amount: 80.000000
Amount Units: ug/ml




Manual Integration Results

RT: 5.56
Area: 502339
Amount: 80.750498
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:48:36
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

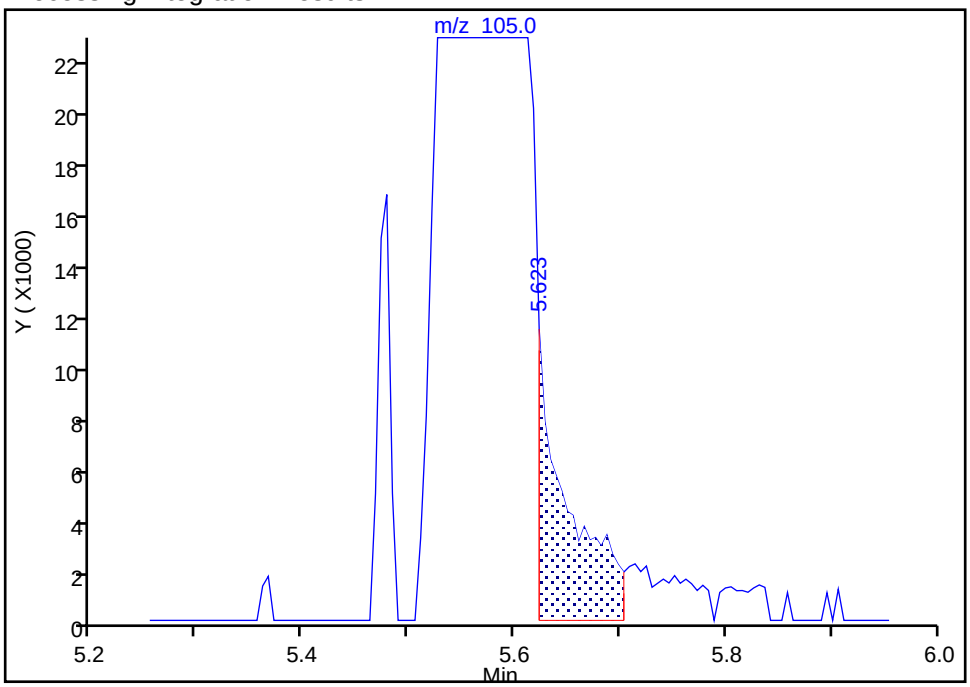
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D
Injection Date: 08-Jan-2019 14:43:30 Instrument ID: SMS_D
Lims ID: ICIS HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 52 Benzoic acid, CAS: 65-85-0

Signal: 1

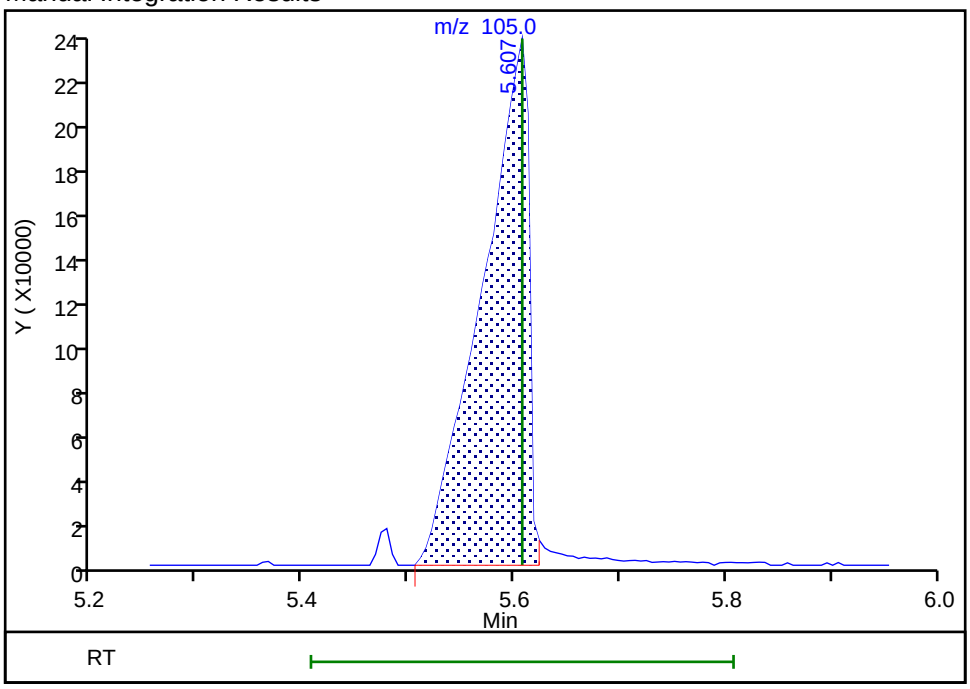
Processing Integration Results

RT: 5.62
Area: 21964
Amount: 14.824502
Amount Units: ug/ml




Manual Integration Results

RT: 5.61
Area: 705029
Amount: 159.6587
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:48:40
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

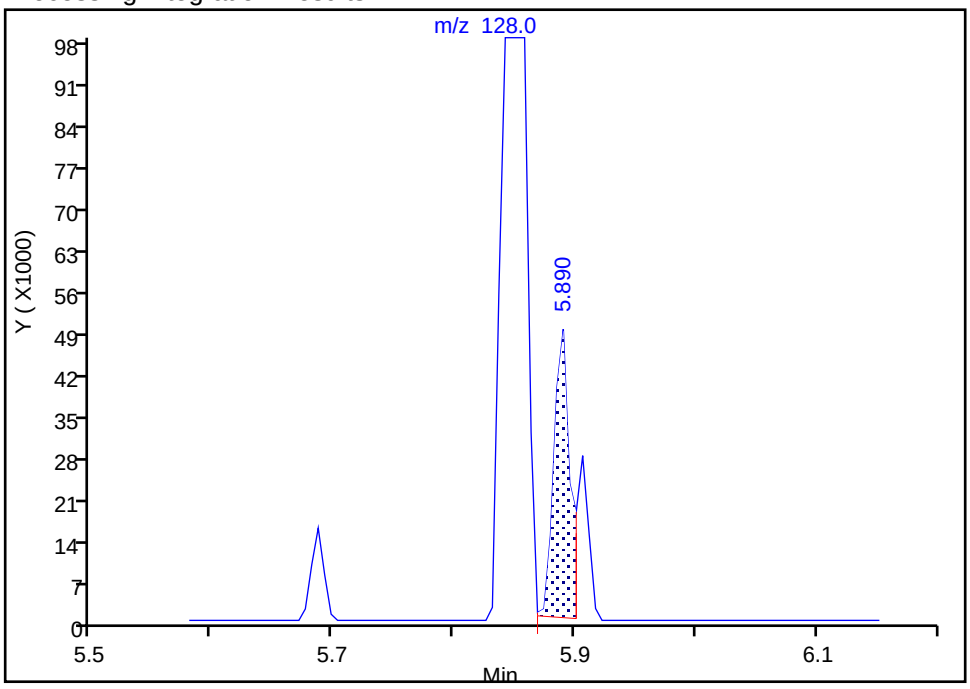
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D | | | | |
| Injection Date: | 08-Jan-2019 14:43:30 | Instrument ID: | SMS_D | | |
| Lims ID: | ICIS HSL | | | | |
| Client ID: | | | | | |
| Operator ID: | KIEKELD | ALS Bottle#: | 2 | Worklist Smp#: | 3 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |
| Column: | VF-5ms ( 0.50 mm) | Detector | MS SCAN | | |

## 56 Naphthalene, CAS: 91-20-3

Signal: 1

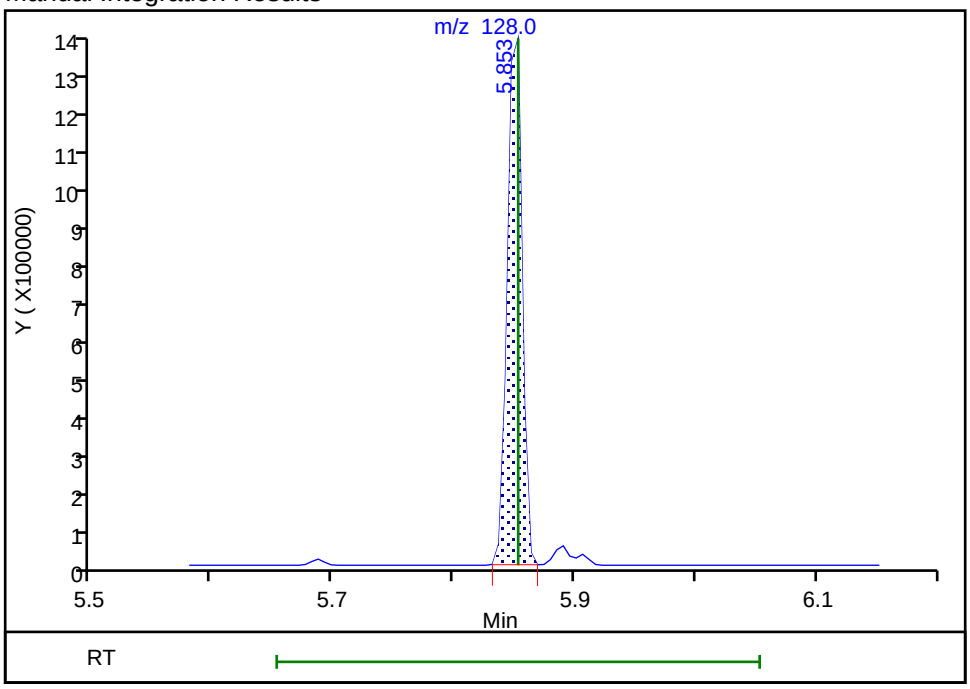
Processing Integration Results

RT: 5.89
Area: 46206
Amount: 80.000000
Amount Units: ug/ml




Manual Integration Results

RT: 5.85
Area: 1143456
Amount: 81.059366
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:48:48

Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

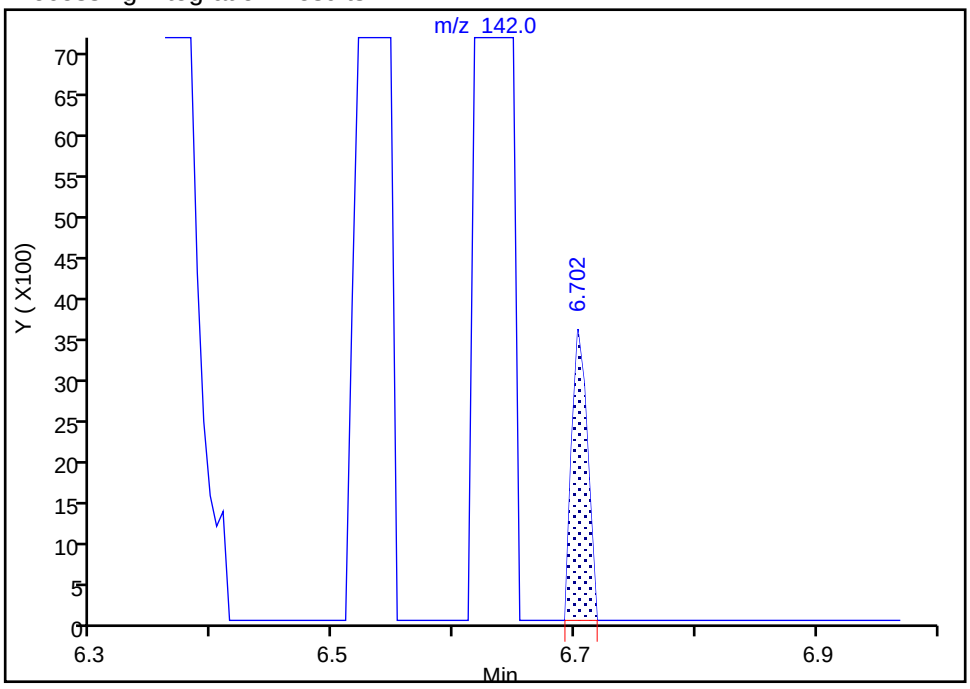
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D
Injection Date: 08-Jan-2019 14:43:30 Instrument ID: SMS_D
Lims ID: ICIS HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 67 1-Methylnaphthalene, CAS: 90-12-0

Signal: 1

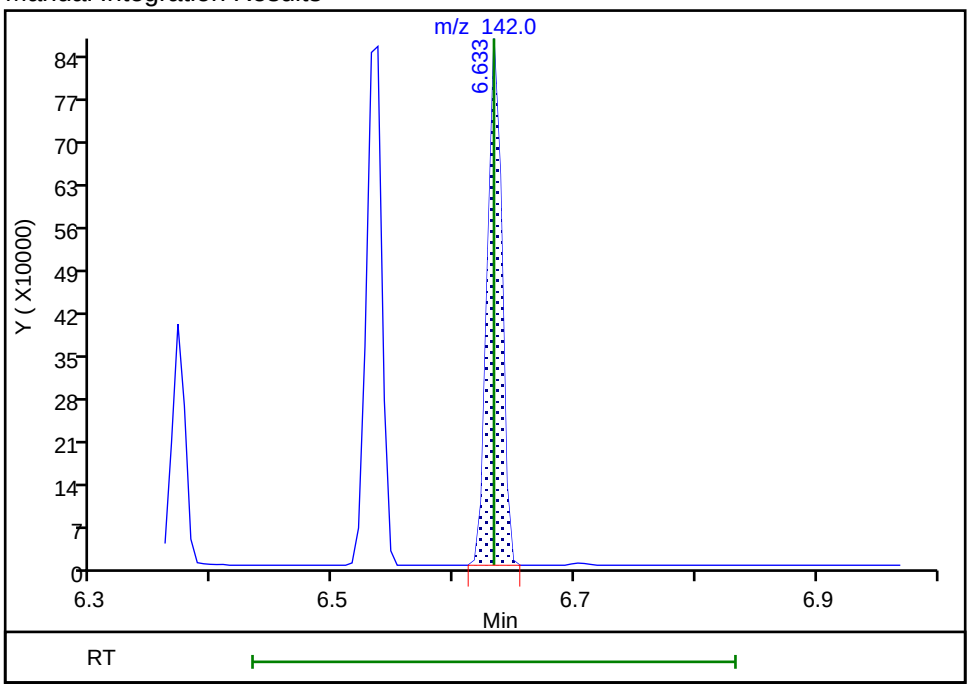
Processing Integration Results

RT: 6.70
Area: 3187
Amount: 80.000000
Amount Units: ug/ml




Manual Integration Results

RT: 6.63
Area: 726449
Amount: 81.611509
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:49:03
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

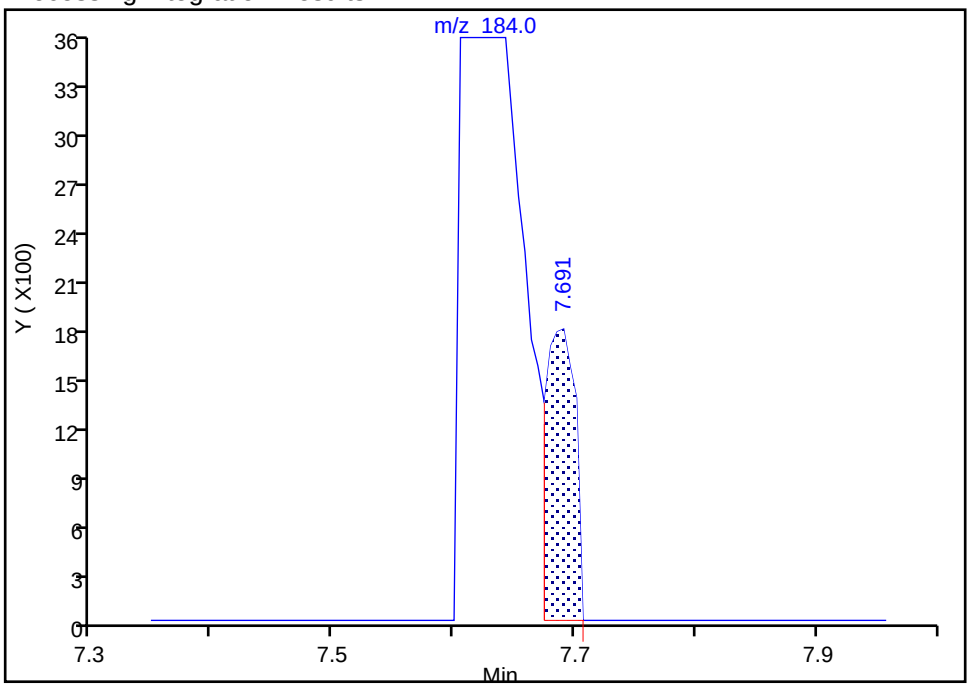
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D
Injection Date: 08-Jan-2019 14:43:30 Instrument ID: SMS_D
Lims ID: ICIS HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 86 2,4-Dinitrophenol, CAS: 51-28-5

Signal: 1

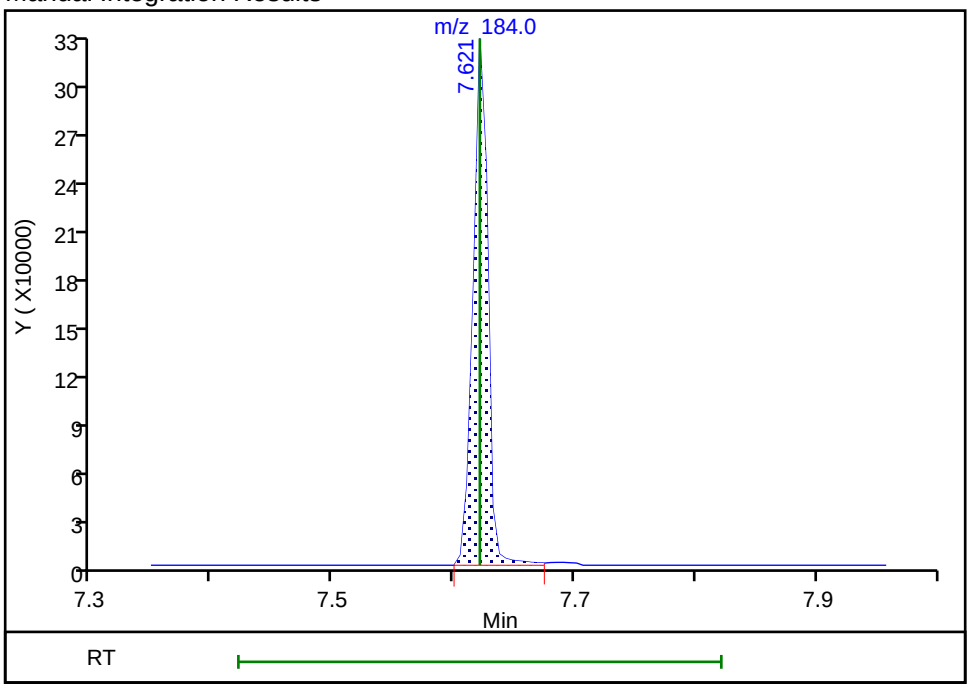
Processing Integration Results

RT: 7.69
Area: 3065
Amount: 16.805586
Amount Units: ug/ml




Manual Integration Results

RT: 7.62
Area: 276839
Amount: 167.6381
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:49:21
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

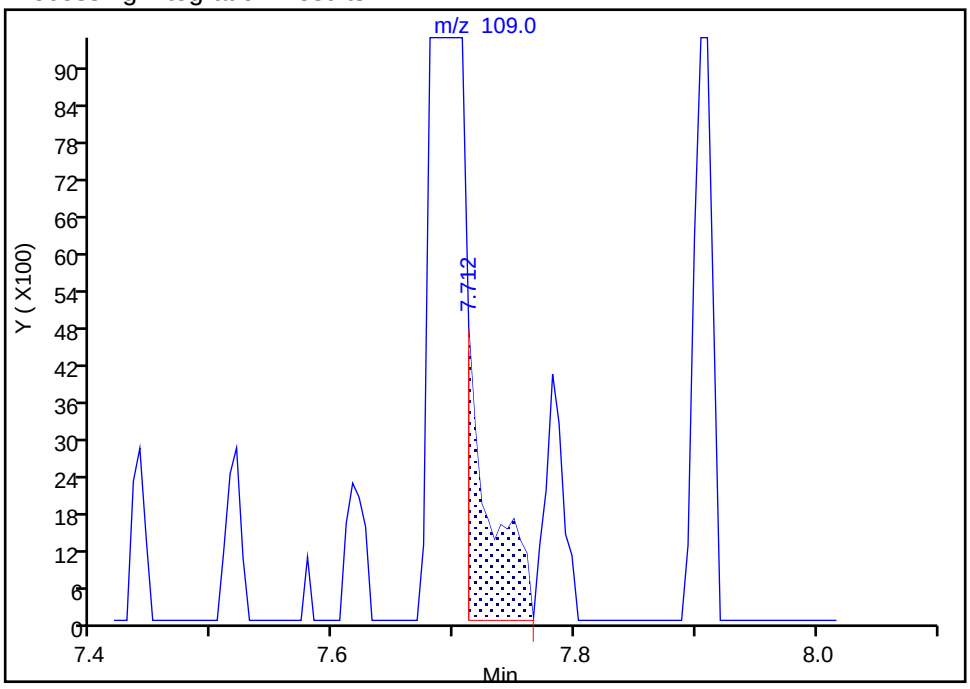
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D
Injection Date: 08-Jan-2019 14:43:30 Instrument ID: SMS_D
Lims ID: ICIS HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 88 4-Nitrophenol, CAS: 100-02-7

Signal: 1

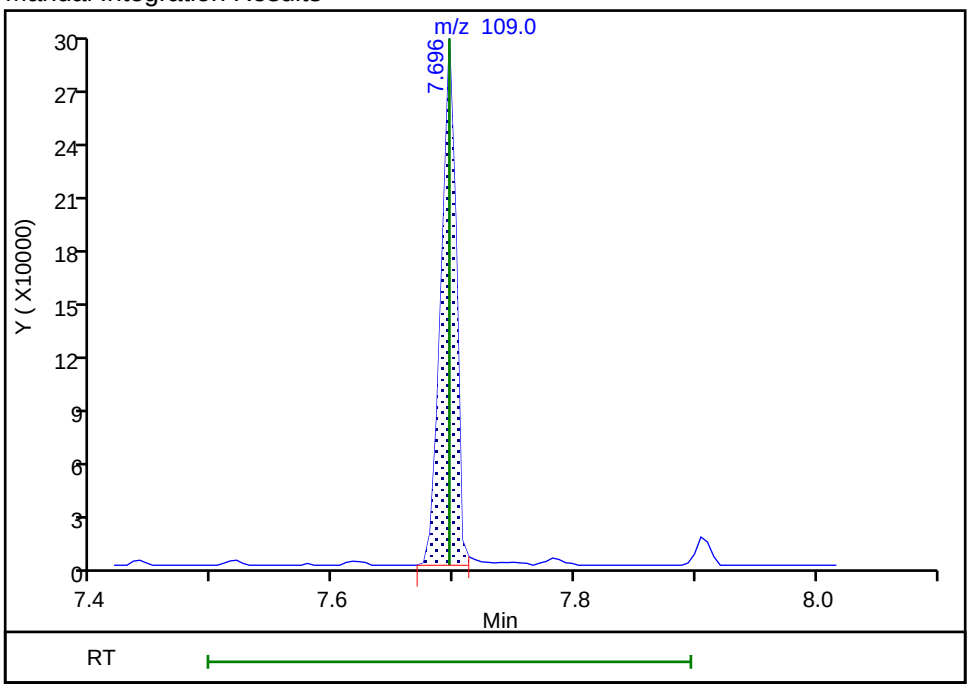
Processing Integration Results

RT: 7.71
Area: 6321
Amount: 160.0000
Amount Units: ug/ml




Manual Integration Results

RT: 7.70
Area: 252882
Amount: 165.6373
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:49:25
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

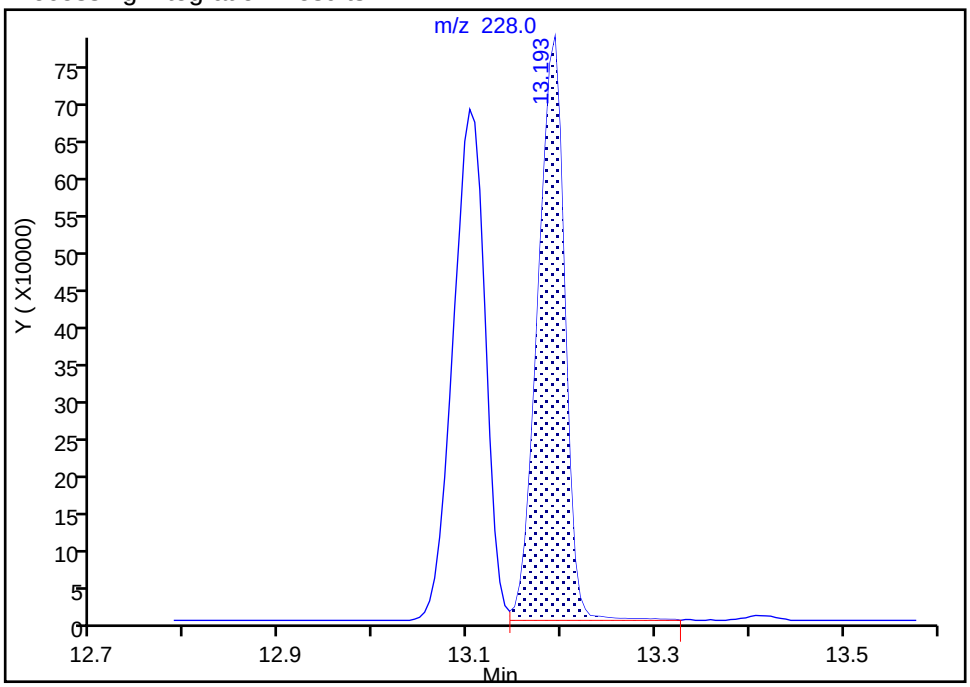
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D | | | | |
| Injection Date: | 08-Jan-2019 14:43:30 | Instrument ID: | SMS_D | | |
| Lims ID: | ICIS HSL | | | | |
| Client ID: | | | | | |
| Operator ID: | KIEKELD | ALS Bottle#: | 2 | Worklist Smp#: | 3 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |
| Column: | VF-5ms ( 0.50 mm) | Detector | MS SCAN | | |

## 145 Benzo[a]anthracene, CAS: 56-55-3

Signal: 1

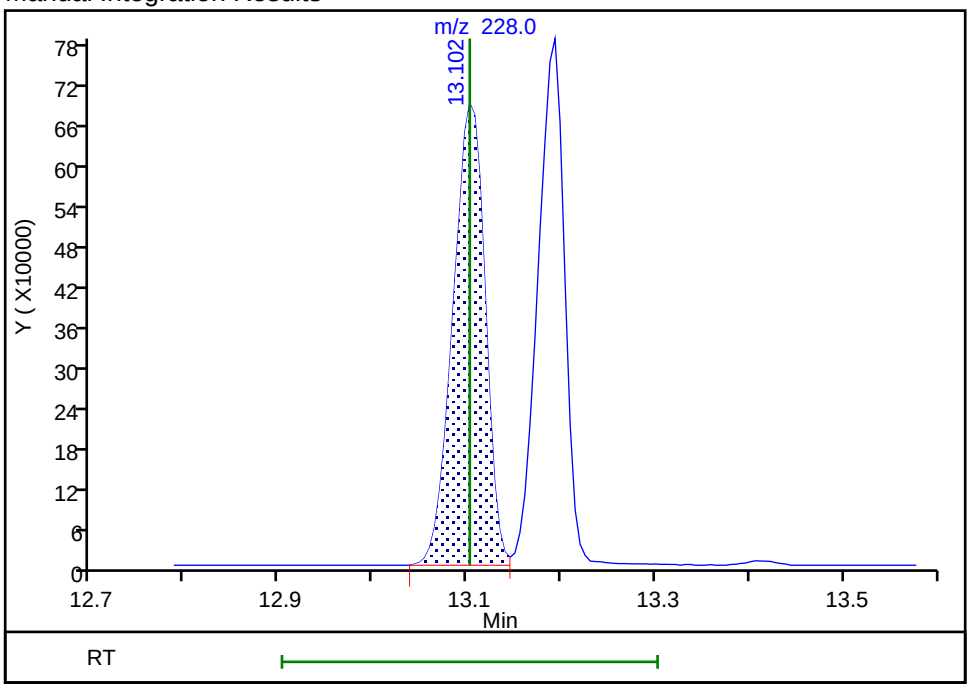
Processing Integration Results

RT: 13.19
Area: 1557877
Amount: 80.000000
Amount Units: ug/ml




Manual Integration Results

RT: 13.10
Area: 1634853
Amount: 81.191696
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:49:49

Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

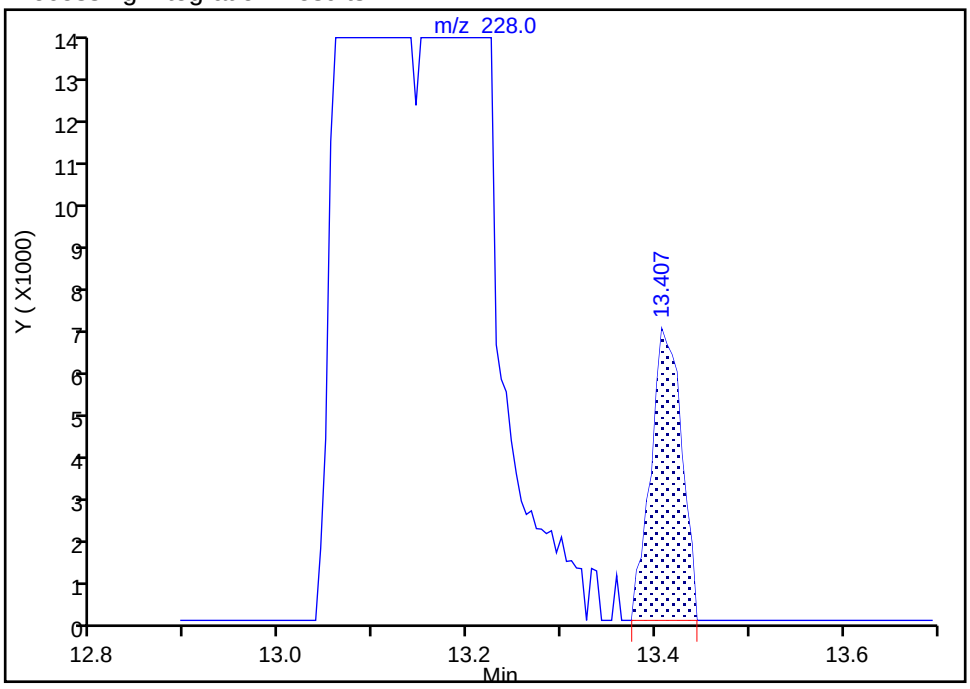
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D | | | | |
| Injection Date: | 08-Jan-2019 14:43:30 | Instrument ID: | SMS_D | | |
| Lims ID: | ICIS HSL | | | | |
| Client ID: | | | | | |
| Operator ID: | KIEKELD | ALS Bottle#: | 2 | Worklist Smp#: | 3 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |
| Column: | VF-5ms ( 0.50 mm) | Detector | MS SCAN | | |

## 146 Chrysene, CAS: 218-01-9

Signal: 1

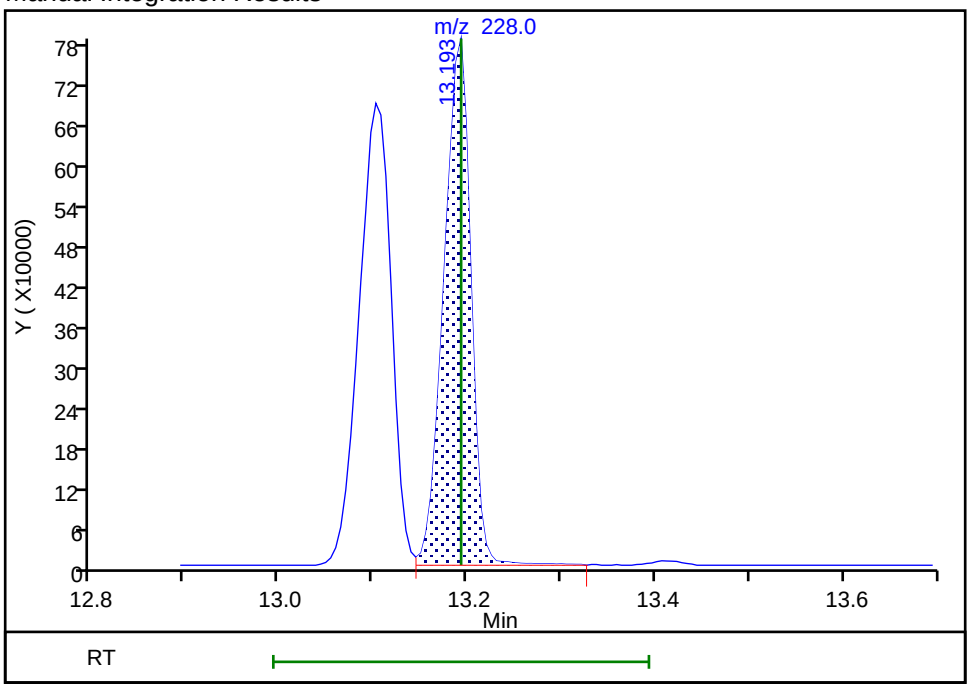
Processing Integration Results

RT: 13.41
Area: 14996
Amount: 80.000000
Amount Units: ug/ml




Manual Integration Results

RT: 13.19
Area: 1557877
Amount: 81.043910
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:49:52
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

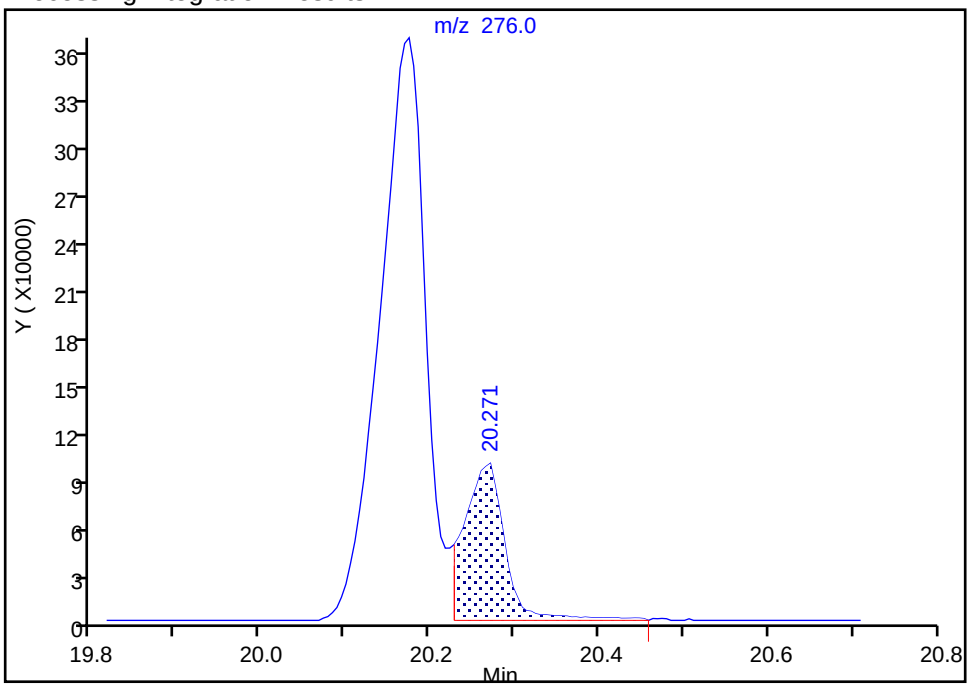
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31076.D
Injection Date: 08-Jan-2019 14:43:30 Instrument ID: SMS_D
Lims ID: ICIS HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 156 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

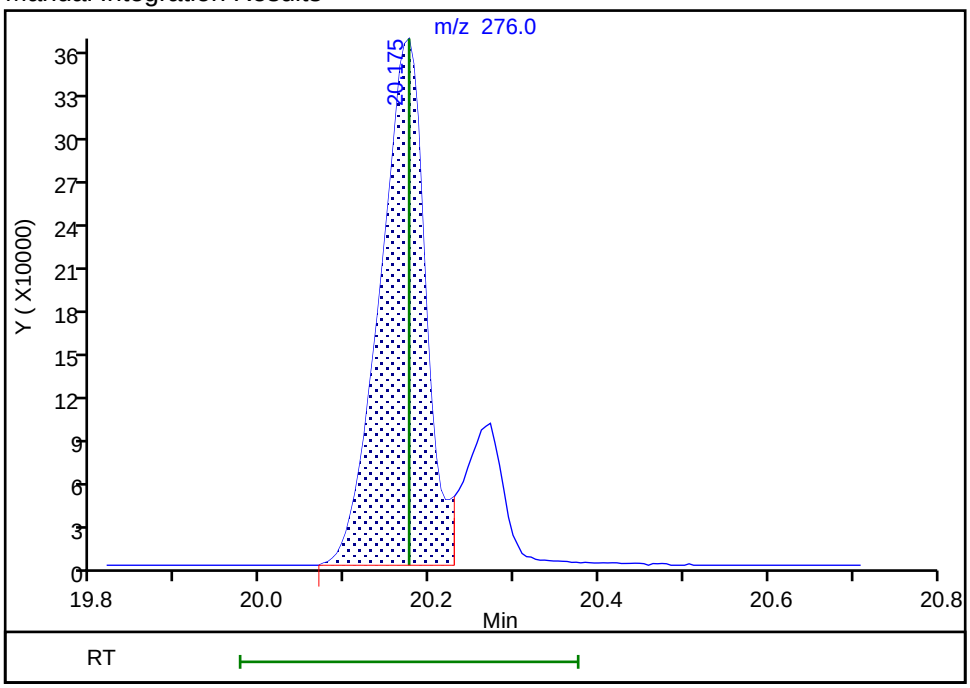
Processing Integration Results

RT: 20.27
Area: 330138
Amount: 80.000000
Amount Units: ug/ml




Manual Integration Results

RT: 20.18
Area: 1380975
Amount: 81.885894
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:50:02
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Report Date: 09-Jan-2019 10:20:00 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31077.D
Lims ID: STD004 HSL
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 08-Jan-2019 15:12:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD004 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub14

Method: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 09-Jan-2019 10:20:00 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 08-Jan-2019 15:52:05

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.596 | 4.592 | 0.004 | 96 | 128836 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.830 | 5.832 | -0.002 | 99 | 514981 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.577 | 7.578 | -0.001 | 95 | 288644 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.068 | 9.069 | -0.001 | 98 | 577225 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.117 | 13.129 | -0.012 | 99 | 596585 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.043 | 17.050 | -0.007 | 97 | 629619 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.400 | 3.396 | 0.004 | 90 | 20610 | 4.00 | 4.26 | |
| $ 8 Phenol-d5 | 99 | 4.228 | 4.234 | -0.006 | 97 | 27225 | 4.00 | 4.22 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.109 | 5.116 | -0.007 | 89 | 22526 | 4.00 | 4.06 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.888 | 6.889 | -0.001 | 99 | 44988 | 4.00 | 4.48 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.368 | 8.369 | -0.001 | 88 | 4939 | 4.00 | 3.54 | |
| $ 12 Terphenyl-d14 | 244 | 11.007 | 11.008 | -0.001 | 97 | 56716 | 4.00 | 4.14 | |
| 13 1,4-Dioxane | 88 | 1.957 | 1.953 | 0.004 | 91 | 9913 | 4.00 | 4.23 | |
| 14 N-Nitrosodimethylamine | 74 | 2.192 | 2.194 | -0.002 | 94 | 15509 | 4.00 | 4.17 | |
| 15 Pyridine | 79 | 2.251 | 2.247 | 0.004 | 97 | 49857 | 8.00 | 8.37 | |
| 23 n-Decane | 57 | 4.431 | 4.432 | -0.001 | 97 | 21268 | 4.00 | 4.20 | |
| 24 Phenol | 94 | 4.244 | 4.245 | -0.001 | 97 | 28169 | 4.00 | 4.17 | |
| 25 Aniline | 93 | 4.276 | 4.277 | -0.001 | 98 | 33873 | 4.00 | 4.01 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.319 | 4.320 | -0.001 | 96 | 20571 | 4.00 | 4.28 | |
| 28 2-Chlorophenol | 128 | 4.399 | 4.400 | -0.001 | 96 | 19471 | 4.00 | 4.05 | |
| 29 1,3-Dichlorobenzene | 146 | 4.543 | 4.544 | -0.001 | 97 | 21484 | 4.00 | 4.27 | |
| 30 1,4-Dichlorobenzene | 146 | 4.607 | 4.608 | -0.001 | 91 | 21299 | 4.00 | 4.21 | |
| 31 Benzyl alcohol | 108 | 4.703 | 4.710 | -0.007 | 94 | 14238 | 4.00 | 3.98 | |
| 32 1,2-Dichlorobenzene | 146 | 4.762 | 4.758 | 0.004 | 96 | 21008 | 4.00 | 4.31 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.831 | 4.833 | -0.002 | 92 | 27628 | 4.00 | 4.29 | |
| 35 2-Methylphenol | 108 | 4.810 | 4.817 | -0.007 | 94 | 20414 | 4.00 | 4.13 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.954 | 4.961 | -0.007 | 84 | 15870 | 4.00 | 4.25 | |
| 39 Acetophenone | 105 | 4.960 | 4.966 | -0.006 | 88 | 29851 | 4.00 | 4.39 | |
| 40 4-Methylphenol | 108 | 4.960 | 4.961 | -0.001 | 92 | 21295 | 4.00 | 4.36 | |
| 41 3-Methylphenol | 108 | 4.960 | 4.961 | -0.001 | 87 | 21295 | 4.00 | 4.36 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.960 | 4.961 | -0.001 | 84 | 21295 | 4.00 | 4.36 | |
| 44 Hexachloroethane | 117 | 5.088 | 5.089 | -0.001 | 92 | 7861 | 4.00 | 4.12 | |
| 45 Nitrobenzene | 77 | 5.131 | 5.132 | -0.001 | 86 | 23298 | 4.00 | 4.13 | |
| 47 Isophorone | 82 | 5.355 | 5.361 | -0.006 | 99 | 43063 | 4.00 | 4.12 | |
| 48 2-Nitrophenol | 139 | 5.446 | 5.447 | -0.001 | 92 | 9772 | 4.00 | 3.90 | |
| 49 2,4-Dimethylphenol | 107 | 5.472 | 5.479 | -0.007 | 96 | 20728 | 4.00 | 4.16 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.558 | 5.559 | -0.001 | 99 | 25533 | 4.00 | 4.28 | |
| 52 Benzoic acid | 105 | 5.526 | 5.607 | -0.081 | 89 | 22702 | 8.00 | 10.2 | |
| 53 2,4-Dichlorophenol | 162 | 5.686 | 5.687 | -0.001 | 93 | 16936 | 4.00 | 4.31 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.772 | 5.773 | -0.001 | 92 | 18703 | 4.00 | 4.35 | |
| 56 Naphthalene | 128 | 5.846 | 5.853 | -0.007 | 96 | 60659 | 4.00 | 4.49 | |
| 57 4-Chloroaniline | 127 | 5.884 | 5.890 | -0.006 | 96 | 23855 | 4.00 | 3.93 | |
| 58 2,6-Dichlorophenol | 162 | 5.905 | 5.906 | -0.001 | 96 | 16661 | 4.00 | 4.28 | |
| 60 Hexachlorobutadiene | 225 | 5.980 | 5.976 | 0.004 | 94 | 9283 | 4.00 | 4.10 | |
| 63 Caprolactam | 55 | 6.188 | 6.232 | -0.044 | 81 | 9595 | 4.00 | 3.97 | |
| 64 4-Chloro-3-methylphenol | 107 | 6.365 | 6.371 | -0.006 | 96 | 18045 | 4.00 | 4.12 | |
| 66 2-Methylnaphthalene | 142 | 6.530 | 6.537 | -0.007 | 94 | 41071 | 4.00 | 4.50 | |
| 67 1-Methylnaphthalene | 142 | 6.632 | 6.633 | -0.001 | 93 | 36726 | 4.00 | 4.31 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.701 | 6.702 | -0.001 | 92 | 9729 | 4.00 | 3.81 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.706 | 6.708 | -0.002 | 96 | 18779 | 4.00 | 4.46 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.813 | 6.815 | -0.002 | 90 | 11999 | 4.00 | 4.34 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.856 | 6.857 | -0.001 | 93 | 12399 | 4.00 | 3.99 | |
| 74 1,1'-Biphenyl | 154 | 6.990 | 6.996 | -0.006 | 95 | 47930 | 4.00 | 4.58 | |
| 75 2-Chloronaphthalene | 162 | 7.016 | 7.023 | -0.007 | 96 | 37562 | 4.00 | 4.50 | |
| 77 2-Nitroaniline | 65 | 7.107 | 7.108 | -0.001 | 78 | 11373 | 4.00 | 3.78 | |
| 80 Dimethyl phthalate | 163 | 7.278 | 7.285 | -0.007 | 98 | 40633 | 4.00 | 4.26 | |
| 81 1,3-Dinitrobenzene | 168 | 7.305 | 7.311 | -0.006 | 85 | 6145 | 4.00 | 3.63 | |
| 82 2,6-Dinitrotoluene | 165 | 7.337 | 7.343 | -0.006 | 92 | 8964 | 4.00 | 3.79 | |
| 83 Acenaphthylene | 152 | 7.438 | 7.440 | -0.002 | 99 | 59485 | 4.00 | 4.37 | |
| 84 3-Nitroaniline | 138 | 7.513 | 7.520 | -0.007 | 91 | 10537 | 4.00 | 3.80 | a |
| 85 Acenaphthene | 153 | 7.609 | 7.611 | -0.002 | 94 | 37468 | 4.00 | 4.57 | |
| 86 2,4-Dinitrophenol | 184 | 7.615 | 7.621 | -0.006 | 74 | 6248 | 8.00 | 9.89 | |
| 88 4-Nitrophenol | 109 | 7.684 | 7.696 | -0.012 | 93 | 10796 | 8.00 | 7.64 | |
| 89 2,4-Dinitrotoluene | 165 | 7.743 | 7.749 | -0.006 | 91 | 11910 | 4.00 | 3.69 | |
| 90 Dibenzofuran | 168 | 7.780 | 7.787 | -0.007 | 98 | 55918 | 4.00 | 4.46 | |
| 92 Hexadecane | 57 | 8.005 | 8.006 | -0.001 | 95 | 24507 | 4.00 | 4.17 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.908 | 7.910 | -0.002 | 67 | 9690 | 4.00 | 3.71 | |
| 95 Diethyl phthalate | 149 | 7.978 | 7.990 | -0.012 | 98 | 40289 | 4.00 | 4.28 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.111 | 8.113 | -0.002 | 91 | 20808 | 4.00 | 4.29 | |
| 99 Fluorene | 166 | 8.122 | 8.129 | -0.007 | 96 | 46063 | 4.00 | 4.63 | |
| 100 4-Nitroaniline | 138 | 8.117 | 8.134 | -0.017 | 84 | 11362 | 4.00 | 3.84 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.160 | 8.171 | -0.011 | 86 | 10455 | 8.00 | 8.83 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.224 | 8.230 | -0.006 | 62 | 33425 | 4.00 | 4.51 | |
| 103 Diphenylamine | 169 | 8.224 | 8.230 | -0.006 | 94 | 33425 | 3.40 | 3.75 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.272 | 8.273 | -0.001 | 97 | 48350 | 4.04 | 4.25 | |
| 106 Azobenzene | 77 | 8.272 | 8.273 | -0.001 | 97 | 48350 | 4.00 | 4.20 | |
| 112 Atrazine | 200 | 8.742 | 8.754 | -0.012 | 93 | 11880 | 4.00 | 4.20 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.603 | 8.604 | -0.001 | 66 | 12687 | 4.00 | 4.32 | |
| 116 Hexachlorobenzene | 284 | 8.688 | 8.695 | -0.007 | 93 | 11927 | 4.00 | 4.20 | |
| 119 Pentachlorophenol | 266 | 8.881 | 8.882 | -0.001 | 91 | 10824 | 8.00 | 8.01 | |
| 123 Phenanthrene | 178 | 9.089 | 9.096 | -0.007 | 97 | 67900 | 4.00 | 4.60 | |
| 124 Anthracene | 178 | 9.142 | 9.144 | -0.002 | 98 | 68893 | 4.00 | 4.51 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.292 | 9.293 | -0.001 | 95 | 66491 | 4.00 | 4.51 | |
| 127 Di-n-butyl phthalate | 149 | 9.629 | 9.630 | -0.001 | 100 | 66977 | 4.00 | 4.12 | |
| 132 Fluoranthene | 202 | 10.451 | 10.453 | -0.002 | 98 | 75143 | 4.00 | 4.34 | |
| 134 Pyrene | 202 | 10.783 | 10.789 | -0.007 | 97 | 78114 | 4.00 | 4.13 | |
| 141 Butyl benzyl phthalate | 149 | 11.888 | 11.900 | -0.012 | 95 | 29374 | 4.00 | 3.65 | |
| 144 3,3'-Dichlorobenzidine | 252 | 13.042 | 13.059 | -0.017 | 70 | 23553 | 4.00 | 3.77 | |
| 145 Benzo[a]anthracene | 228 | 13.090 | 13.102 | -0.012 | 98 | 78873 | 4.00 | 4.17 | |
| 146 Chrysene | 228 | 13.176 | 13.193 | -0.017 | 97 | 78755 | 4.00 | 4.36 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.267 | 13.268 | -0.001 | 96 | 38544 | 4.00 | 3.53 | |
| 148 Di-n-octyl phthalate | 149 | 15.062 | 15.073 | -0.011 | 98 | 64878 | 4.00 | 3.43 | |
| 150 Benzo[b]fluoranthene | 252 | 15.938 | 15.966 | -0.028 | 98 | 70562 | 4.00 | 3.78 | |
| 151 Benzo[k]fluoranthene | 252 | 16.018 | 16.046 | -0.028 | 98 | 78834 | 4.00 | 4.14 | |
| 153 Benzo[a]pyrene | 252 | 16.862 | 16.895 | -0.033 | 78 | 73104 | 4.00 | 3.94 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 20.137 | 20.175 | -0.038 | 96 | 64545 | 4.00 | 4.07 | |
| 157 Dibenz(a,h)anthracene | 278 | 20.227 | 20.271 | -0.044 | 93 | 62461 | 4.00 | 3.81 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.868 | 20.918 | -0.050 | 95 | 70796 | 4.00 | 4.07 | |
| S 169 Methyl Phenols,Total | 108 | | | | 0 | | | 8.49 | |
| S 170 Total Cresols | 108 | | | | 0 | | | 4.13 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

MS-HSLA004_00041 Amount Added: 200.00 Units: uL

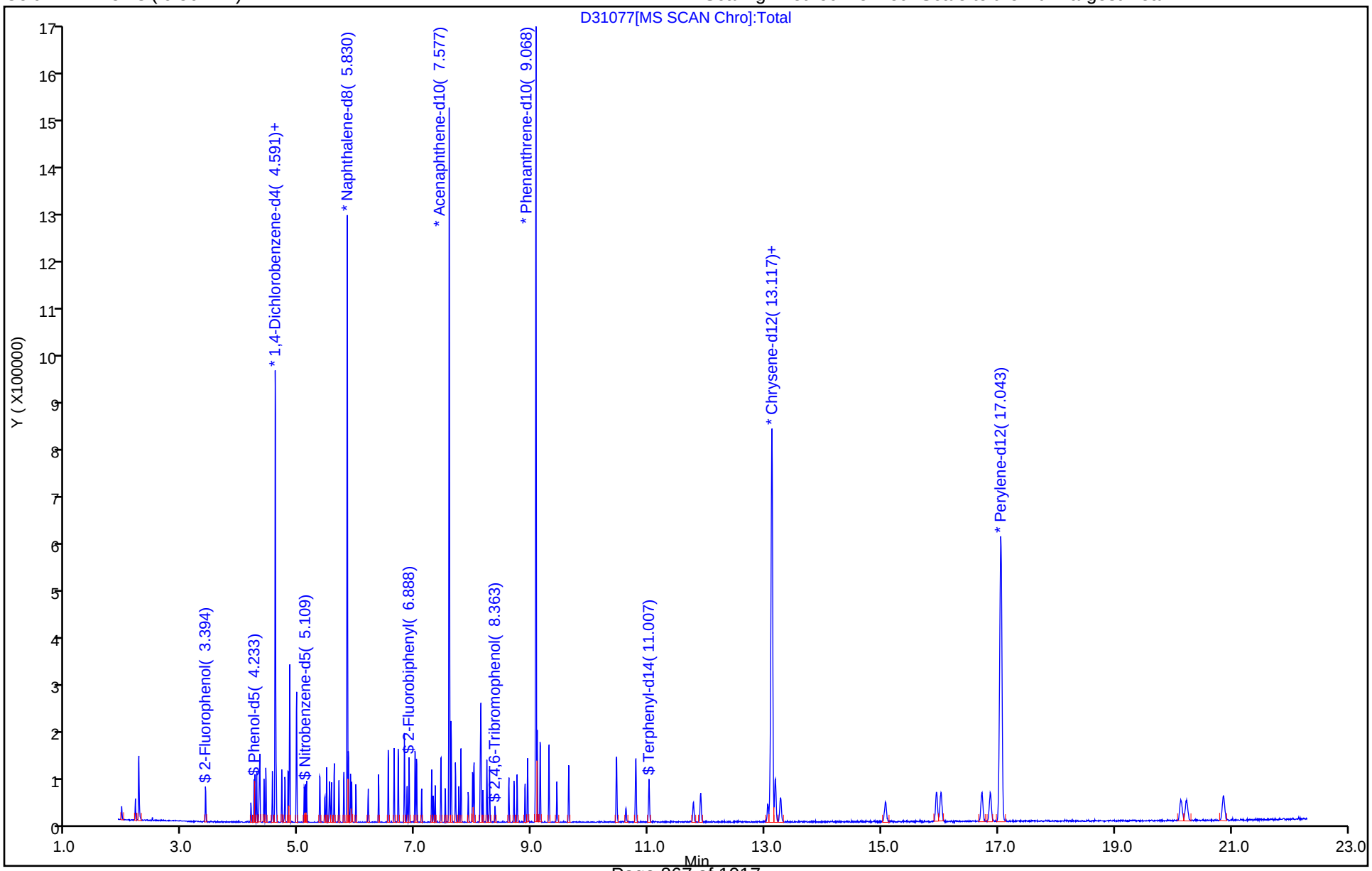
Report Date: 09-Jan-2019 10:20:01 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31077.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 15:12:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD004 HSL | | | Worklist Smp#: | 4 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 3 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

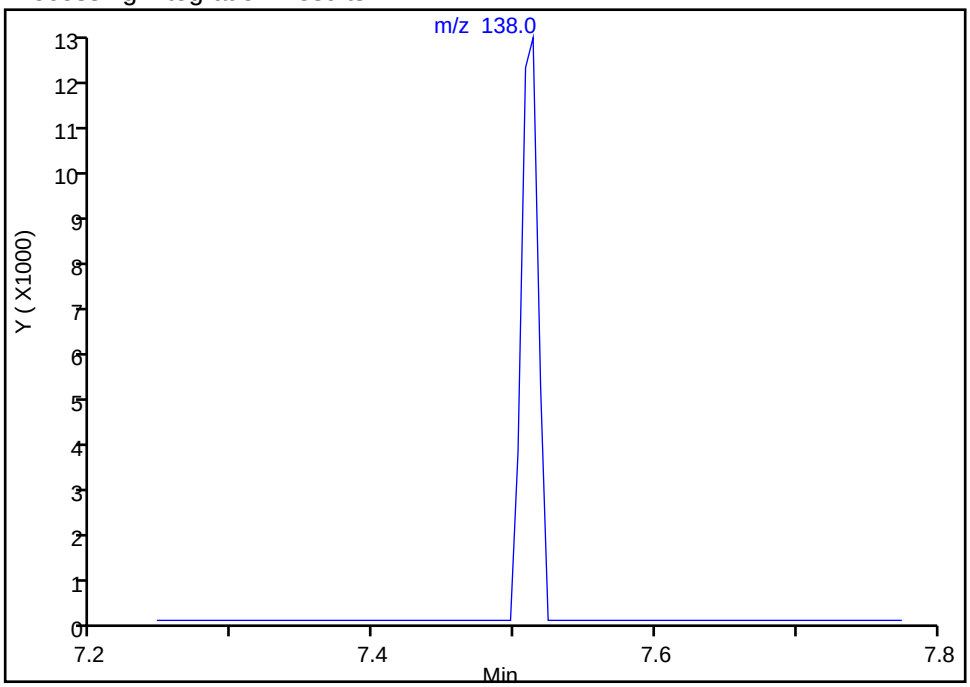
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31077.D | | | | |
| Injection Date: | 08-Jan-2019 15:12:30 | Instrument ID: | SMS_D | | |
| Lims ID: | STD004 HSL | | | | |
| Client ID: | | | | | |
| Operator ID: | KIEKELD | ALS Bottle#: | 3 | Worklist Smp#: | 4 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |
| Column: | VF-5ms ( 0.50 mm) | Detector | MS SCAN | | |

## 84 3-Nitroaniline, CAS: 99-09-2

Signal: 1

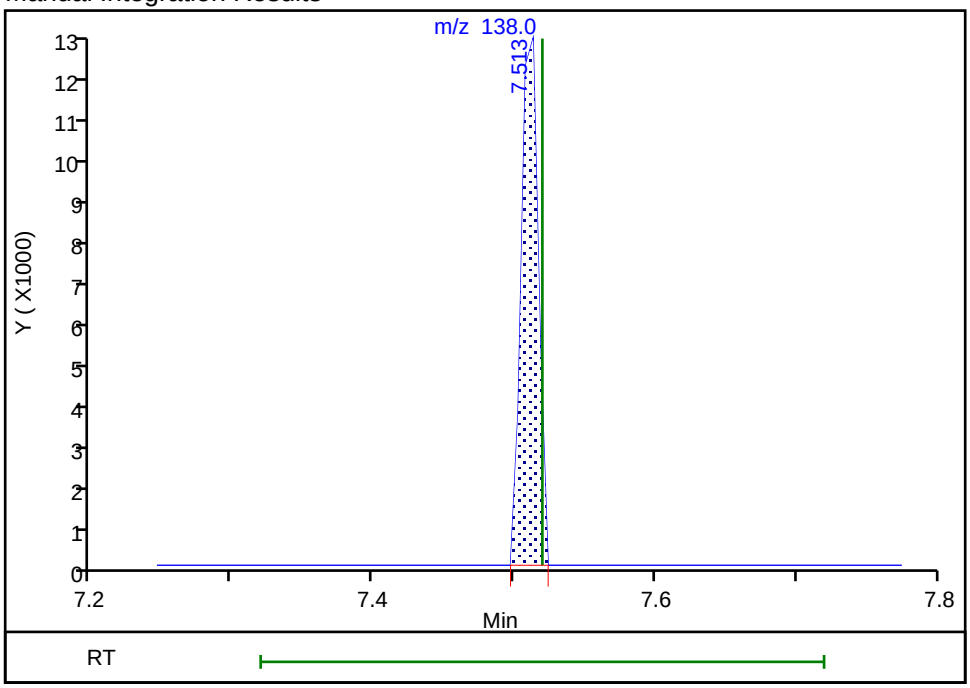
Not Detected
Expected RT: 7.52

Processing Integration Results




Manual Integration Results

RT: 7.51
Area: 10537
Amount: 3.796132
Amount Units: ug/ml




Reviewer: kiekeld, 08-Jan-2019 15:51:25
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31078.D
Lims ID: STD010 HSL
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jan-2019 15:42:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD010 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub14

Method: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 09-Jan-2019 10:20:04 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 09-Jan-2019 10:01:44

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.597 | 4.592 | 0.005 | 96 | 138476 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.831 | 5.832 | -0.001 | 99 | 547968 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.583 | 7.578 | 0.005 | 94 | 314070 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.068 | 9.069 | -0.001 | 98 | 634978 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.117 | 13.129 | -0.012 | 99 | 649159 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.049 | 17.050 | -0.001 | 98 | 668070 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.400 | 3.396 | 0.004 | 93 | 53134 | 10.0 | 10.2 | |
| $ 8 Phenol-d5 | 99 | 4.233 | 4.234 | -0.001 | 98 | 71107 | 10.0 | 10.3 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.115 | 5.116 | -0.001 | 86 | 60983 | 10.0 | 10.3 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.894 | 6.889 | 0.005 | 99 | 119349 | 10.0 | 10.9 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.368 | 8.369 | -0.001 | 91 | 14527 | 10.0 | 9.57 | |
| $ 12 Terphenyl-d14 | 244 | 11.007 | 11.008 | -0.001 | 98 | 151186 | 10.0 | 10.1 | |
| 13 1,4-Dioxane | 88 | 1.963 | 1.953 | 0.010 | 93 | 25732 | 10.0 | 10.2 | |
| 14 N-Nitrosodimethylamine | 74 | 2.198 | 2.194 | 0.004 | 94 | 39244 | 10.0 | 9.83 | |
| 15 Pyridine | 79 | 2.257 | 2.247 | 0.010 | 98 | 131018 | 20.0 | 20.5 | |
| 23 n-Decane | 57 | 4.436 | 4.432 | 0.004 | 98 | 56729 | 10.0 | 10.4 | |
| 24 Phenol | 94 | 4.244 | 4.245 | -0.001 | 97 | 73873 | 10.0 | 10.2 | |
| 25 Aniline | 93 | 4.276 | 4.277 | -0.001 | 98 | 93349 | 10.0 | 10.3 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.319 | 4.320 | -0.001 | 96 | 54832 | 10.0 | 10.6 | |
| 28 2-Chlorophenol | 128 | 4.404 | 4.400 | 0.004 | 97 | 53385 | 10.0 | 10.3 | |
| 29 1,3-Dichlorobenzene | 146 | 4.549 | 4.544 | 0.005 | 97 | 56943 | 10.0 | 10.5 | |
| 30 1,4-Dichlorobenzene | 146 | 4.613 | 4.608 | 0.005 | 95 | 56791 | 10.0 | 10.5 | |
| 31 Benzyl alcohol | 108 | 4.709 | 4.710 | -0.001 | 93 | 37687 | 10.0 | 9.80 | |
| 32 1,2-Dichlorobenzene | 146 | 4.762 | 4.758 | 0.004 | 95 | 53989 | 10.0 | 10.3 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.837 | 4.833 | 0.004 | 93 | 70752 | 10.0 | 10.2 | |
| 35 2-Methylphenol | 108 | 4.816 | 4.817 | -0.001 | 93 | 53791 | 10.0 | 10.1 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.955 | 4.961 | -0.006 | 84 | 42394 | 10.0 | 10.6 | |
| 39 Acetophenone | 105 | 4.965 | 4.966 | -0.001 | 93 | 78778 | 10.0 | 10.8 | |
| 40 4-Methylphenol | 108 | 4.960 | 4.961 | -0.001 | 96 | 56460 | 10.0 | 10.8 | |
| 41 3-Methylphenol | 108 | 4.960 | 4.961 | -0.001 | 89 | 56460 | 10.0 | 10.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.960 | 4.961 | -0.001 | 90 | 56460 | 10.0 | 10.8 | |
| 44 Hexachloroethane | 117 | 5.093 | 5.089 | 0.004 | 93 | 21247 | 10.0 | 10.4 | |
| 45 Nitrobenzene | 77 | 5.131 | 5.132 | -0.001 | 85 | 62301 | 10.0 | 10.4 | |
| 47 Isophorone | 82 | 5.361 | 5.361 | 0.000 | 99 | 114150 | 10.0 | 10.3 | |
| 48 2-Nitrophenol | 139 | 5.446 | 5.447 | -0.001 | 95 | 26949 | 10.0 | 10.1 | |
| 49 2,4-Dimethylphenol | 107 | 5.478 | 5.479 | -0.001 | 96 | 56677 | 10.0 | 10.7 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.558 | 5.559 | -0.001 | 98 | 66195 | 10.0 | 10.4 | |
| 52 Benzoic acid | 105 | 5.542 | 5.607 | -0.065 | 88 | 72139 | 20.0 | 20.5 | a |
| 53 2,4-Dichlorophenol | 162 | 5.686 | 5.687 | -0.001 | 95 | 42597 | 10.0 | 10.2 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.772 | 5.773 | -0.001 | 93 | 48896 | 10.0 | 10.7 | |
| 56 Naphthalene | 128 | 5.852 | 5.853 | -0.001 | 97 | 154038 | 10.0 | 10.7 | |
| 57 4-Chloroaniline | 127 | 5.889 | 5.890 | -0.001 | 97 | 68875 | 10.0 | 10.7 | |
| 58 2,6-Dichlorophenol | 162 | 5.905 | 5.906 | -0.001 | 97 | 44164 | 10.0 | 10.7 | |
| 60 Hexachlorobutadiene | 225 | 5.980 | 5.976 | 0.004 | 95 | 25455 | 10.0 | 10.6 | |
| 63 Caprolactam | 55 | 6.194 | 6.232 | -0.038 | 82 | 24412 | 10.0 | 9.50 | |
| 64 4-Chloro-3-methylphenol | 107 | 6.370 | 6.371 | -0.001 | 97 | 47211 | 10.0 | 10.1 | |
| 66 2-Methylnaphthalene | 142 | 6.536 | 6.537 | -0.001 | 93 | 105716 | 10.0 | 10.9 | |
| 67 1-Methylnaphthalene | 142 | 6.632 | 6.633 | -0.001 | 94 | 98870 | 10.0 | 10.9 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.701 | 6.702 | -0.001 | 94 | 27518 | 10.0 | 9.91 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.707 | 6.708 | -0.001 | 97 | 48622 | 10.0 | 10.9 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.814 | 6.815 | -0.001 | 94 | 32334 | 10.0 | 10.8 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.856 | 6.857 | -0.001 | 96 | 34596 | 10.0 | 10.2 | |
| 74 1,1'-Biphenyl | 154 | 6.995 | 6.996 | -0.001 | 95 | 125190 | 10.0 | 11.0 | |
| 75 2-Chloronaphthalene | 162 | 7.022 | 7.023 | -0.001 | 96 | 97441 | 10.0 | 10.7 | |
| 77 2-Nitroaniline | 65 | 7.107 | 7.108 | -0.001 | 83 | 32281 | 10.0 | 9.85 | |
| 80 Dimethyl phthalate | 163 | 7.278 | 7.285 | -0.007 | 98 | 108559 | 10.0 | 10.5 | |
| 81 1,3-Dinitrobenzene | 168 | 7.310 | 7.311 | -0.001 | 85 | 16683 | 10.0 | 9.07 | |
| 82 2,6-Dinitrotoluene | 165 | 7.342 | 7.343 | -0.001 | 95 | 25586 | 10.0 | 9.94 | |
| 83 Acenaphthylene | 152 | 7.439 | 7.440 | -0.001 | 99 | 160369 | 10.0 | 10.8 | |
| 84 3-Nitroaniline | 138 | 7.513 | 7.520 | -0.007 | 94 | 30013 | 10.0 | 9.94 | |
| 85 Acenaphthene | 153 | 7.610 | 7.611 | -0.001 | 94 | 99494 | 10.0 | 11.2 | |
| 86 2,4-Dinitrophenol | 184 | 7.615 | 7.621 | -0.006 | 83 | 24423 | 20.0 | 20.1 | |
| 88 4-Nitrophenol | 109 | 7.684 | 7.696 | -0.012 | 92 | 29874 | 20.0 | 19.4 | |
| 89 2,4-Dinitrotoluene | 165 | 7.748 | 7.749 | -0.001 | 92 | 35129 | 10.0 | 9.99 | |
| 90 Dibenzofuran | 168 | 7.781 | 7.787 | -0.006 | 98 | 148989 | 10.0 | 10.9 | |
| 92 Hexadecane | 57 | 8.005 | 8.006 | -0.001 | 97 | 68108 | 10.0 | 10.7 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.909 | 7.910 | -0.001 | 71 | 28309 | 10.0 | 9.97 | |
| 95 Diethyl phthalate | 149 | 7.984 | 7.990 | -0.006 | 98 | 109935 | 10.0 | 10.7 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.112 | 8.113 | -0.001 | 91 | 56477 | 10.0 | 10.7 | |
| 99 Fluorene | 166 | 8.128 | 8.129 | -0.001 | 94 | 120198 | 10.0 | 11.1 | |
| 100 4-Nitroaniline | 138 | 8.122 | 8.134 | -0.012 | 86 | 32038 | 10.0 | 9.95 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.160 | 8.171 | -0.011 | 86 | 34574 | 20.0 | 19.8 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.224 | 8.230 | -0.006 | 62 | 87454 | 10.0 | 10.7 | |
| 103 Diphenylamine | 169 | 8.224 | 8.230 | -0.006 | 95 | 87454 | 8.50 | 9.03 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.272 | 8.273 | -0.001 | 98 | 129897 | 10.1 | 10.5 | |
| 106 Azobenzene | 77 | 8.272 | 8.273 | -0.001 | 98 | 129897 | 10.0 | 10.4 | |
| 112 Atrazine | 200 | 8.747 | 8.754 | -0.007 | 95 | 32333 | 10.0 | 10.4 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.603 | 8.604 | -0.001 | 65 | 34133 | 10.0 | 10.6 | |
| 116 Hexachlorobenzene | 284 | 8.694 | 8.695 | -0.001 | 94 | 33492 | 10.0 | 10.7 | |
| 119 Pentachlorophenol | 266 | 8.881 | 8.882 | -0.001 | 93 | 35005 | 20.0 | 19.7 | |
| 123 Phenanthrene | 178 | 9.089 | 9.096 | -0.007 | 97 | 176527 | 10.0 | 10.9 | |
| 124 Anthracene | 178 | 9.143 | 9.144 | -0.001 | 98 | 182594 | 10.0 | 10.9 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.292 | 9.293 | -0.001 | 95 | 174644 | 10.0 | 10.8 | |
| 127 Di-n-butyl phthalate | 149 | 9.629 | 9.630 | -0.001 | 100 | 188100 | 10.0 | 10.5 | |
| 132 Fluoranthene | 202 | 10.452 | 10.453 | -0.001 | 98 | 202884 | 10.0 | 10.6 | |
| 134 Pyrene | 202 | 10.783 | 10.789 | -0.006 | 97 | 214875 | 10.0 | 10.4 | |
| 141 Butyl benzyl phthalate | 149 | 11.899 | 11.900 | -0.001 | 98 | 85437 | 10.0 | 9.76 | |
| 144 3,3'-Dichlorobenzidine | 252 | 13.048 | 13.059 | -0.011 | 74 | 69062 | 10.0 | 10.1 | |
| 145 Benzo[a]anthracene | 228 | 13.096 | 13.102 | -0.006 | 99 | 213650 | 10.0 | 10.4 | |
| 146 Chrysene | 228 | 13.181 | 13.193 | -0.012 | 97 | 200025 | 10.0 | 10.2 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.272 | 13.268 | 0.004 | 97 | 116885 | 10.0 | 9.82 | |
| 148 Di-n-octyl phthalate | 149 | 15.067 | 15.073 | -0.006 | 99 | 195842 | 10.0 | 9.53 | |
| 150 Benzo[b]fluoranthene | 252 | 15.949 | 15.966 | -0.017 | 98 | 194845 | 10.0 | 9.84 | |
| 151 Benzo[k]fluoranthene | 252 | 16.023 | 16.046 | -0.023 | 99 | 201769 | 10.0 | 9.99 | |
| 153 Benzo[a]pyrene | 252 | 16.873 | 16.895 | -0.022 | 78 | 196452 | 10.0 | 9.97 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 20.142 | 20.175 | -0.033 | 98 | 170084 | 10.0 | 9.87 | |
| 157 Dibenz(a,h)anthracene | 278 | 20.233 | 20.271 | -0.038 | 93 | 170901 | 10.0 | 9.82 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.874 | 20.918 | -0.044 | 98 | 183928 | 10.0 | 9.97 | |
| S 169 Methyl Phenols,Total | 108 | | | | 0 | | | 20.9 | |
| S 170 Total Cresols | 108 | | | | 0 | | | 10.1 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

MS-HSLA010_00040 Amount Added: 200.00 Units: uL

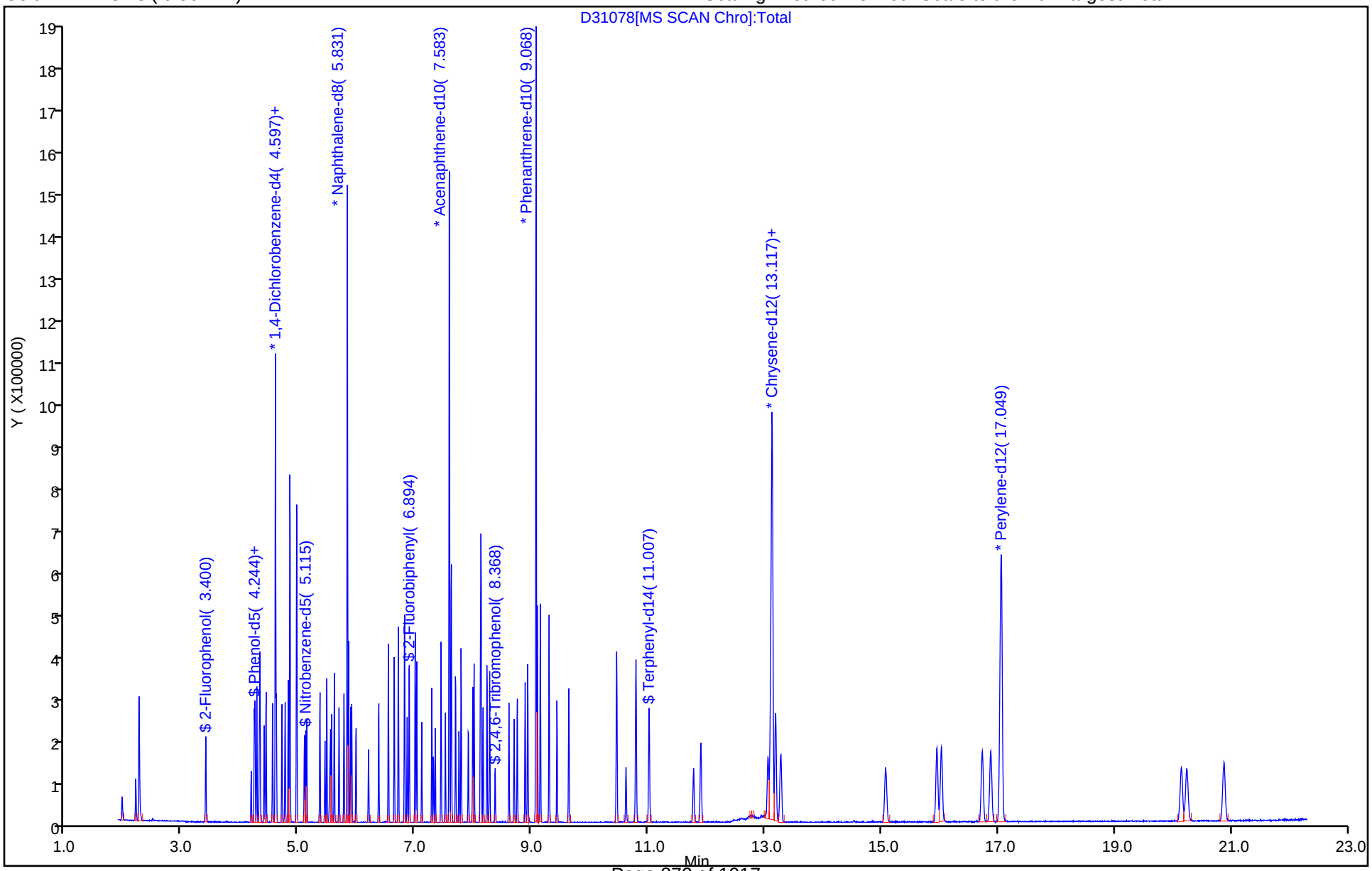
Report Date: 09-Jan-2019 10:20:04 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31078.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 15:42:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD010 HSL | | | Worklist Smp#: | 5 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 4 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

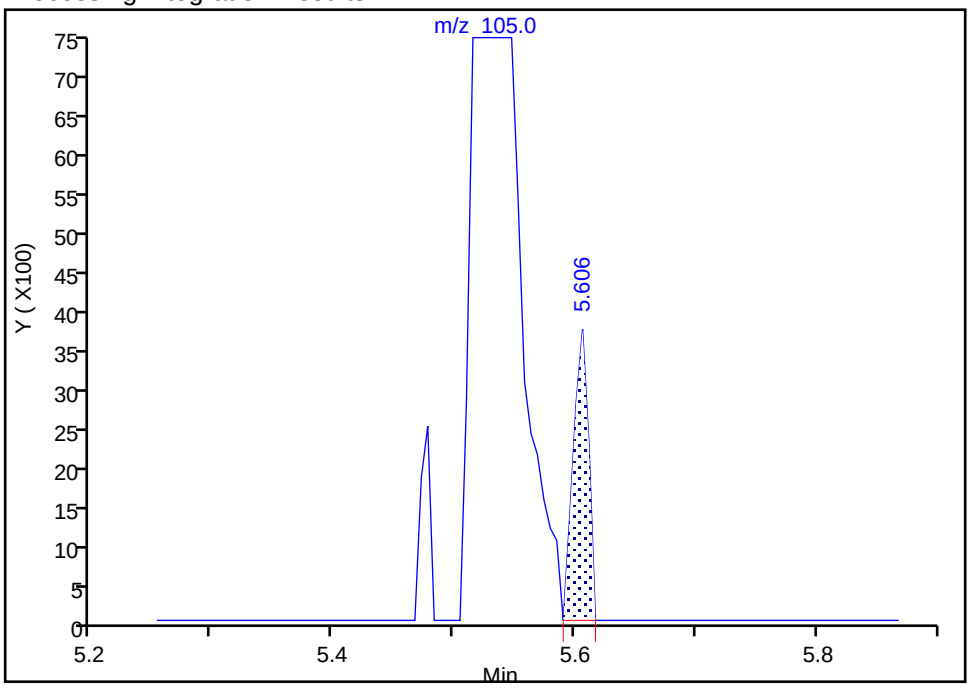
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31078.D
Injection Date: 08-Jan-2019 15:42:30 Instrument ID: SMS_D
Lims ID: STD010 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 52 Benzoic acid, CAS: 65-85-0

Signal: 1

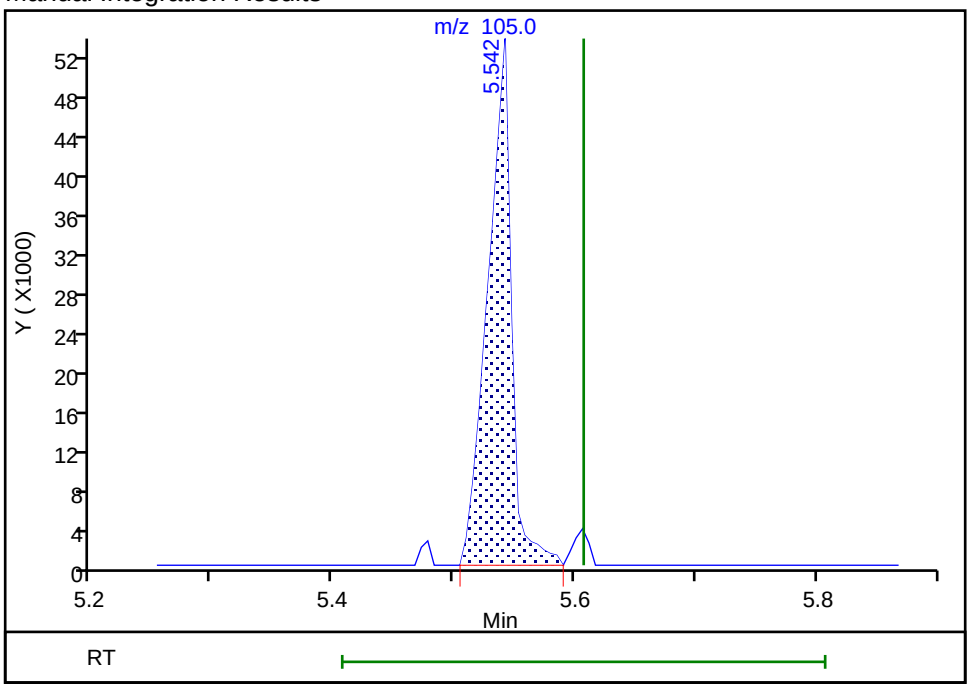
Processing Integration Results

RT: 5.61
Area: 3218
Amount: 5.046366
Amount Units: ug/ml




Manual Integration Results

RT: 5.54
Area: 72139
Amount: 20.508833
Amount Units: ug/ml




Reviewer: kiekeld, 09-Jan-2019 10:01:19
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31079.D
Lims ID: STD020 HSL
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jan-2019 16:11:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD020 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub14

Method: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 09-Jan-2019 10:20:08 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 09-Jan-2019 10:02:37

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.596 | 4.592 | 0.004 | 96 | 130552 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.830 | 5.832 | -0.002 | 99 | 537224 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.582 | 7.578 | 0.004 | 94 | 316643 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.067 | 9.069 | -0.002 | 97 | 651451 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.122 | 13.129 | -0.007 | 98 | 690145 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.054 | 17.050 | 0.004 | 97 | 693306 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.399 | 3.396 | 0.003 | 93 | 97986 | 20.0 | 20.0 | |
| $ 8 Phenol-d5 | 99 | 4.232 | 4.234 | -0.002 | 98 | 133764 | 20.0 | 20.5 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.114 | 5.116 | -0.002 | 87 | 117579 | 20.0 | 20.3 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.893 | 6.889 | 0.004 | 99 | 228257 | 20.0 | 20.7 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.367 | 8.369 | -0.002 | 92 | 30193 | 20.0 | 19.7 | |
| $ 12 Terphenyl-d14 | 244 | 11.012 | 11.008 | 0.004 | 98 | 321347 | 20.0 | 20.3 | |
| 13 1,4-Dioxane | 88 | 1.957 | 1.953 | 0.004 | 93 | 47765 | 20.0 | 20.1 | |
| 14 N-Nitrosodimethylamine | 74 | 2.192 | 2.194 | -0.002 | 93 | 76181 | 20.0 | 20.2 | |
| 15 Pyridine | 79 | 2.245 | 2.247 | -0.002 | 98 | 243905 | 40.0 | 40.4 | |
| 23 n-Decane | 57 | 4.435 | 4.432 | 0.003 | 98 | 104301 | 20.0 | 20.3 | |
| 24 Phenol | 94 | 4.243 | 4.245 | -0.002 | 97 | 140519 | 20.0 | 20.5 | |
| 25 Aniline | 93 | 4.275 | 4.277 | -0.002 | 99 | 176106 | 20.0 | 20.6 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.318 | 4.320 | -0.002 | 97 | 103116 | 20.0 | 21.2 | |
| 28 2-Chlorophenol | 128 | 4.403 | 4.400 | 0.003 | 97 | 101568 | 20.0 | 20.8 | |
| 29 1,3-Dichlorobenzene | 146 | 4.548 | 4.544 | 0.004 | 98 | 107968 | 20.0 | 21.2 | |
| 30 1,4-Dichlorobenzene | 146 | 4.612 | 4.608 | 0.004 | 93 | 107619 | 20.0 | 21.0 | |
| 31 Benzyl alcohol | 108 | 4.708 | 4.710 | -0.002 | 94 | 74713 | 20.0 | 20.6 | |
| 32 1,2-Dichlorobenzene | 146 | 4.761 | 4.758 | 0.003 | 96 | 103159 | 20.0 | 20.9 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.836 | 4.833 | 0.003 | 93 | 138014 | 20.0 | 21.2 | |
| 35 2-Methylphenol | 108 | 4.815 | 4.817 | -0.002 | 93 | 103193 | 20.0 | 20.6 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.959 | 4.961 | -0.002 | 85 | 80260 | 20.0 | 21.2 | |
| 39 Acetophenone | 105 | 4.964 | 4.966 | -0.002 | 91 | 149547 | 20.0 | 21.7 | |
| 40 4-Methylphenol | 108 | 4.959 | 4.961 | -0.002 | 96 | 107378 | 20.0 | 21.7 | |
| 41 3-Methylphenol | 108 | 4.959 | 4.961 | -0.002 | 87 | 107378 | 20.0 | 21.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.959 | 4.961 | -0.002 | 85 | 107378 | 20.0 | 21.7 | |
| 44 Hexachloroethane | 117 | 5.093 | 5.089 | 0.004 | 94 | 39487 | 20.0 | 20.4 | |
| 45 Nitrobenzene | 77 | 5.130 | 5.132 | -0.002 | 86 | 118803 | 20.0 | 20.2 | |
| 47 Isophorone | 82 | 5.360 | 5.361 | -0.001 | 99 | 223051 | 20.0 | 20.5 | |
| 48 2-Nitrophenol | 139 | 5.445 | 5.447 | -0.002 | 96 | 52612 | 20.0 | 20.1 | |
| 49 2,4-Dimethylphenol | 107 | 5.477 | 5.479 | -0.002 | 96 | 105883 | 20.0 | 20.4 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.557 | 5.559 | -0.002 | 98 | 125080 | 20.0 | 20.1 | |
| 52 Benzoic acid | 105 | 5.557 | 5.607 | -0.050 | 88 | 150617 | 40.0 | 38.0 | a |
| 53 2,4-Dichlorophenol | 162 | 5.686 | 5.687 | -0.001 | 93 | 84548 | 20.0 | 20.6 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.771 | 5.773 | -0.002 | 94 | 92112 | 20.0 | 20.5 | |
| 56 Naphthalene | 128 | 5.851 | 5.853 | -0.002 | 97 | 298523 | 20.0 | 21.2 | |
| 57 4-Chloroaniline | 127 | 5.889 | 5.890 | -0.001 | 96 | 133302 | 20.0 | 21.1 | |
| 58 2,6-Dichlorophenol | 162 | 5.905 | 5.906 | -0.001 | 97 | 84253 | 20.0 | 20.7 | |
| 60 Hexachlorobutadiene | 225 | 5.979 | 5.976 | 0.003 | 95 | 49060 | 20.0 | 20.8 | |
| 63 Caprolactam | 55 | 6.204 | 6.232 | -0.028 | 82 | 50417 | 20.0 | 20.0 | |
| 64 4-Chloro-3-methylphenol | 107 | 6.369 | 6.371 | -0.002 | 96 | 93587 | 20.0 | 20.5 | |
| 66 2-Methylnaphthalene | 142 | 6.535 | 6.537 | -0.002 | 93 | 199129 | 20.0 | 20.9 | |
| 67 1-Methylnaphthalene | 142 | 6.636 | 6.633 | 0.003 | 94 | 188521 | 20.0 | 21.2 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.706 | 6.702 | 0.004 | 96 | 56652 | 20.0 | 20.2 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.706 | 6.708 | -0.002 | 97 | 95949 | 20.0 | 21.8 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.813 | 6.815 | -0.002 | 92 | 63046 | 20.0 | 20.8 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.855 | 6.857 | -0.002 | 95 | 68602 | 20.0 | 20.1 | |
| 74 1,1'-Biphenyl | 154 | 6.994 | 6.996 | -0.002 | 95 | 237170 | 20.0 | 20.7 | |
| 75 2-Chloronaphthalene | 162 | 7.021 | 7.023 | -0.002 | 96 | 185382 | 20.0 | 20.3 | |
| 77 2-Nitroaniline | 65 | 7.107 | 7.108 | -0.001 | 83 | 65961 | 20.0 | 20.0 | |
| 80 Dimethyl phthalate | 163 | 7.283 | 7.285 | -0.002 | 98 | 217533 | 20.0 | 20.8 | |
| 81 1,3-Dinitrobenzene | 168 | 7.310 | 7.311 | -0.001 | 87 | 36720 | 20.0 | 19.8 | |
| 82 2,6-Dinitrotoluene | 165 | 7.342 | 7.343 | -0.001 | 95 | 52194 | 20.0 | 20.1 | |
| 83 Acenaphthylene | 152 | 7.438 | 7.440 | -0.002 | 99 | 314177 | 20.0 | 21.0 | |
| 84 3-Nitroaniline | 138 | 7.513 | 7.520 | -0.007 | 95 | 63526 | 20.0 | 20.9 | |
| 85 Acenaphthene | 153 | 7.614 | 7.611 | 0.003 | 95 | 191660 | 20.0 | 21.3 | |
| 86 2,4-Dinitrophenol | 184 | 7.619 | 7.621 | -0.002 | 83 | 57850 | 40.0 | 39.2 | |
| 88 4-Nitrophenol | 109 | 7.689 | 7.696 | -0.007 | 93 | 65307 | 40.0 | 42.1 | |
| 89 2,4-Dinitrotoluene | 165 | 7.748 | 7.749 | -0.001 | 93 | 71435 | 20.0 | 20.1 | |
| 90 Dibenzofuran | 168 | 7.785 | 7.787 | -0.002 | 98 | 285162 | 20.0 | 20.7 | |
| 92 Hexadecane | 57 | 8.004 | 8.006 | -0.002 | 98 | 133171 | 20.0 | 20.7 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.908 | 7.910 | -0.002 | 71 | 57836 | 20.0 | 20.2 | |
| 95 Diethyl phthalate | 149 | 7.983 | 7.990 | -0.007 | 98 | 215915 | 20.0 | 20.9 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.116 | 8.113 | 0.003 | 88 | 110775 | 20.0 | 20.8 | |
| 99 Fluorene | 166 | 8.127 | 8.129 | -0.002 | 94 | 234082 | 20.0 | 21.4 | |
| 100 4-Nitroaniline | 138 | 8.127 | 8.134 | -0.007 | 86 | 68008 | 20.0 | 21.0 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.164 | 8.171 | -0.007 | 88 | 79305 | 40.0 | 40.2 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.228 | 8.230 | -0.002 | 61 | 173256 | 20.0 | 20.7 | |
| 103 Diphenylamine | 169 | 8.228 | 8.230 | -0.002 | 96 | 173256 | 17.0 | 17.7 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.271 | 8.273 | -0.002 | 98 | 257374 | 20.2 | 20.6 | |
| 106 Azobenzene | 77 | 8.271 | 8.273 | -0.002 | 98 | 257374 | 20.0 | 20.4 | |
| 112 Atrazine | 200 | 8.747 | 8.754 | -0.007 | 95 | 68922 | 20.0 | 21.6 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.608 | 8.604 | 0.004 | 65 | 68109 | 20.0 | 20.5 | |
| 116 Hexachlorobenzene | 284 | 8.693 | 8.695 | -0.002 | 95 | 65840 | 20.0 | 20.6 | |
| 119 Pentachlorophenol | 266 | 8.880 | 8.882 | -0.002 | 93 | 78241 | 40.0 | 40.6 | |
| 123 Phenanthrene | 178 | 9.094 | 9.096 | -0.002 | 97 | 358582 | 20.0 | 21.5 | |
| 124 Anthracene | 178 | 9.142 | 9.144 | -0.002 | 98 | 370647 | 20.0 | 21.5 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.291 | 9.293 | -0.002 | 95 | 358158 | 20.0 | 21.5 | |
| 127 Di-n-butyl phthalate | 149 | 9.633 | 9.630 | 0.003 | 100 | 388821 | 20.0 | 21.2 | |
| 132 Fluoranthene | 202 | 10.456 | 10.453 | 0.003 | 98 | 421659 | 20.0 | 21.6 | |
| 134 Pyrene | 202 | 10.787 | 10.789 | -0.002 | 97 | 446655 | 20.0 | 20.4 | |
| 141 Butyl benzyl phthalate | 149 | 11.898 | 11.900 | -0.002 | 97 | 184563 | 20.0 | 19.8 | |
| 144 3,3'-Dichlorobenzidine | 252 | 13.052 | 13.059 | -0.007 | 74 | 148285 | 20.0 | 20.5 | |
| 145 Benzo[a]anthracene | 228 | 13.095 | 13.102 | -0.007 | 98 | 443781 | 20.0 | 20.3 | |
| 146 Chrysene | 228 | 13.186 | 13.193 | -0.007 | 98 | 425783 | 20.0 | 20.4 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.271 | 13.268 | 0.003 | 97 | 250170 | 20.0 | 19.8 | |
| 148 Di-n-octyl phthalate | 149 | 15.066 | 15.073 | -0.007 | 99 | 432437 | 20.0 | 19.8 | |
| 150 Benzo[b]fluoranthene | 252 | 15.953 | 15.966 | -0.013 | 98 | 409054 | 20.0 | 19.9 | |
| 151 Benzo[k]fluoranthene | 252 | 16.028 | 16.046 | -0.018 | 99 | 429051 | 20.0 | 20.5 | |
| 153 Benzo[a]pyrene | 252 | 16.872 | 16.895 | -0.023 | 78 | 410594 | 20.0 | 20.1 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 20.152 | 20.175 | -0.023 | 98 | 345952 | 20.0 | 18.9 | |
| 157 Dibenz(a,h)anthracene | 278 | 20.243 | 20.271 | -0.028 | 94 | 352280 | 20.0 | 19.5 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.879 | 20.918 | -0.039 | 97 | 373458 | 20.0 | 19.5 | |
| S 169 Methyl Phenols,Total | 108 | | | | 0 | | | 42.3 | |
| S 170 Total Cresols | 108 | | | | 0 | | | 20.6 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

MS-HSLA020_00040 Amount Added: 200.00 Units: uL

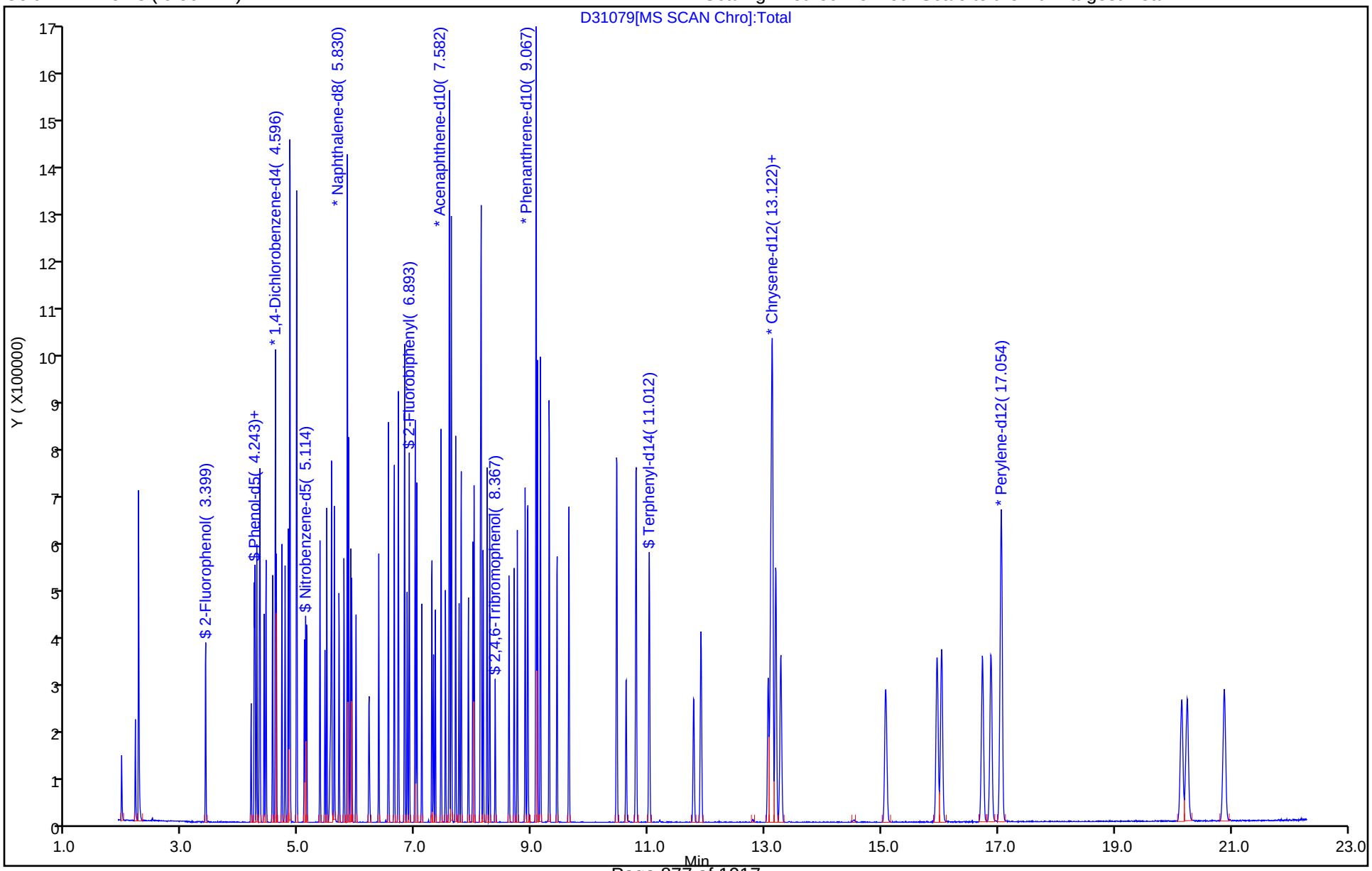
Report Date: 09-Jan-2019 10:20:09 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31079.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 16:11:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD020 HSL | | | Worklist Smp#: | 6 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 5 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

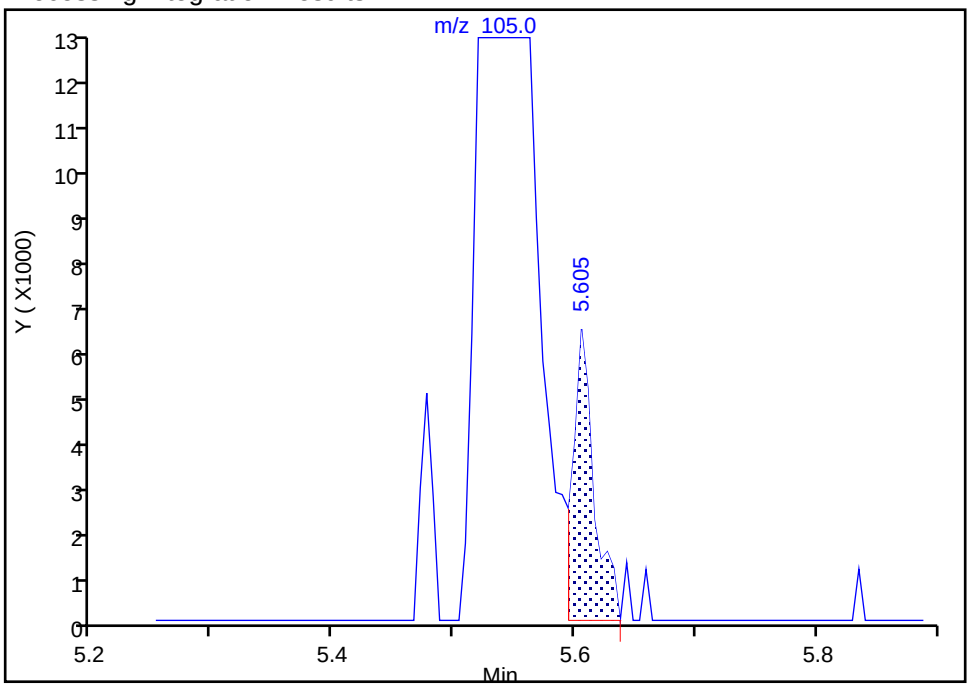
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31079.D
Injection Date: 08-Jan-2019 16:11:30 Instrument ID: SMS_D
Lims ID: STD020 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 52 Benzoic acid, CAS: 65-85-0

Signal: 1

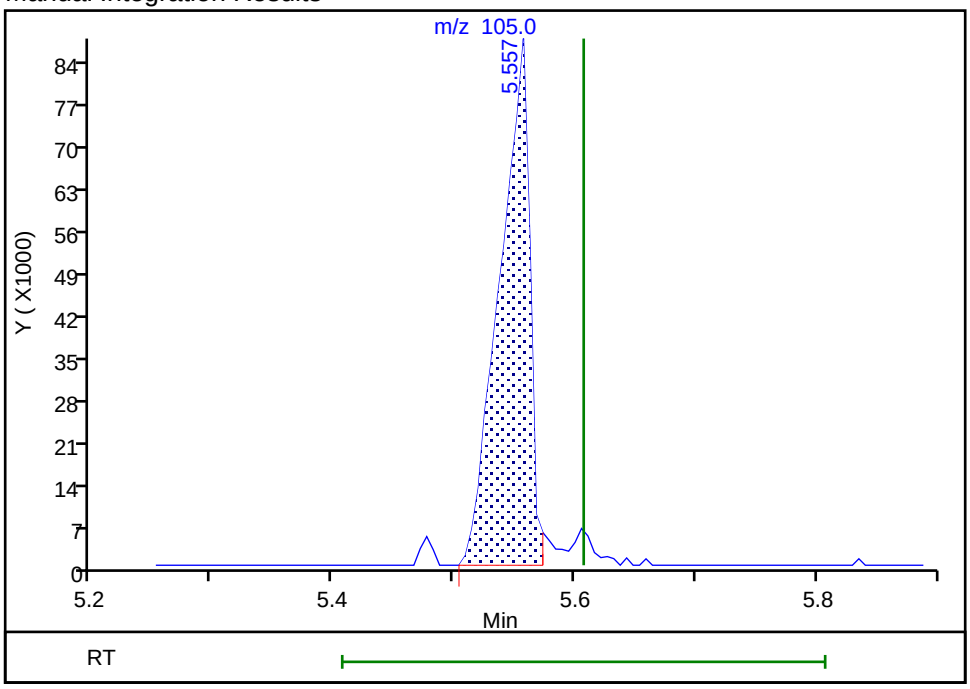
Processing Integration Results

RT: 5.61
Area: 7337
Amount: 4.144826
Amount Units: ug/ml




Manual Integration Results

RT: 5.56
Area: 150617
Amount: 38.043781
Amount Units: ug/ml




Reviewer: kiekeld, 09-Jan-2019 10:02:15
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31080.D
Lims ID: STD050 HSL
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jan-2019 16:40:30 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD050 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub14

Method: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 09-Jan-2019 10:20:12 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 09-Jan-2019 10:03:31

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.597 | 4.592 | 0.005 | 96 | 139536 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.831 | 5.832 | -0.001 | 99 | 577100 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.583 | 7.578 | 0.005 | 94 | 336666 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.069 | 9.069 | 0.000 | 98 | 676652 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.129 | 13.129 | 0.000 | 99 | 682695 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.060 | 17.050 | 0.010 | 97 | 682678 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.395 | 3.396 | -0.001 | 93 | 266536 | 50.0 | 50.8 | |
| $ 8 Phenol-d5 | 99 | 4.234 | 4.234 | 0.000 | 98 | 350818 | 50.0 | 50.2 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.115 | 5.116 | -0.001 | 87 | 318001 | 50.0 | 51.1 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.894 | 6.889 | 0.005 | 99 | 595059 | 50.0 | 50.8 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.369 | 8.369 | 0.000 | 94 | 83751 | 50.0 | 51.5 | |
| $ 12 Terphenyl-d14 | 244 | 11.013 | 11.008 | 0.005 | 98 | 795196 | 50.0 | 50.7 | |
| 13 1,4-Dioxane | 88 | 1.958 | 1.953 | 0.005 | 91 | 129073 | 50.0 | 50.9 | |
| 14 N-Nitrosodimethylamine | 74 | 2.193 | 2.194 | -0.001 | 93 | 204140 | 50.0 | 50.7 | |
| 15 Pyridine | 79 | 2.247 | 2.247 | 0.000 | 98 | 653155 | 100.0 | 101.3 | |
| 23 n-Decane | 57 | 4.437 | 4.432 | 0.005 | 97 | 280752 | 50.0 | 51.2 | |
| 24 Phenol | 94 | 4.245 | 4.245 | 0.000 | 99 | 374311 | 50.0 | 51.1 | |
| 25 Aniline | 93 | 4.277 | 4.277 | 0.000 | 98 | 468907 | 50.0 | 51.2 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.319 | 4.320 | -0.001 | 96 | 270922 | 50.0 | 52.0 | |
| 28 2-Chlorophenol | 128 | 4.405 | 4.400 | 0.005 | 97 | 262909 | 50.0 | 50.5 | |
| 29 1,3-Dichlorobenzene | 146 | 4.549 | 4.544 | 0.005 | 97 | 281103 | 50.0 | 51.6 | |
| 30 1,4-Dichlorobenzene | 146 | 4.613 | 4.608 | 0.005 | 93 | 282534 | 50.0 | 51.6 | |
| 31 Benzyl alcohol | 108 | 4.709 | 4.710 | -0.001 | 93 | 198218 | 50.0 | 51.2 | |
| 32 1,2-Dichlorobenzene | 146 | 4.763 | 4.758 | 0.005 | 96 | 271479 | 50.0 | 51.5 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.838 | 4.833 | 0.005 | 94 | 358264 | 50.0 | 51.4 | |
| 35 2-Methylphenol | 108 | 4.816 | 4.817 | -0.001 | 95 | 270929 | 50.0 | 50.6 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.960 | 4.961 | -0.001 | 85 | 213856 | 50.0 | 52.8 | |
| 39 Acetophenone | 105 | 4.966 | 4.966 | 0.000 | 90 | 387677 | 50.0 | 52.6 | |
| 40 4-Methylphenol | 108 | 4.960 | 4.961 | -0.001 | 92 | 278158 | 50.0 | 52.6 | |
| 41 3-Methylphenol | 108 | 4.960 | 4.961 | -0.001 | 94 | 278158 | 50.0 | 52.6 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.960 | 4.961 | -0.001 | 85 | 278158 | 50.0 | 52.6 | |
| 44 Hexachloroethane | 117 | 5.094 | 5.089 | 0.005 | 95 | 105311 | 50.0 | 51.0 | |
| 45 Nitrobenzene | 77 | 5.137 | 5.132 | 0.005 | 85 | 318957 | 50.0 | 50.5 | |
| 47 Isophorone | 82 | 5.366 | 5.361 | 0.005 | 99 | 592446 | 50.0 | 50.6 | |
| 48 2-Nitrophenol | 139 | 5.447 | 5.447 | 0.000 | 96 | 141945 | 50.0 | 50.5 | |
| 49 2,4-Dimethylphenol | 107 | 5.479 | 5.479 | 0.000 | 96 | 280702 | 50.0 | 50.3 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.564 | 5.559 | 0.005 | 99 | 338951 | 50.0 | 50.7 | |
| 52 Benzoic acid | 105 | 5.591 | 5.607 | -0.016 | 78 | 457487 | 100.0 | 98.5 | a |
| 53 2,4-Dichlorophenol | 162 | 5.692 | 5.687 | 0.005 | 94 | 223022 | 50.0 | 50.7 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.772 | 5.773 | -0.001 | 94 | 244722 | 50.0 | 50.8 | |
| 56 Naphthalene | 128 | 5.853 | 5.853 | 0.000 | 98 | 770453 | 50.0 | 50.9 | |
| 57 4-Chloroaniline | 127 | 5.890 | 5.890 | 0.000 | 96 | 348487 | 50.0 | 51.2 | |
| 58 2,6-Dichlorophenol | 162 | 5.906 | 5.906 | 0.000 | 96 | 222681 | 50.0 | 51.0 | |
| 60 Hexachlorobutadiene | 225 | 5.981 | 5.976 | 0.005 | 95 | 130741 | 50.0 | 51.6 | |
| 63 Caprolactam | 55 | 6.221 | 6.232 | -0.011 | 82 | 135910 | 50.0 | 50.2 | |
| 64 4-Chloro-3-methylphenol | 107 | 6.371 | 6.371 | 0.000 | 97 | 250093 | 50.0 | 50.9 | |
| 66 2-Methylnaphthalene | 142 | 6.536 | 6.537 | -0.001 | 93 | 522992 | 50.0 | 51.1 | |
| 67 1-Methylnaphthalene | 142 | 6.638 | 6.633 | 0.005 | 94 | 492503 | 50.0 | 51.5 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.707 | 6.702 | 0.005 | 94 | 156135 | 50.0 | 52.5 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.707 | 6.708 | -0.001 | 97 | 240223 | 50.0 | 50.9 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.814 | 6.815 | -0.001 | 93 | 165935 | 50.0 | 51.5 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.857 | 6.857 | 0.000 | 95 | 185648 | 50.0 | 51.2 | |
| 74 1,1'-Biphenyl | 154 | 6.996 | 6.996 | 0.000 | 96 | 619252 | 50.0 | 50.7 | |
| 75 2-Chloronaphthalene | 162 | 7.023 | 7.023 | 0.000 | 96 | 488099 | 50.0 | 50.2 | |
| 77 2-Nitroaniline | 65 | 7.108 | 7.108 | 0.000 | 83 | 178212 | 50.0 | 50.7 | |
| 80 Dimethyl phthalate | 163 | 7.284 | 7.285 | -0.001 | 98 | 560364 | 50.0 | 50.4 | |
| 81 1,3-Dinitrobenzene | 168 | 7.311 | 7.311 | 0.000 | 88 | 99719 | 50.0 | 50.6 | |
| 82 2,6-Dinitrotoluene | 165 | 7.343 | 7.343 | 0.000 | 96 | 141761 | 50.0 | 51.4 | |
| 83 Acenaphthylene | 152 | 7.439 | 7.440 | -0.001 | 99 | 809651 | 50.0 | 50.9 | |
| 84 3-Nitroaniline | 138 | 7.519 | 7.520 | -0.001 | 94 | 164285 | 50.0 | 50.7 | |
| 85 Acenaphthene | 153 | 7.616 | 7.611 | 0.005 | 93 | 483257 | 50.0 | 50.6 | |
| 86 2,4-Dinitrophenol | 184 | 7.621 | 7.621 | 0.000 | 82 | 174556 | 100.0 | 100.3 | |
| 88 4-Nitrophenol | 109 | 7.696 | 7.696 | 0.000 | 93 | 166566 | 100.0 | 101.0 | |
| 89 2,4-Dinitrotoluene | 165 | 7.749 | 7.749 | 0.000 | 93 | 192684 | 50.0 | 51.1 | |
| 90 Dibenzofuran | 168 | 7.786 | 7.787 | -0.001 | 98 | 739019 | 50.0 | 50.6 | |
| 92 Hexadecane | 57 | 8.005 | 8.006 | -0.001 | 97 | 356700 | 50.0 | 52.0 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.909 | 7.910 | -0.001 | 72 | 157807 | 50.0 | 51.8 | |
| 95 Diethyl phthalate | 149 | 7.989 | 7.990 | -0.001 | 98 | 563588 | 50.0 | 51.3 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.118 | 8.113 | 0.005 | 89 | 289327 | 50.0 | 51.1 | |
| 99 Fluorene | 166 | 8.128 | 8.129 | -0.001 | 94 | 582856 | 50.0 | 50.2 | |
| 100 4-Nitroaniline | 138 | 8.134 | 8.134 | 0.000 | 85 | 170293 | 50.0 | 49.3 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.166 | 8.171 | -0.005 | 88 | 223780 | 100.0 | 103.4 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.230 | 8.230 | 0.000 | 62 | 445731 | 50.0 | 51.3 | |
| 103 Diphenylamine | 169 | 8.230 | 8.230 | 0.000 | 95 | 445731 | 42.5 | 42.9 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.278 | 8.273 | 0.005 | 98 | 683303 | 50.5 | 51.5 | |
| 106 Azobenzene | 77 | 8.278 | 8.273 | 0.005 | 98 | 683303 | 50.0 | 50.9 | |
| 112 Atrazine | 200 | 8.753 | 8.754 | -0.001 | 95 | 173466 | 50.0 | 52.3 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.604 | 8.604 | 0.000 | 66 | 175399 | 50.0 | 50.9 | |
| 116 Hexachlorobenzene | 284 | 8.695 | 8.695 | 0.000 | 94 | 168529 | 50.0 | 50.7 | |
| 119 Pentachlorophenol | 266 | 8.887 | 8.882 | 0.005 | 93 | 214569 | 100.0 | 104.0 | |
| 123 Phenanthrene | 178 | 9.095 | 9.096 | -0.001 | 98 | 889037 | 50.0 | 51.4 | |
| 124 Anthracene | 178 | 9.143 | 9.144 | -0.001 | 98 | 928800 | 50.0 | 51.9 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.298 | 9.293 | 0.005 | 95 | 884804 | 50.0 | 51.2 | |
| 127 Di-n-butyl phthalate | 149 | 9.635 | 9.630 | 0.005 | 100 | 990118 | 50.0 | 51.9 | |
| 132 Fluoranthene | 202 | 10.458 | 10.453 | 0.005 | 98 | 1039769 | 50.0 | 51.2 | |
| 134 Pyrene | 202 | 10.789 | 10.789 | 0.000 | 97 | 1094905 | 50.0 | 50.6 | |
| 141 Butyl benzyl phthalate | 149 | 11.900 | 11.900 | 0.000 | 98 | 467884 | 50.0 | 50.8 | |
| 144 3,3'-Dichlorobenzidine | 252 | 13.059 | 13.059 | 0.000 | 73 | 374819 | 50.0 | 52.4 | |
| 145 Benzo[a]anthracene | 228 | 13.107 | 13.102 | 0.005 | 99 | 1092871 | 50.0 | 50.5 | |
| 146 Chrysene | 228 | 13.193 | 13.193 | 0.000 | 98 | 1026819 | 50.0 | 49.7 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.273 | 13.268 | 0.005 | 97 | 630472 | 50.0 | 50.4 | |
| 148 Di-n-octyl phthalate | 149 | 15.078 | 15.073 | 0.005 | 99 | 1106216 | 50.0 | 51.2 | |
| 150 Benzo[b]fluoranthene | 252 | 15.965 | 15.966 | -0.001 | 89 | 1014014 | 50.0 | 50.1 | |
| 151 Benzo[k]fluoranthene | 252 | 16.045 | 16.046 | -0.001 | 99 | 1041209 | 50.0 | 50.4 | |
| 153 Benzo[a]pyrene | 252 | 16.889 | 16.895 | -0.006 | 78 | 1016514 | 50.0 | 50.5 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 20.170 | 20.175 | -0.005 | 99 | 893181 | 50.0 | 49.3 | |
| 157 Dibenz(a,h)anthracene | 278 | 20.260 | 20.271 | -0.011 | 94 | 889641 | 50.0 | 50.0 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.901 | 20.918 | -0.017 | 97 | 940354 | 50.0 | 49.9 | |
| S 169 Methyl Phenols,Total | 108 | | | | 0 | | | 103.2 | |
| S 170 Total Cresols | 108 | | | | 0 | | | 50.6 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

MS-HSLA050_00041 Amount Added: 200.00 Units: uL

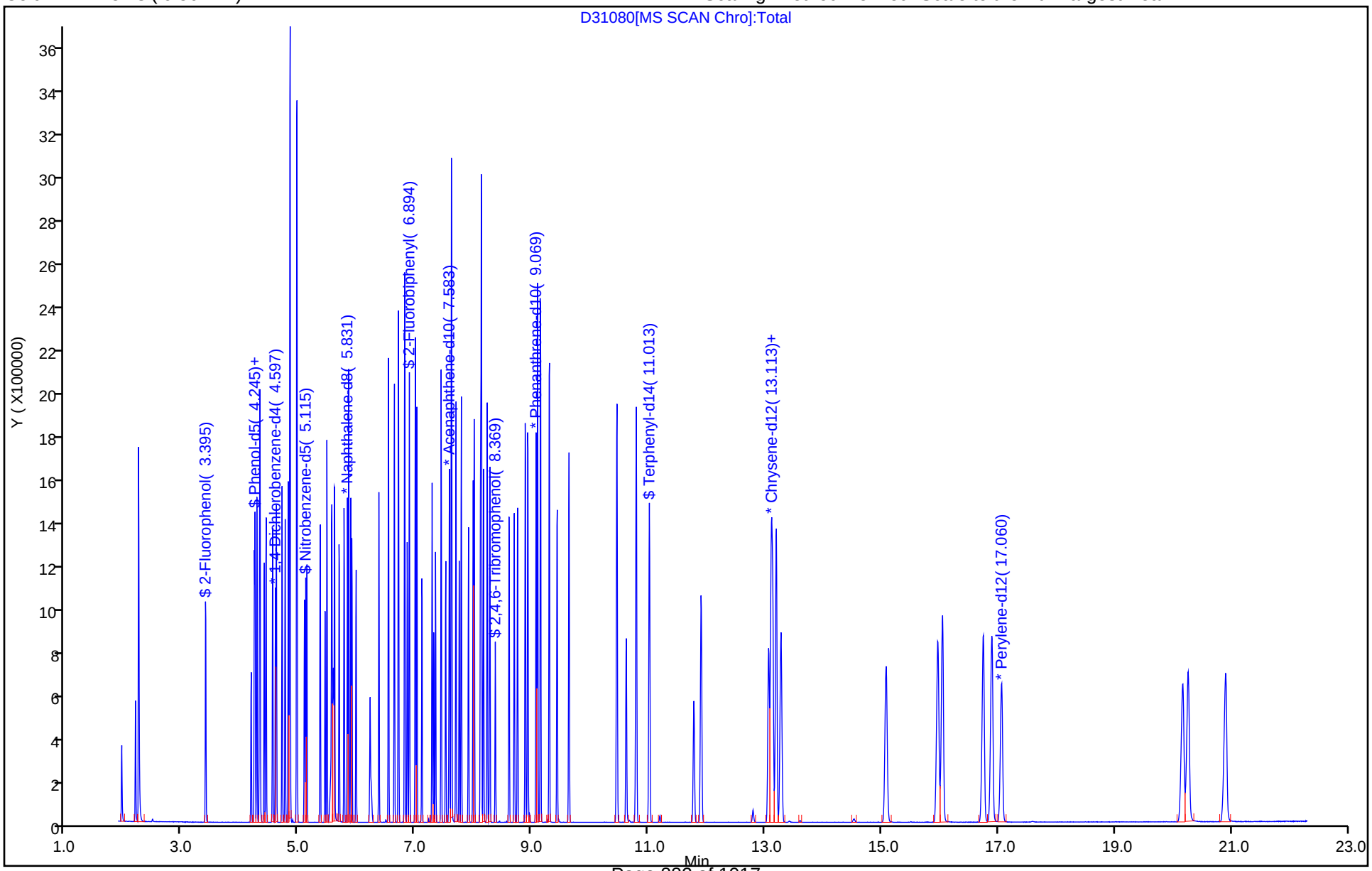
Report Date: 09-Jan-2019 10:20:13 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31080.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 16:40:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD050 HSL | | | Worklist Smp#: | 7 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 6 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

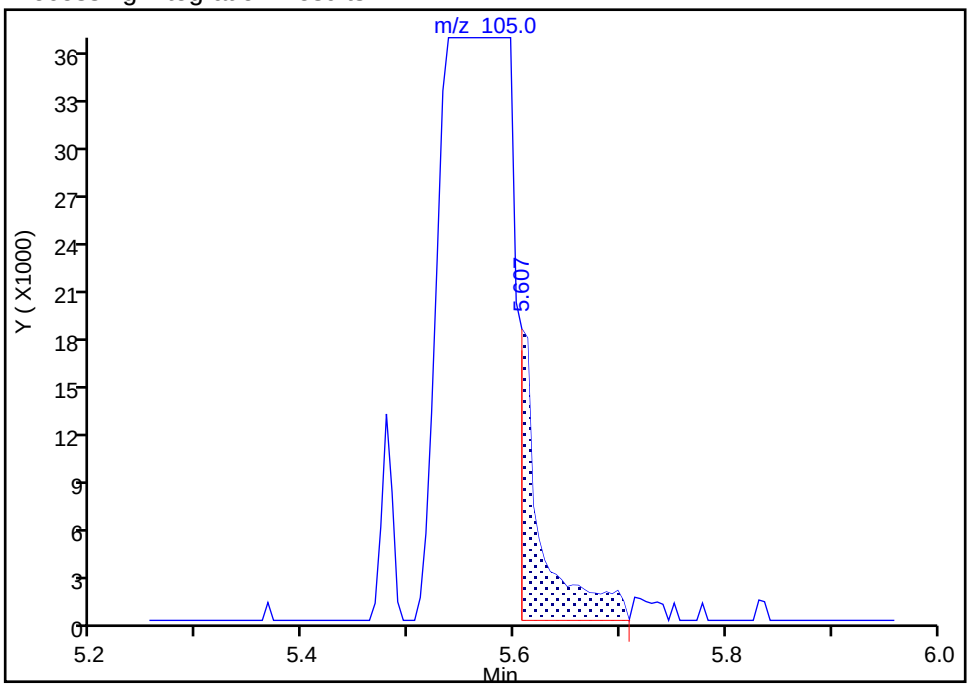
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31080.D
Injection Date: 08-Jan-2019 16:40:30 Instrument ID: SMS_D
Lims ID: STD050 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 52 Benzoic acid, CAS: 65-85-0

Signal: 1

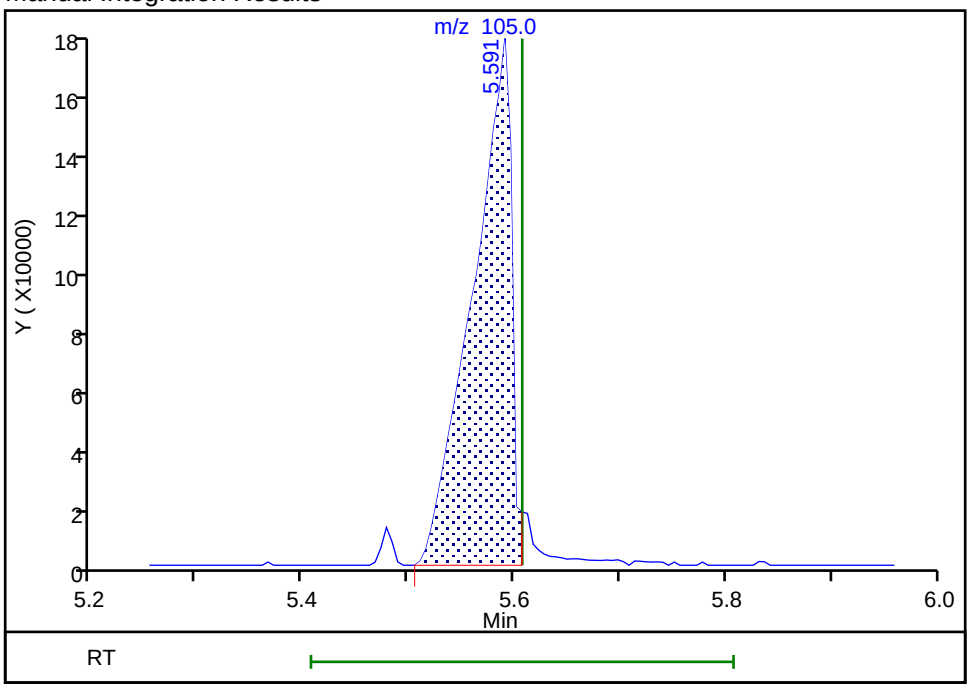
Processing Integration Results

RT: 5.61
Area: 25770
Amount: 8.284493
Amount Units: ug/ml




Manual Integration Results

RT: 5.59
Area: 457487
Amount: 98.458155
Amount Units: ug/ml




Reviewer: kiekeld, 09-Jan-2019 10:03:09
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31081.D
Lims ID: STD120 HSL
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jan-2019 17:10:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD120 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub14

Method: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 09-Jan-2019 10:20:16 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 09-Jan-2019 10:04:39

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.597 | 4.592 | 0.005 | 95 | 144246 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.837 | 5.832 | 0.005 | 99 | 595681 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.583 | 7.578 | 0.005 | 96 | 338111 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.074 | 9.069 | 0.005 | 97 | 689653 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.139 | 13.129 | 0.010 | 99 | 663705 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.066 | 17.050 | 0.016 | 97 | 664692 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.401 | 3.396 | 0.005 | 94 | 626732 | 120.0 | 115.6 | |
| $ 8 Phenol-d5 | 99 | 4.239 | 4.234 | 0.005 | 98 | 840930 | 120.0 | 116.5 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.121 | 5.116 | 0.005 | 87 | 749742 | 120.0 | 116.8 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.900 | 6.889 | 0.011 | 99 | 1340250 | 120.0 | 114.0 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.374 | 8.369 | 0.005 | 94 | 198814 | 120.0 | 121.7 | |
| $ 12 Terphenyl-d14 | 244 | 11.018 | 11.008 | 0.010 | 98 | 1794275 | 120.0 | 117.6 | |
| 13 1,4-Dioxane | 88 | 1.958 | 1.953 | 0.005 | 92 | 307587 | 120.0 | 117.3 | |
| 14 N-Nitrosodimethylamine | 74 | 2.199 | 2.194 | 0.005 | 93 | 490898 | 120.0 | 118.0 | |
| 15 Pyridine | 79 | 2.252 | 2.247 | 0.005 | 98 | 1573082 | 240.0 | 235.9 | |
| 23 n-Decane | 57 | 4.437 | 4.432 | 0.005 | 97 | 661555 | 120.0 | 116.7 | |
| 24 Phenol | 94 | 4.255 | 4.245 | 0.010 | 98 | 879157 | 120.0 | 116.2 | |
| 25 Aniline | 93 | 4.282 | 4.277 | 0.005 | 98 | 1108208 | 120.0 | 117.1 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.325 | 4.320 | 0.005 | 94 | 609707 | 120.0 | 113.3 | |
| 28 2-Chlorophenol | 128 | 4.405 | 4.400 | 0.005 | 98 | 627808 | 120.0 | 116.6 | |
| 29 1,3-Dichlorobenzene | 146 | 4.549 | 4.544 | 0.005 | 97 | 638164 | 120.0 | 113.4 | |
| 30 1,4-Dichlorobenzene | 146 | 4.613 | 4.608 | 0.005 | 92 | 647894 | 120.0 | 114.5 | |
| 31 Benzyl alcohol | 108 | 4.715 | 4.710 | 0.005 | 93 | 472179 | 120.0 | 117.9 | |
| 32 1,2-Dichlorobenzene | 146 | 4.763 | 4.758 | 0.005 | 96 | 627435 | 120.0 | 115.1 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.838 | 4.833 | 0.005 | 93 | 831030 | 120.0 | 115.3 | |
| 35 2-Methylphenol | 108 | 4.822 | 4.817 | 0.005 | 95 | 646730 | 120.0 | 116.9 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.966 | 4.961 | 0.005 | 79 | 470824 | 120.0 | 112.5 | |
| 39 Acetophenone | 105 | 4.971 | 4.966 | 0.005 | 88 | 845945 | 120.0 | 111.0 | |
| 40 4-Methylphenol | 108 | 4.971 | 4.961 | 0.010 | 93 | 603319 | 120.0 | 110.4 | |
| 41 3-Methylphenol | 108 | 4.971 | 4.961 | 0.010 | 90 | 603319 | 120.0 | 110.4 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.971 | 4.961 | 0.010 | 90 | 603319 | 120.0 | 110.4 | |
| 44 Hexachloroethane | 117 | 5.094 | 5.089 | 0.005 | 93 | 249146 | 120.0 | 116.6 | |
| 45 Nitrobenzene | 77 | 5.142 | 5.132 | 0.010 | 86 | 763607 | 120.0 | 117.2 | |
| 47 Isophorone | 82 | 5.372 | 5.361 | 0.011 | 99 | 1396991 | 120.0 | 115.6 | |
| 48 2-Nitrophenol | 139 | 5.452 | 5.447 | 0.005 | 95 | 346493 | 120.0 | 119.4 | |
| 49 2,4-Dimethylphenol | 107 | 5.484 | 5.479 | 0.005 | 96 | 664096 | 120.0 | 115.2 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.564 | 5.559 | 0.005 | 99 | 790735 | 120.0 | 114.7 | |
| 52 Benzoic acid | 105 | 5.639 | 5.607 | 0.032 | 87 | 1191150 | 240.0 | 240.8 | |
| 53 2,4-Dichlorophenol | 162 | 5.692 | 5.687 | 0.005 | 95 | 521067 | 120.0 | 114.7 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.778 | 5.773 | 0.005 | 93 | 565994 | 120.0 | 113.9 | |
| 56 Naphthalene | 128 | 5.858 | 5.853 | 0.005 | 98 | 1741390 | 120.0 | 111.4 | |
| 57 4-Chloroaniline | 127 | 5.895 | 5.890 | 0.005 | 96 | 815232 | 120.0 | 116.1 | |
| 58 2,6-Dichlorophenol | 162 | 5.911 | 5.906 | 0.005 | 96 | 508954 | 120.0 | 113.0 | |
| 60 Hexachlorobutadiene | 225 | 5.981 | 5.976 | 0.005 | 95 | 300849 | 120.0 | 115.0 | |
| 63 Caprolactam | 55 | 6.248 | 6.232 | 0.016 | 82 | 327857 | 120.0 | 117.4 | M |
| 64 4-Chloro-3-methylphenol | 107 | 6.382 | 6.371 | 0.011 | 96 | 583877 | 120.0 | 115.2 | |
| 66 2-Methylnaphthalene | 142 | 6.542 | 6.537 | 0.005 | 93 | 1175767 | 120.0 | 111.3 | |
| 67 1-Methylnaphthalene | 142 | 6.638 | 6.633 | 0.005 | 94 | 1103154 | 120.0 | 111.8 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.707 | 6.702 | 0.005 | 95 | 360132 | 120.0 | 120.5 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.713 | 6.708 | 0.005 | 97 | 535974 | 120.0 | 110.1 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.820 | 6.815 | 0.005 | 95 | 369412 | 120.0 | 114.1 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.862 | 6.857 | 0.005 | 96 | 431027 | 120.0 | 118.4 | |
| 74 1,1'-Biphenyl | 154 | 7.001 | 6.996 | 0.005 | 95 | 1384712 | 120.0 | 113.0 | |
| 75 2-Chloronaphthalene | 162 | 7.028 | 7.023 | 0.005 | 96 | 1118198 | 120.0 | 114.5 | |
| 77 2-Nitroaniline | 65 | 7.113 | 7.108 | 0.005 | 83 | 428814 | 120.0 | 121.5 | |
| 80 Dimethyl phthalate | 163 | 7.295 | 7.285 | 0.010 | 98 | 1282083 | 120.0 | 114.7 | |
| 81 1,3-Dinitrobenzene | 168 | 7.322 | 7.311 | 0.011 | 87 | 246481 | 120.0 | 124.4 | |
| 82 2,6-Dinitrotoluene | 165 | 7.354 | 7.343 | 0.011 | 96 | 331501 | 120.0 | 119.7 | |
| 83 Acenaphthylene | 152 | 7.445 | 7.440 | 0.005 | 99 | 1818824 | 120.0 | 113.9 | |
| 84 3-Nitroaniline | 138 | 7.525 | 7.520 | 0.005 | 94 | 390295 | 120.0 | 120.0 | |
| 85 Acenaphthene | 153 | 7.621 | 7.611 | 0.010 | 94 | 1062915 | 120.0 | 110.7 | |
| 86 2,4-Dinitrophenol | 184 | 7.632 | 7.621 | 0.011 | 82 | 427561 | 240.0 | 236.2 | |
| 88 4-Nitrophenol | 109 | 7.706 | 7.696 | 0.010 | 94 | 394623 | 240.0 | 238.3 | |
| 89 2,4-Dinitrotoluene | 165 | 7.760 | 7.749 | 0.011 | 93 | 453779 | 120.0 | 119.9 | |
| 90 Dibenzofuran | 168 | 7.792 | 7.787 | 0.005 | 98 | 1653754 | 120.0 | 112.7 | |
| 92 Hexadecane | 57 | 8.011 | 8.006 | 0.005 | 97 | 807349 | 120.0 | 117.3 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.915 | 7.910 | 0.005 | 71 | 372644 | 120.0 | 121.9 | |
| 95 Diethyl phthalate | 149 | 7.995 | 7.990 | 0.005 | 98 | 1259638 | 120.0 | 114.2 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.118 | 8.113 | 0.005 | 91 | 651732 | 120.0 | 114.6 | |
| 99 Fluorene | 166 | 8.134 | 8.129 | 0.005 | 93 | 1281942 | 120.0 | 110.0 | |
| 100 4-Nitroaniline | 138 | 8.150 | 8.134 | 0.016 | 86 | 407250 | 120.0 | 117.5 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.176 | 8.171 | 0.005 | 87 | 536894 | 240.0 | 238.9 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.235 | 8.230 | 0.005 | 62 | 1010725 | 120.0 | 114.1 | |
| 103 Diphenylamine | 169 | 8.235 | 8.230 | 0.005 | 96 | 1010725 | 102.0 | 96.9 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.278 | 8.273 | 0.005 | 98 | 1566448 | 121.3 | 117.5 | |
| 106 Azobenzene | 77 | 8.278 | 8.273 | 0.005 | 98 | 1566448 | 120.0 | 116.2 | |
| 112 Atrazine | 200 | 8.759 | 8.754 | 0.005 | 96 | 385072 | 120.0 | 113.9 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.609 | 8.604 | 0.005 | 65 | 404951 | 120.0 | 115.4 | |
| 116 Hexachlorobenzene | 284 | 8.700 | 8.695 | 0.005 | 95 | 390256 | 120.0 | 115.2 | |
| 119 Pentachlorophenol | 266 | 8.887 | 8.882 | 0.005 | 94 | 505960 | 240.0 | 238.0 | |
| 123 Phenanthrene | 178 | 9.101 | 9.096 | 0.005 | 98 | 1964379 | 120.0 | 111.4 | |
| 124 Anthracene | 178 | 9.149 | 9.144 | 0.005 | 98 | 2024606 | 120.0 | 111.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.304 | 9.293 | 0.011 | 95 | 1981809 | 120.0 | 112.5 | |
| 127 Di-n-butyl phthalate | 149 | 9.635 | 9.630 | 0.005 | 100 | 2240806 | 120.0 | 115.2 | |
| 132 Fluoranthene | 202 | 10.463 | 10.453 | 0.010 | 99 | 2326683 | 120.0 | 112.4 | |
| 134 Pyrene | 202 | 10.794 | 10.789 | 0.005 | 97 | 2458283 | 120.0 | 116.9 | |
| 141 Butyl benzyl phthalate | 149 | 11.905 | 11.900 | 0.005 | 98 | 1092153 | 120.0 | 122.1 | |
| 144 3,3'-Dichlorobenzidine | 252 | 13.070 | 13.059 | 0.011 | 74 | 823380 | 120.0 | 118.3 | |
| 145 Benzo[a]anthracene | 228 | 13.118 | 13.102 | 0.016 | 99 | 2461177 | 120.0 | 117.0 | |
| 146 Chrysene | 228 | 13.203 | 13.193 | 0.010 | 98 | 2333671 | 120.0 | 116.2 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.278 | 13.268 | 0.010 | 97 | 1499559 | 120.0 | 123.3 | |
| 148 Di-n-octyl phthalate | 149 | 15.084 | 15.073 | 0.011 | 99 | 2620290 | 120.0 | 124.7 | |
| 150 Benzo[b]fluoranthene | 252 | 15.987 | 15.966 | 0.021 | 98 | 2385522 | 120.0 | 121.1 | |
| 151 Benzo[k]fluoranthene | 252 | 16.067 | 16.046 | 0.021 | 99 | 2379166 | 120.0 | 118.4 | |
| 153 Benzo[a]pyrene | 252 | 16.916 | 16.895 | 0.021 | 78 | 2338543 | 120.0 | 119.3 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 20.196 | 20.175 | 0.021 | 99 | 2149619 | 120.0 | 122.0 | |
| 157 Dibenz(a,h)anthracene | 278 | 20.287 | 20.271 | 0.016 | 94 | 2136529 | 120.0 | 123.3 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.939 | 20.918 | 0.021 | 97 | 2210276 | 120.0 | 120.4 | |
| S 169 Methyl Phenols,Total | 108 | | | | 0 | | | 227.3 | |
| S 170 Total Cresols | 108 | | | | 0 | | | 116.9 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

MS-HSLA120_00040 Amount Added: 200.00 Units: uL

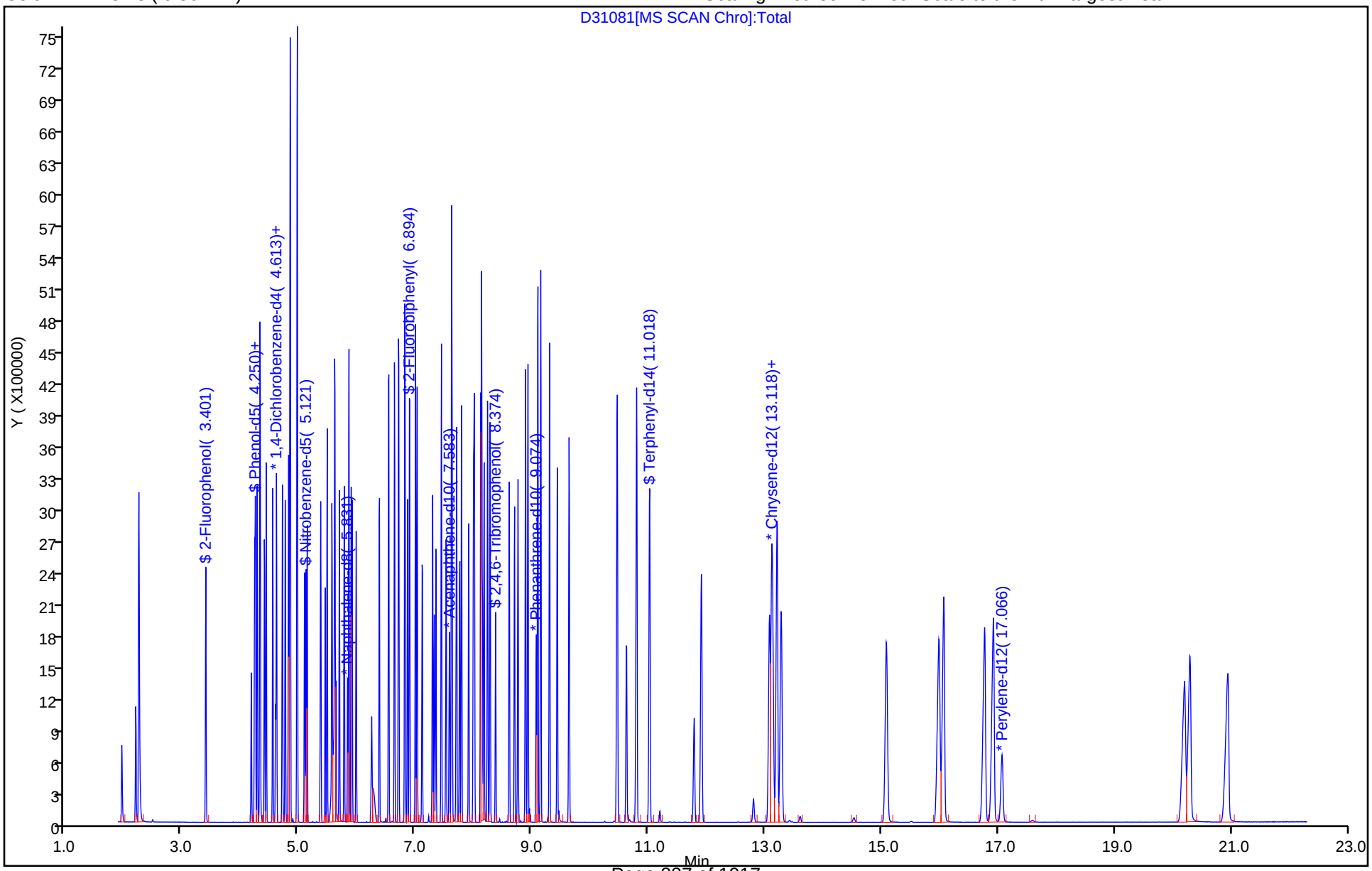
Report Date: 09-Jan-2019 10:20:17 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31081.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 17:10:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD120 HSL | | | Worklist Smp#: | 8 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 7 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

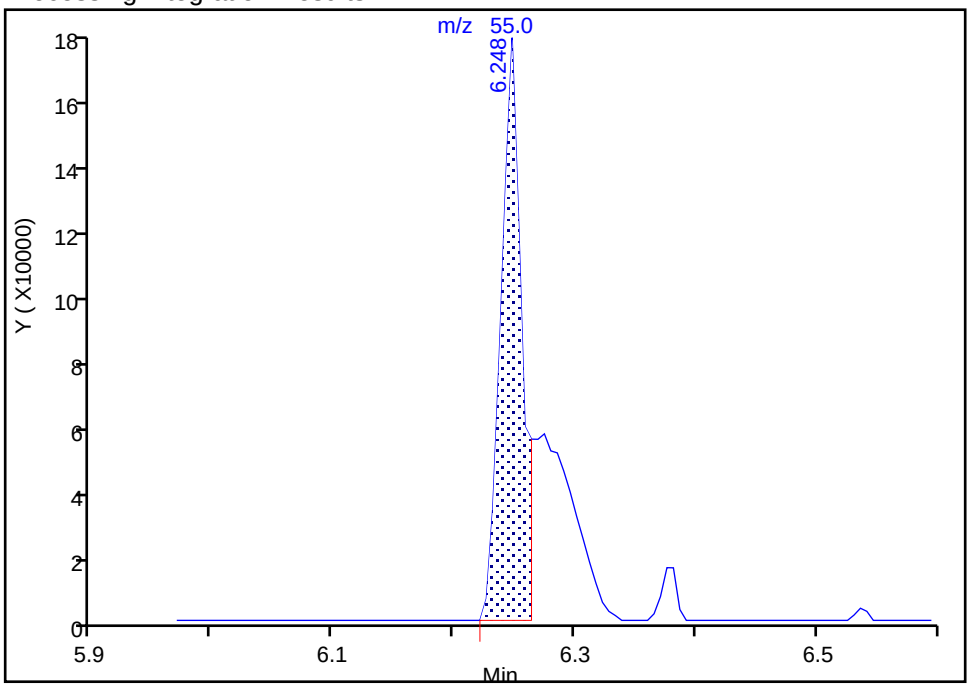
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31081.D
Injection Date: 08-Jan-2019 17:10:30 Instrument ID: SMS_D
Lims ID: STD120 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 63 Caprolactam, CAS: 105-60-2

Signal: 1

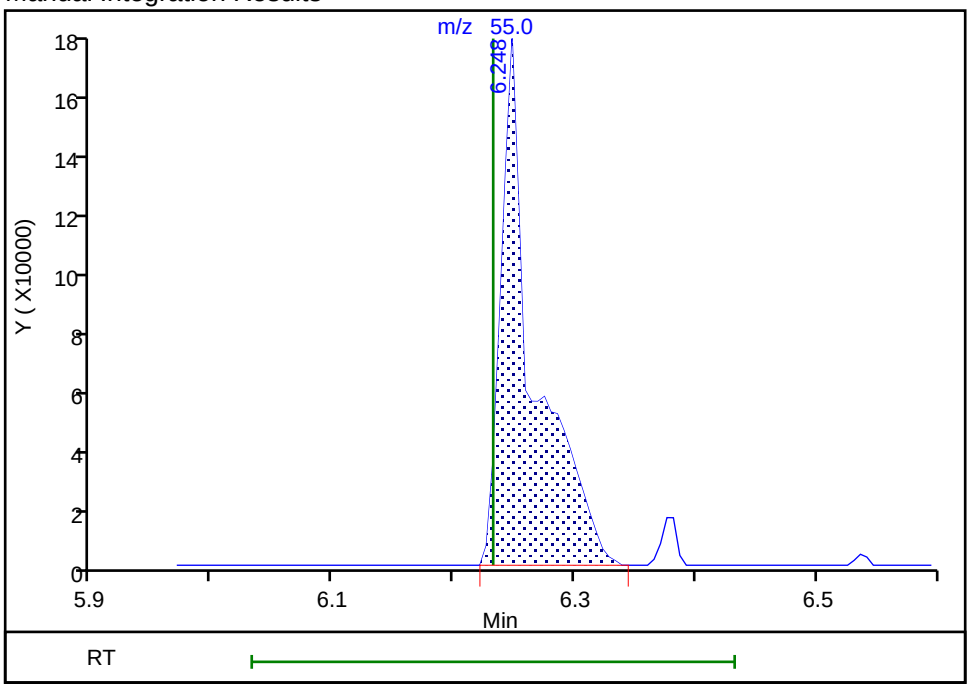
Processing Integration Results

RT: 6.25
Area: 206260
Amount: 88.173550
Amount Units: ug/ml




Manual Integration Results

RT: 6.25
Area: 327857
Amount: 117.3898
Amount Units: ug/ml




Reviewer: kiekeld, 09-Jan-2019 10:04:12
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31082.D
Lims ID: STD160 HSL
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 08-Jan-2019 17:39:30 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD160 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub14

Method: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 09-Jan-2019 10:20:20 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 09-Jan-2019 10:05:58

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.596 | 4.592 | 0.004 | 96 | 144546 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.836 | 5.832 | 0.004 | 99 | 587605 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.583 | 7.578 | 0.005 | 96 | 338518 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.073 | 9.069 | 0.004 | 97 | 697060 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.149 | 13.129 | 0.020 | 98 | 661717 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.070 | 17.050 | 0.020 | 97 | 659967 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.400 | 3.396 | 0.004 | 93 | 825503 | 160.0 | 152.0 | |
| $ 8 Phenol-d5 | 99 | 4.244 | 4.234 | 0.010 | 98 | 1093895 | 160.0 | 151.2 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.125 | 5.116 | 0.009 | 87 | 994187 | 160.0 | 157.0 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.899 | 6.889 | 0.010 | 99 | 1723413 | 160.0 | 146.4 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.379 | 8.369 | 0.010 | 94 | 275770 | 160.0 | 168.6 | |
| $ 12 Terphenyl-d14 | 244 | 11.023 | 11.008 | 0.015 | 98 | 2416263 | 160.0 | 158.9 | |
| 13 1,4-Dioxane | 88 | 1.957 | 1.953 | 0.004 | 92 | 402332 | 160.0 | 153.1 | |
| 14 N-Nitrosodimethylamine | 74 | 2.203 | 2.194 | 0.009 | 93 | 641059 | 160.0 | 153.8 | |
| 15 Pyridine | 79 | 2.251 | 2.247 | 0.004 | 98 | 2026462 | 320.0 | 303.3 | |
| 23 n-Decane | 57 | 4.436 | 4.432 | 0.004 | 98 | 872874 | 160.0 | 153.6 | |
| 24 Phenol | 94 | 4.254 | 4.245 | 0.009 | 99 | 1146631 | 160.0 | 151.2 | |
| 25 Aniline | 93 | 4.286 | 4.277 | 0.009 | 98 | 1448745 | 160.0 | 152.7 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.329 | 4.320 | 0.009 | 97 | 786709 | 160.0 | 145.9 | |
| 28 2-Chlorophenol | 128 | 4.409 | 4.400 | 0.009 | 98 | 822639 | 160.0 | 152.4 | |
| 29 1,3-Dichlorobenzene | 146 | 4.554 | 4.544 | 0.010 | 96 | 826606 | 160.0 | 146.6 | |
| 30 1,4-Dichlorobenzene | 146 | 4.618 | 4.608 | 0.010 | 93 | 839330 | 160.0 | 148.0 | |
| 31 Benzyl alcohol | 108 | 4.719 | 4.710 | 0.009 | 93 | 621774 | 160.0 | 155.0 | |
| 32 1,2-Dichlorobenzene | 146 | 4.767 | 4.758 | 0.009 | 95 | 812271 | 160.0 | 148.7 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.842 | 4.833 | 0.009 | 94 | 1078662 | 160.0 | 149.3 | |
| 35 2-Methylphenol | 108 | 4.821 | 4.817 | 0.004 | 95 | 840546 | 160.0 | 151.6 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.970 | 4.961 | 0.009 | 72 | 608898 | 160.0 | 145.2 | |
| 39 Acetophenone | 105 | 4.976 | 4.966 | 0.010 | 84 | 1072369 | 160.0 | 140.4 | |
| 40 4-Methylphenol | 108 | 4.970 | 4.961 | 0.009 | 76 | 763356 | 160.0 | 139.4 | |
| 41 3-Methylphenol | 108 | 4.970 | 4.961 | 0.009 | 78 | 763356 | 160.0 | 139.4 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.970 | 4.961 | 0.009 | 83 | 763356 | 160.0 | 139.4 | |
| 44 Hexachloroethane | 117 | 5.093 | 5.089 | 0.004 | 95 | 331194 | 160.0 | 154.7 | |
| 45 Nitrobenzene | 77 | 5.141 | 5.132 | 0.009 | 86 | 1003108 | 160.0 | 156.0 | |
| 47 Isophorone | 82 | 5.376 | 5.361 | 0.015 | 99 | 1868434 | 160.0 | 156.7 | |
| 48 2-Nitrophenol | 139 | 5.451 | 5.447 | 0.004 | 96 | 454068 | 160.0 | 158.7 | |
| 49 2,4-Dimethylphenol | 107 | 5.488 | 5.479 | 0.009 | 97 | 867946 | 160.0 | 152.7 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.569 | 5.559 | 0.010 | 99 | 1062320 | 160.0 | 156.2 | |
| 52 Benzoic acid | 105 | 5.659 | 5.607 | 0.052 | 87 | 1595917 | 320.0 | 325.2 | |
| 53 2,4-Dichlorophenol | 162 | 5.697 | 5.687 | 0.010 | 95 | 685342 | 160.0 | 152.9 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.777 | 5.773 | 0.004 | 93 | 742865 | 160.0 | 151.5 | |
| 56 Naphthalene | 128 | 5.857 | 5.853 | 0.004 | 98 | 2249718 | 160.0 | 145.9 | |
| 57 4-Chloroaniline | 127 | 5.900 | 5.890 | 0.010 | 96 | 1045234 | 160.0 | 151.0 | |
| 58 2,6-Dichlorophenol | 162 | 5.916 | 5.906 | 0.010 | 96 | 668568 | 160.0 | 150.5 | |
| 60 Hexachlorobutadiene | 225 | 5.980 | 5.976 | 0.004 | 96 | 395890 | 160.0 | 153.4 | |
| 63 Caprolactam | 55 | 6.258 | 6.232 | 0.026 | 82 | 439583 | 160.0 | 159.6 | M |
| 64 4-Chloro-3-methylphenol | 107 | 6.381 | 6.371 | 0.010 | 96 | 784920 | 160.0 | 157.0 | |
| 66 2-Methylnaphthalene | 142 | 6.541 | 6.537 | 0.004 | 93 | 1524783 | 160.0 | 146.3 | |
| 67 1-Methylnaphthalene | 142 | 6.642 | 6.633 | 0.009 | 93 | 1428935 | 160.0 | 146.8 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.706 | 6.702 | 0.004 | 96 | 476920 | 160.0 | 159.4 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.717 | 6.708 | 0.009 | 97 | 692087 | 160.0 | 144.1 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.824 | 6.815 | 0.009 | 94 | 476142 | 160.0 | 146.9 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.867 | 6.857 | 0.010 | 96 | 567790 | 160.0 | 155.8 | |
| 74 1,1'-Biphenyl | 154 | 7.000 | 6.996 | 0.004 | 96 | 1777024 | 160.0 | 144.8 | |
| 75 2-Chloronaphthalene | 162 | 7.032 | 7.023 | 0.009 | 96 | 1460257 | 160.0 | 149.3 | |
| 77 2-Nitroaniline | 65 | 7.118 | 7.108 | 0.010 | 82 | 569403 | 160.0 | 161.2 | |
| 80 Dimethyl phthalate | 163 | 7.299 | 7.285 | 0.014 | 98 | 1695013 | 160.0 | 151.5 | |
| 81 1,3-Dinitrobenzene | 168 | 7.326 | 7.311 | 0.015 | 87 | 333184 | 160.0 | 168.0 | |
| 82 2,6-Dinitrotoluene | 165 | 7.358 | 7.343 | 0.015 | 96 | 449143 | 160.0 | 162.0 | |
| 83 Acenaphthylene | 152 | 7.449 | 7.440 | 0.009 | 99 | 2343276 | 160.0 | 146.6 | |
| 84 3-Nitroaniline | 138 | 7.529 | 7.520 | 0.009 | 93 | 522141 | 160.0 | 160.4 | |
| 85 Acenaphthene | 153 | 7.620 | 7.611 | 0.009 | 95 | 1377704 | 160.0 | 143.4 | |
| 86 2,4-Dinitrophenol | 184 | 7.636 | 7.621 | 0.015 | 82 | 582678 | 320.0 | 319.3 | |
| 88 4-Nitrophenol | 109 | 7.716 | 7.696 | 0.020 | 92 | 530260 | 320.0 | 319.8 | |
| 89 2,4-Dinitrotoluene | 165 | 7.764 | 7.749 | 0.015 | 93 | 615236 | 160.0 | 162.3 | |
| 90 Dibenzofuran | 168 | 7.791 | 7.787 | 0.004 | 98 | 2162251 | 160.0 | 147.2 | |
| 92 Hexadecane | 57 | 8.010 | 8.006 | 0.004 | 98 | 1067159 | 160.0 | 154.8 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.914 | 7.910 | 0.004 | 71 | 489234 | 160.0 | 159.9 | |
| 95 Diethyl phthalate | 149 | 7.999 | 7.990 | 0.009 | 98 | 1661414 | 160.0 | 150.4 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.122 | 8.113 | 0.009 | 90 | 853450 | 160.0 | 149.9 | |
| 99 Fluorene | 166 | 8.138 | 8.129 | 0.009 | 93 | 1673571 | 160.0 | 143.4 | |
| 100 4-Nitroaniline | 138 | 8.160 | 8.134 | 0.026 | 86 | 557221 | 160.0 | 160.6 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.186 | 8.171 | 0.015 | 90 | 724181 | 320.0 | 317.6 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.240 | 8.230 | 0.010 | 62 | 1322951 | 160.0 | 147.7 | |
| 103 Diphenylamine | 169 | 8.240 | 8.230 | 0.010 | 95 | 1322951 | 136.0 | 126.7 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.282 | 8.273 | 0.009 | 98 | 2088645 | 161.8 | 156.5 | |
| 106 Azobenzene | 77 | 8.282 | 8.273 | 0.009 | 98 | 2088645 | 160.0 | 154.8 | |
| 112 Atrazine | 200 | 8.763 | 8.754 | 0.009 | 96 | 516950 | 160.0 | 151.3 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.614 | 8.604 | 0.010 | 65 | 546023 | 160.0 | 153.9 | |
| 116 Hexachlorobenzene | 284 | 8.699 | 8.695 | 0.004 | 95 | 525800 | 160.0 | 153.5 | |
| 119 Pentachlorophenol | 266 | 8.891 | 8.882 | 0.009 | 94 | 687005 | 320.0 | 319.0 | |
| 123 Phenanthrene | 178 | 9.100 | 9.096 | 0.004 | 98 | 2536109 | 160.0 | 142.3 | |
| 124 Anthracene | 178 | 9.153 | 9.144 | 0.009 | 98 | 2661233 | 160.0 | 144.3 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.303 | 9.293 | 0.010 | 95 | 2589574 | 160.0 | 145.5 | |
| 127 Di-n-butyl phthalate | 149 | 9.639 | 9.630 | 0.009 | 100 | 2997486 | 160.0 | 152.5 | |
| 132 Fluoranthene | 202 | 10.467 | 10.453 | 0.014 | 99 | 3122903 | 160.0 | 149.3 | |
| 134 Pyrene | 202 | 10.804 | 10.789 | 0.015 | 96 | 3265650 | 160.0 | 155.7 | |
| 141 Butyl benzyl phthalate | 149 | 11.910 | 11.900 | 0.010 | 98 | 1486074 | 160.0 | 166.6 | |
| 144 3,3'-Dichlorobenzidine | 252 | 13.085 | 13.059 | 0.026 | 74 | 1088511 | 160.0 | 156.9 | |
| 145 Benzo[a]anthracene | 228 | 13.128 | 13.102 | 0.026 | 99 | 3274513 | 160.0 | 156.1 | |
| 146 Chrysene | 228 | 13.219 | 13.193 | 0.026 | 98 | 3103122 | 160.0 | 154.9 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.283 | 13.268 | 0.015 | 97 | 2081456 | 160.0 | 171.6 | |
| 148 Di-n-octyl phthalate | 149 | 15.088 | 15.073 | 0.015 | 99 | 3567745 | 160.0 | 170.3 | |
| 150 Benzo[b]fluoranthene | 252 | 15.996 | 15.966 | 0.030 | 99 | 3220136 | 160.0 | 164.6 | |
| 151 Benzo[k]fluoranthene | 252 | 16.082 | 16.046 | 0.036 | 99 | 3114890 | 160.0 | 156.1 | |
| 153 Benzo[a]pyrene | 252 | 16.937 | 16.895 | 0.042 | 78 | 3094828 | 160.0 | 159.0 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 20.217 | 20.175 | 0.042 | 99 | 2845711 | 160.0 | 161.9 | M |
| 157 Dibenz(a,h)anthracene | 278 | 20.308 | 20.271 | 0.037 | 93 | 2841429 | 160.0 | 165.2 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.959 | 20.918 | 0.041 | 97 | 2923519 | 160.0 | 160.3 | |
| S 169 Methyl Phenols,Total | 108 | | | | 0 | | | 291.0 | |
| S 170 Total Cresols | 108 | | | | 0 | | | 151.6 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

MS-HSLA160_00040 Amount Added: 200.00 Units: uL

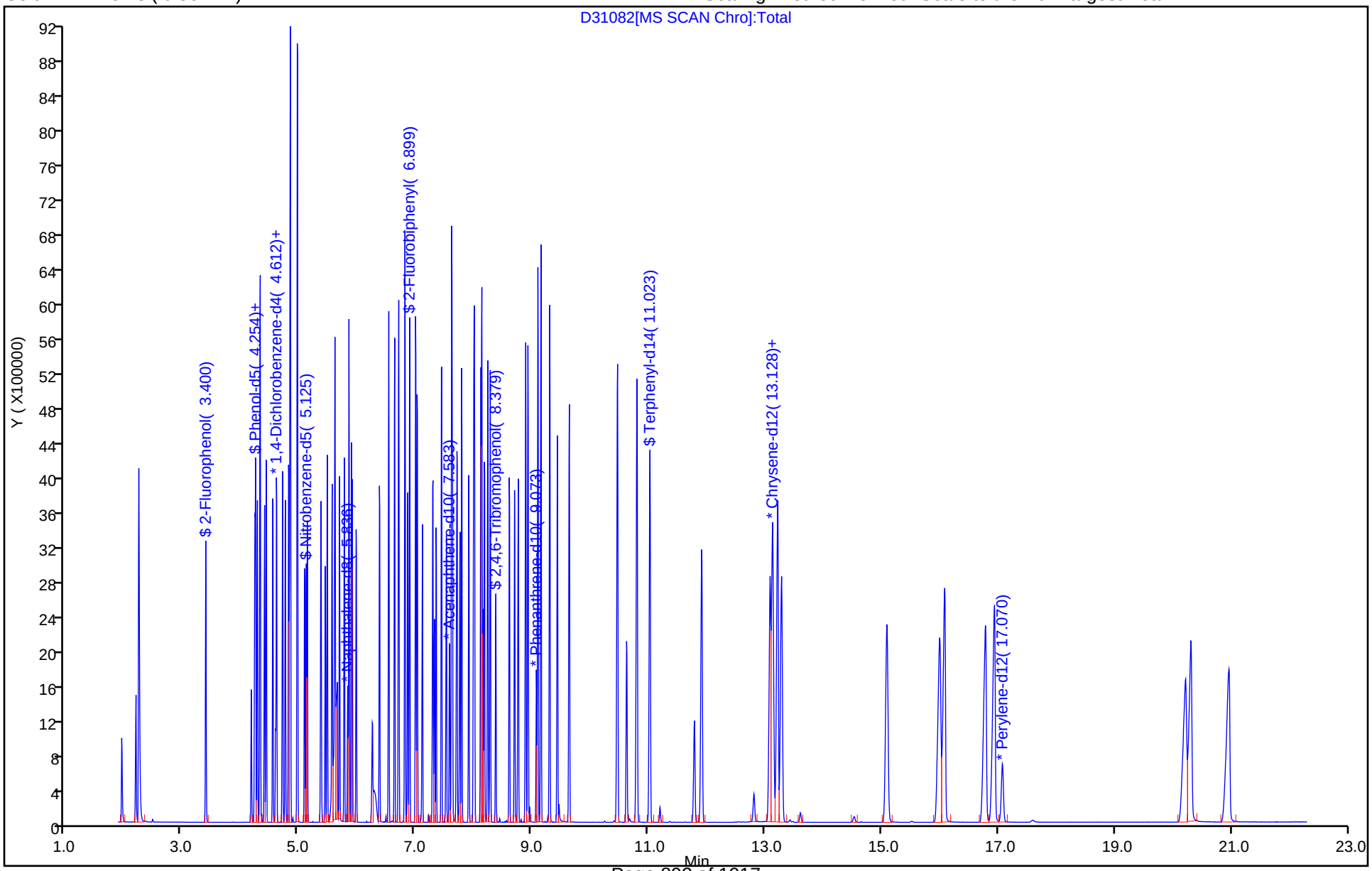
Report Date: 09-Jan-2019 10:20:21 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31082.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 17:39:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD160 HSL | | | Worklist Smp#: | 9 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 8 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

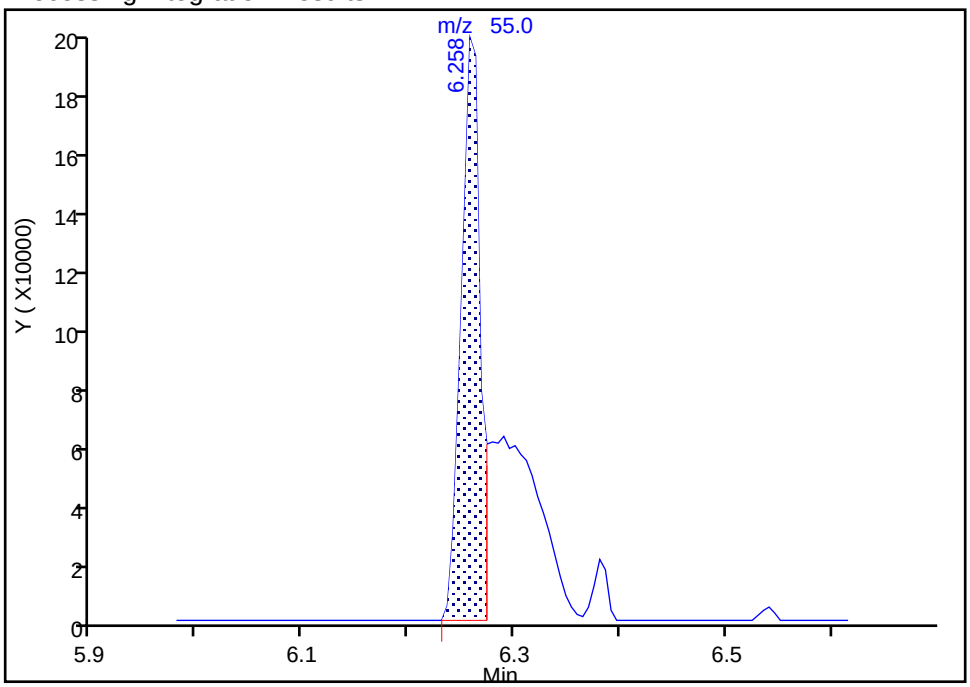
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Injection Date: 08-Jan-2019 17:39:30 Instrument ID: SMS_D
Lims ID: STD160 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 63 Caprolactam, CAS: 105-60-2

Signal: 1

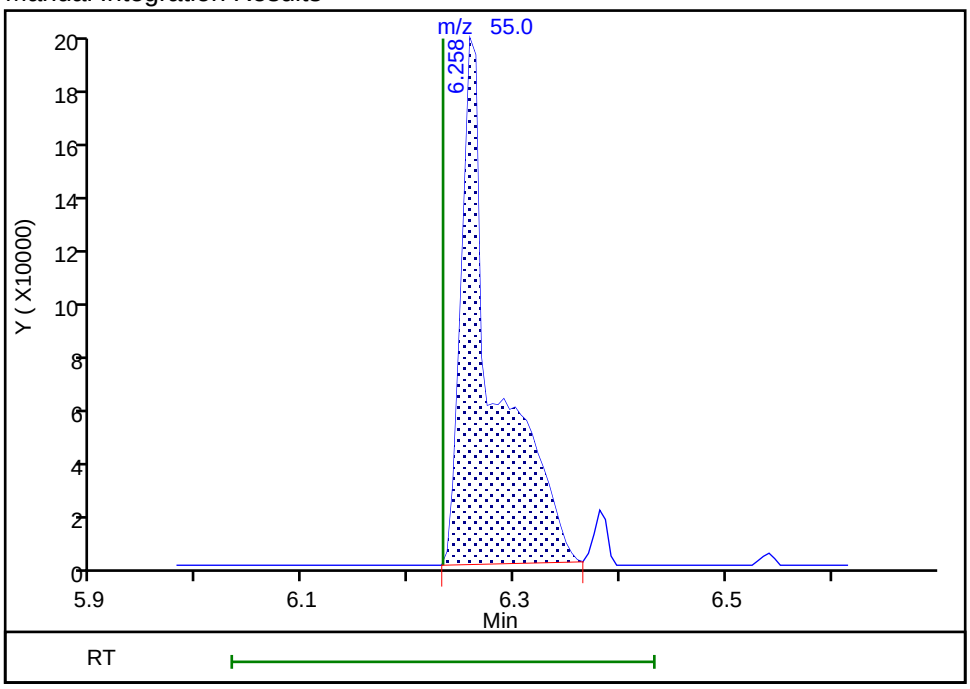
Processing Integration Results

RT: 6.26
Area: 247412
Amount: 101.7118
Amount Units: ug/ml




Manual Integration Results

RT: 6.26
Area: 439583
Amount: 159.5566
Amount Units: ug/ml




Reviewer: kiekeld, 09-Jan-2019 10:05:24
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

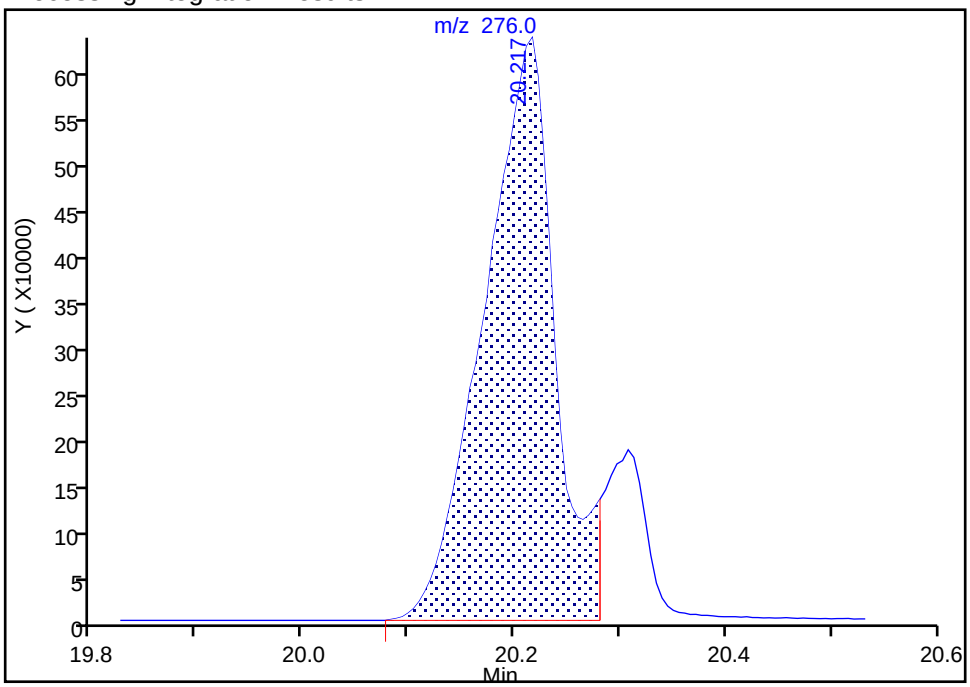
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31082.D
Injection Date: 08-Jan-2019 17:39:30 Instrument ID: SMS_D
Lims ID: STD160 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 156 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

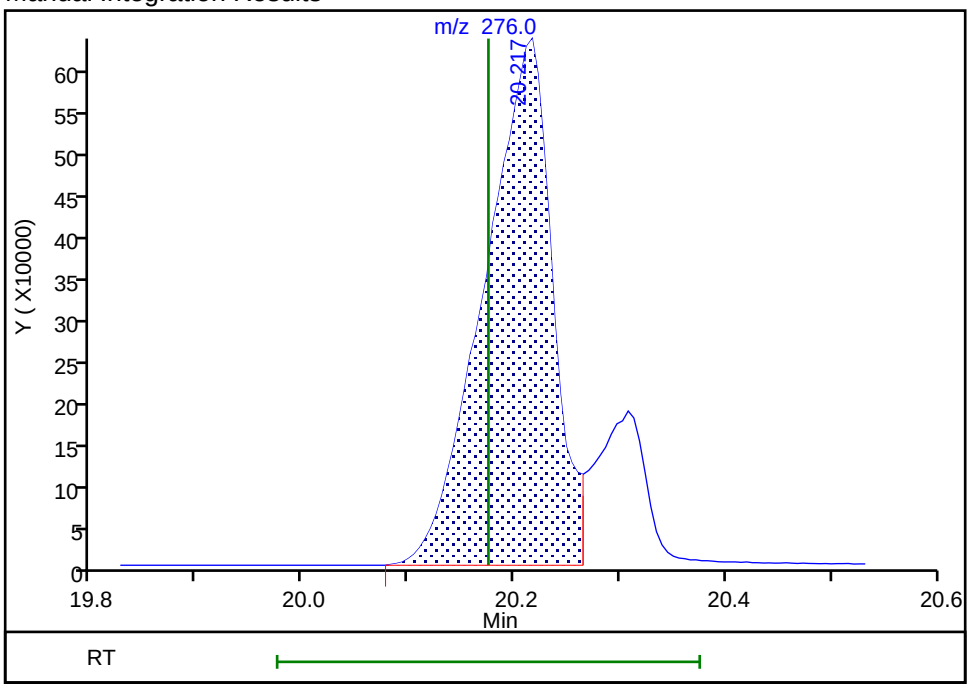
Processing Integration Results

RT: 20.22
Area: 2963977
Amount: 163.5838
Amount Units: ug/ml




Manual Integration Results

RT: 20.22
Area: 2845711
Amount: 161.9480
Amount Units: ug/ml




Reviewer: kiekeld, 09-Jan-2019 10:05:51
Audit Action: Split an Integrated Peak Audit Reason: Shouldering

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D
Lims ID: STD200 HSL
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 08-Jan-2019 18:08:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD200 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub14

Method: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 09-Jan-2019 10:20:23 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 09-Jan-2019 10:16:55

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.597 | 4.592 | 0.005 | 96 | 131303 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.836 | 5.832 | 0.004 | 99 | 562607 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.588 | 7.578 | 0.010 | 96 | 327844 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.074 | 9.069 | 0.005 | 97 | 681977 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.150 | 13.129 | 0.021 | 99 | 644957 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.076 | 17.050 | 0.026 | 97 | 652863 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.400 | 3.396 | 0.004 | 93 | 951610 | 200.0 | 192.9 | |
| $ 8 Phenol-d5 | 99 | 4.244 | 4.234 | 0.010 | 98 | 1265556 | 200.0 | 192.6 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.126 | 5.116 | 0.010 | 87 | 1150946 | 200.0 | 189.8 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.899 | 6.889 | 0.010 | 99 | 1934642 | 200.0 | 169.7 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.379 | 8.369 | 0.010 | 94 | 318553 | 200.0 | 201.1 | |
| $ 12 Terphenyl-d14 | 244 | 11.023 | 11.008 | 0.015 | 98 | 2777694 | 200.0 | 187.4 | |
| 13 1,4-Dioxane | 88 | 1.958 | 1.953 | 0.005 | 92 | 460538 | 200.0 | 192.9 | |
| 14 N-Nitrosodimethylamine | 74 | 2.204 | 2.194 | 0.010 | 93 | 749726 | 200.0 | 198.0 | |
| 15 Pyridine | 79 | 2.252 | 2.247 | 0.005 | 98 | 2339362 | 400.0 | 385.4 | |
| 23 n-Decane | 57 | 4.437 | 4.432 | 0.005 | 98 | 961365 | 200.0 | 186.3 | |
| 24 Phenol | 94 | 4.255 | 4.245 | 0.010 | 98 | 1332114 | 200.0 | 193.3 | |
| 25 Aniline | 93 | 4.287 | 4.277 | 0.010 | 98 | 1687895 | 200.0 | 195.9 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.330 | 4.320 | 0.010 | 93 | 879541 | 200.0 | 179.5 | |
| 28 2-Chlorophenol | 128 | 4.410 | 4.400 | 0.010 | 98 | 938018 | 200.0 | 191.4 | |
| 29 1,3-Dichlorobenzene | 146 | 4.549 | 4.544 | 0.005 | 97 | 934356 | 200.0 | 182.4 | |
| 30 1,4-Dichlorobenzene | 146 | 4.613 | 4.608 | 0.005 | 92 | 944233 | 200.0 | 183.3 | |
| 31 Benzyl alcohol | 108 | 4.720 | 4.710 | 0.010 | 93 | 725360 | 200.0 | 199.0 | |
| 32 1,2-Dichlorobenzene | 146 | 4.768 | 4.758 | 0.010 | 96 | 913128 | 200.0 | 184.0 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.843 | 4.833 | 0.010 | 94 | 1197893 | 200.0 | 182.6 | |
| 35 2-Methylphenol | 108 | 4.821 | 4.817 | 0.004 | 95 | 974233 | 200.0 | 193.5 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.976 | 4.961 | 0.015 | 65 | 691357 | 200.0 | 181.5 | |
| 39 Acetophenone | 105 | 4.976 | 4.966 | 0.010 | 81 | 1206469 | 200.0 | 173.9 | |
| 40 4-Methylphenol | 108 | 4.976 | 4.961 | 0.015 | 70 | 865249 | 200.0 | 173.9 | |
| 41 3-Methylphenol | 108 | 4.976 | 4.961 | 0.015 | 74 | 865249 | 200.0 | 173.9 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.976 | 4.961 | 0.015 | 76 | 865249 | 200.0 | 173.9 | |
| 44 Hexachloroethane | 117 | 5.094 | 5.089 | 0.005 | 95 | 361877 | 200.0 | 186.1 | |
| 45 Nitrobenzene | 77 | 5.147 | 5.132 | 0.015 | 86 | 1140969 | 200.0 | 185.3 | |
| 47 Isophorone | 82 | 5.382 | 5.361 | 0.021 | 99 | 2168836 | 200.0 | 190.0 | |
| 48 2-Nitrophenol | 139 | 5.452 | 5.447 | 0.005 | 96 | 535947 | 200.0 | 195.6 | |
| 49 2,4-Dimethylphenol | 107 | 5.489 | 5.479 | 0.010 | 97 | 1003685 | 200.0 | 184.4 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.569 | 5.559 | 0.010 | 98 | 1202706 | 200.0 | 184.7 | |
| 52 Benzoic acid | 105 | 5.671 | 5.607 | 0.064 | 87 | 1925795 | 400.0 | 408.6 | |
| 53 2,4-Dichlorophenol | 162 | 5.697 | 5.687 | 0.010 | 95 | 790157 | 200.0 | 184.1 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.777 | 5.773 | 0.004 | 93 | 835054 | 200.0 | 177.9 | |
| 56 Naphthalene | 128 | 5.858 | 5.853 | 0.005 | 98 | 2592923 | 200.0 | 175.6 | |
| 57 4-Chloroaniline | 127 | 5.900 | 5.890 | 0.010 | 95 | 1229395 | 200.0 | 185.4 | |
| 58 2,6-Dichlorophenol | 162 | 5.916 | 5.906 | 0.010 | 97 | 762902 | 200.0 | 179.3 | |
| 60 Hexachlorobutadiene | 225 | 5.980 | 5.976 | 0.004 | 95 | 445542 | 200.0 | 180.3 | |
| 63 Caprolactam | 55 | 6.269 | 6.232 | 0.037 | 82 | 558175 | 200.0 | 211.6 | M |
| 64 4-Chloro-3-methylphenol | 107 | 6.386 | 6.371 | 0.015 | 96 | 909647 | 200.0 | 190.0 | |
| 66 2-Methylnaphthalene | 142 | 6.541 | 6.537 | 0.004 | 93 | 1718227 | 200.0 | 172.2 | |
| 67 1-Methylnaphthalene | 142 | 6.643 | 6.633 | 0.010 | 93 | 1629454 | 200.0 | 174.9 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.707 | 6.702 | 0.005 | 95 | 536926 | 200.0 | 185.3 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.718 | 6.708 | 0.010 | 97 | 786079 | 200.0 | 170.9 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.824 | 6.815 | 0.009 | 95 | 549679 | 200.0 | 175.1 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.867 | 6.857 | 0.010 | 95 | 667655 | 200.0 | 189.2 | |
| 74 1,1'-Biphenyl | 154 | 7.006 | 6.996 | 0.010 | 96 | 2020940 | 200.0 | 170.0 | |
| 75 2-Chloronaphthalene | 162 | 7.033 | 7.023 | 0.010 | 96 | 1682156 | 200.0 | 177.6 | |
| 77 2-Nitroaniline | 65 | 7.118 | 7.108 | 0.010 | 83 | 676229 | 200.0 | 197.7 | |
| 80 Dimethyl phthalate | 163 | 7.300 | 7.285 | 0.015 | 98 | 1967810 | 200.0 | 181.6 | |
| 81 1,3-Dinitrobenzene | 168 | 7.327 | 7.311 | 0.016 | 88 | 396998 | 200.0 | 206.7 | |
| 82 2,6-Dinitrotoluene | 165 | 7.359 | 7.343 | 0.016 | 96 | 521853 | 200.0 | 194.3 | |
| 83 Acenaphthylene | 152 | 7.449 | 7.440 | 0.009 | 99 | 2706501 | 200.0 | 174.9 | |
| 84 3-Nitroaniline | 138 | 7.535 | 7.520 | 0.015 | 94 | 613589 | 200.0 | 194.6 | |
| 85 Acenaphthene | 153 | 7.620 | 7.611 | 0.009 | 96 | 1579408 | 200.0 | 169.7 | |
| 86 2,4-Dinitrophenol | 184 | 7.636 | 7.621 | 0.015 | 82 | 695834 | 400.0 | 392.4 | |
| 88 4-Nitrophenol | 109 | 7.717 | 7.696 | 0.021 | 94 | 631866 | 400.0 | 393.5 | |
| 89 2,4-Dinitrotoluene | 165 | 7.765 | 7.749 | 0.016 | 93 | 723911 | 200.0 | 197.2 | |
| 90 Dibenzofuran | 168 | 7.797 | 7.787 | 0.010 | 98 | 2495330 | 200.0 | 175.3 | |
| 92 Hexadecane | 57 | 8.010 | 8.006 | 0.004 | 98 | 1147152 | 200.0 | 171.9 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.920 | 7.910 | 0.010 | 71 | 568410 | 200.0 | 191.8 | |
| 95 Diethyl phthalate | 149 | 8.000 | 7.990 | 0.010 | 98 | 1860367 | 200.0 | 173.9 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.123 | 8.113 | 0.010 | 91 | 976269 | 200.0 | 177.0 | |
| 99 Fluorene | 166 | 8.139 | 8.129 | 0.010 | 93 | 1913056 | 200.0 | 169.2 | |
| 100 4-Nitroaniline | 138 | 8.160 | 8.134 | 0.026 | 86 | 663634 | 200.0 | 197.5 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.187 | 8.171 | 0.016 | 88 | 859529 | 400.0 | 384.6 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.245 | 8.230 | 0.015 | 62 | 1520758 | 200.0 | 173.6 | |
| 103 Diphenylamine | 169 | 8.245 | 8.230 | 0.015 | 95 | 1520758 | 170.0 | 150.4 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.283 | 8.273 | 0.010 | 98 | 2408873 | 202.2 | 186.3 | |
| 106 Azobenzene | 77 | 8.283 | 8.273 | 0.010 | 98 | 2408873 | 200.0 | 184.3 | |
| 112 Atrazine | 200 | 8.769 | 8.754 | 0.015 | 95 | 578521 | 200.0 | 173.0 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.614 | 8.604 | 0.010 | 66 | 624404 | 200.0 | 179.9 | |
| 116 Hexachlorobenzene | 284 | 8.705 | 8.695 | 0.010 | 95 | 613523 | 200.0 | 183.1 | |
| 119 Pentachlorophenol | 266 | 8.892 | 8.882 | 0.010 | 95 | 803355 | 400.0 | 380.9 | |
| 123 Phenanthrene | 178 | 9.106 | 9.096 | 0.010 | 98 | 2914974 | 200.0 | 167.2 | |
| 124 Anthracene | 178 | 9.154 | 9.144 | 0.010 | 98 | 3048557 | 200.0 | 169.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.309 | 9.293 | 0.016 | 96 | 2960303 | 200.0 | 170.0 | |
| 127 Di-n-butyl phthalate | 149 | 9.640 | 9.630 | 0.010 | 100 | 3403027 | 200.0 | 177.0 | |
| 132 Fluoranthene | 202 | 10.468 | 10.453 | 0.015 | 99 | 3546381 | 200.0 | 173.3 | |
| 134 Pyrene | 202 | 10.804 | 10.789 | 0.015 | 96 | 3747222 | 200.0 | 183.3 | |
| 141 Butyl benzyl phthalate | 149 | 11.910 | 11.900 | 0.010 | 98 | 1724832 | 200.0 | 198.4 | |
| 144 3,3'-Dichlorobenzidine | 252 | 13.085 | 13.059 | 0.026 | 73 | 1284759 | 200.0 | 190.0 | |
| 145 Benzo[a]anthracene | 228 | 13.128 | 13.102 | 0.026 | 99 | 3805757 | 200.0 | 186.1 | |
| 146 Chrysene | 228 | 13.219 | 13.193 | 0.026 | 98 | 3627777 | 200.0 | 185.8 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.283 | 13.268 | 0.015 | 97 | 2376408 | 200.0 | 201.0 | |
| 148 Di-n-octyl phthalate | 149 | 15.094 | 15.073 | 0.021 | 99 | 4146803 | 200.0 | 203.1 | |
| 150 Benzo[b]fluoranthene | 252 | 16.002 | 15.966 | 0.036 | 98 | 3864797 | 200.0 | 199.7 | |
| 151 Benzo[k]fluoranthene | 252 | 16.088 | 16.046 | 0.042 | 99 | 3708496 | 200.0 | 187.9 | |
| 153 Benzo[a]pyrene | 252 | 16.942 | 16.895 | 0.047 | 78 | 3754449 | 200.0 | 195.0 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 20.223 | 20.175 | 0.048 | 99 | 3471270 | 200.0 | 202.7 | M |
| 157 Dibenz(a,h)anthracene | 278 | 20.319 | 20.271 | 0.048 | 93 | 3393012 | 200.0 | 199.4 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.970 | 20.918 | 0.052 | 97 | 3535561 | 200.0 | 196.0 | |
| S 169 Methyl Phenols,Total | 108 | | | | 0 | | | 367.4 | |
| S 170 Total Cresols | 108 | | | | 0 | | | 193.5 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

MS-HSLA200_00040 Amount Added: 200.00 Units: uL

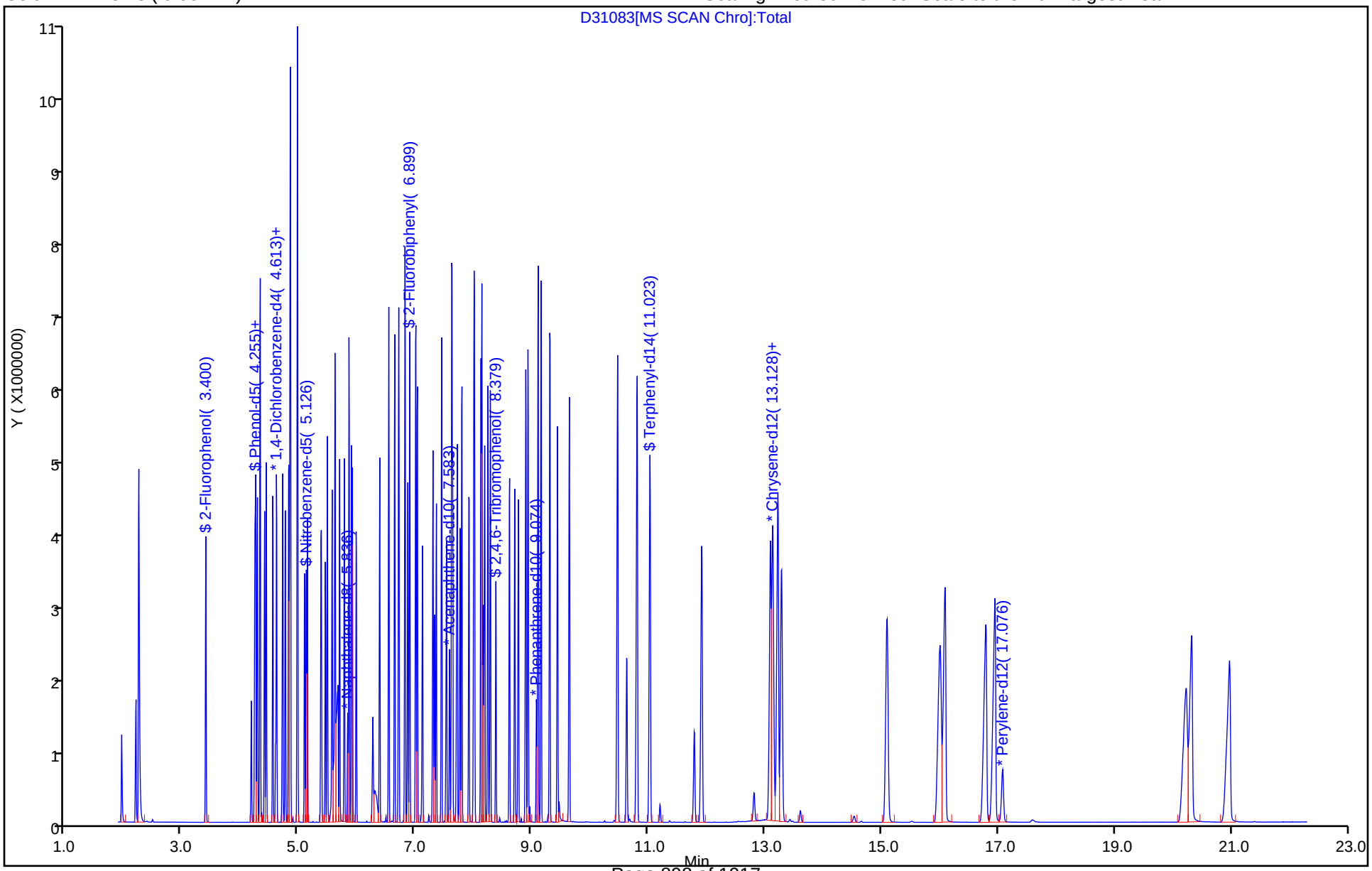
Report Date: 09-Jan-2019 10:20:24 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 18:08:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | STD200 HSL | | | Worklist Smp#: | 10 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 9 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

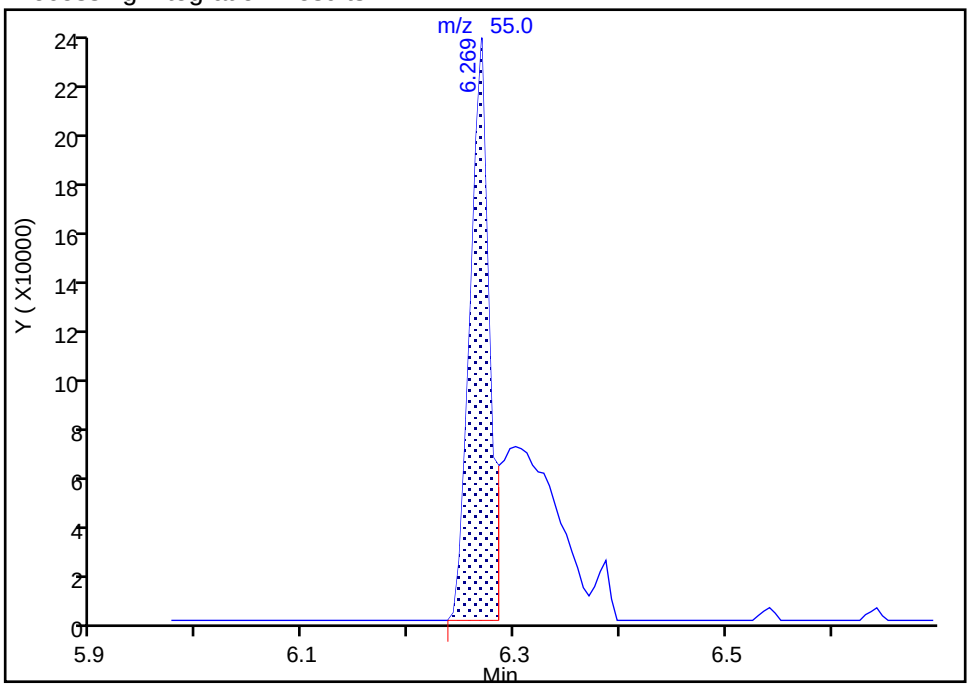
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D
Injection Date: 08-Jan-2019 18:08:30 Instrument ID: SMS_D
Lims ID: STD200 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 63 Caprolactam, CAS: 105-60-2

Signal: 1

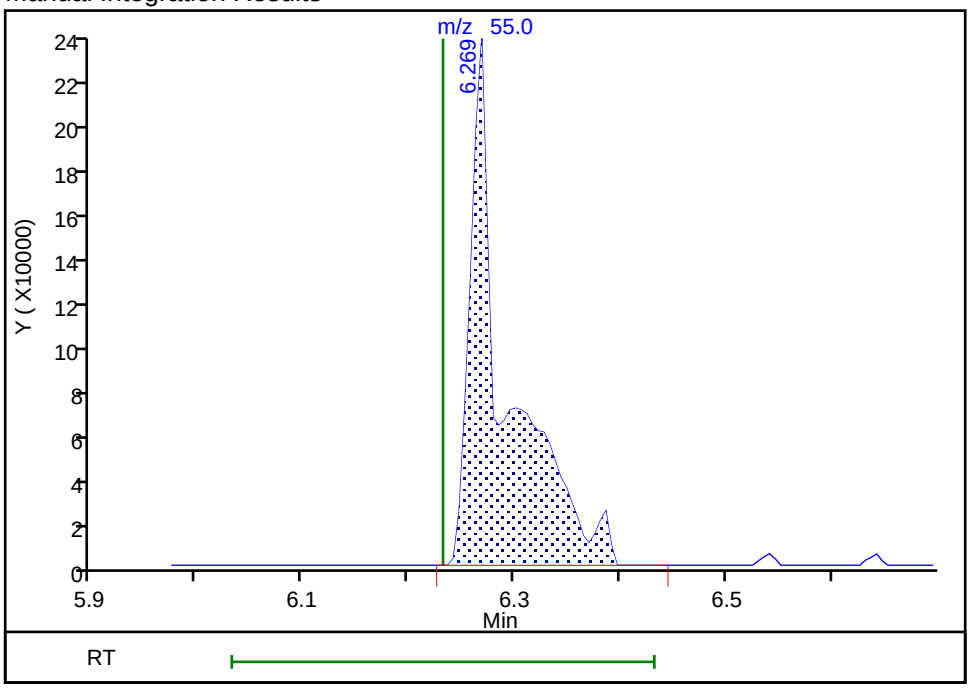
Processing Integration Results

RT: 6.27
Area: 294051
Amount: 118.9168
Amount Units: ug/ml




Manual Integration Results

RT: 6.27
Area: 558175
Amount: 211.6044
Amount Units: ug/ml




Reviewer: kiekeld, 09-Jan-2019 10:06:46
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

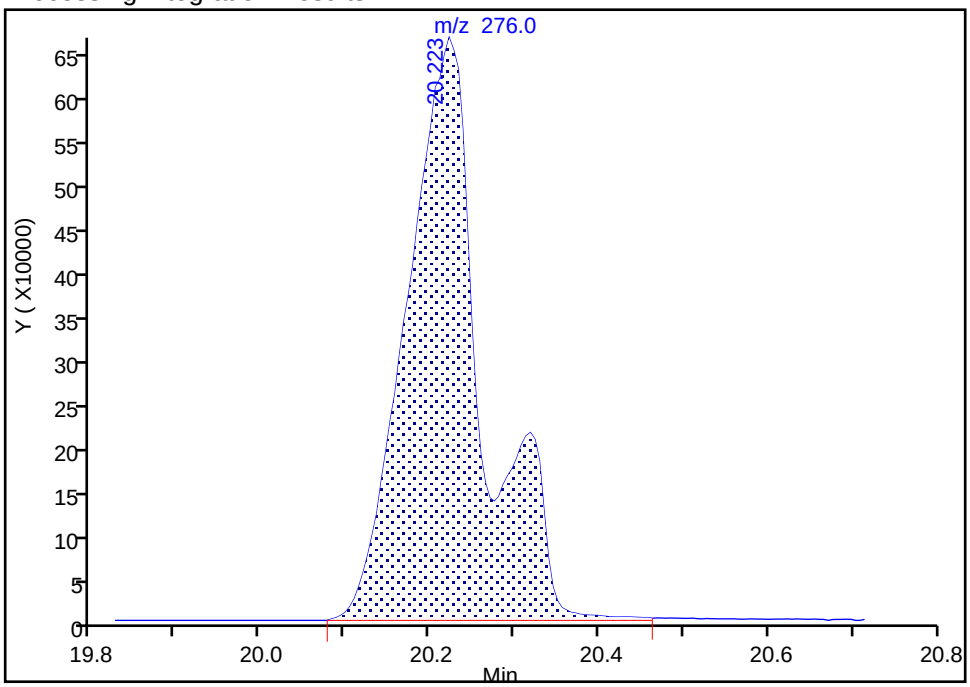
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D
Injection Date: 08-Jan-2019 18:08:30 Instrument ID: SMS_D
Lims ID: STD200 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 156 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

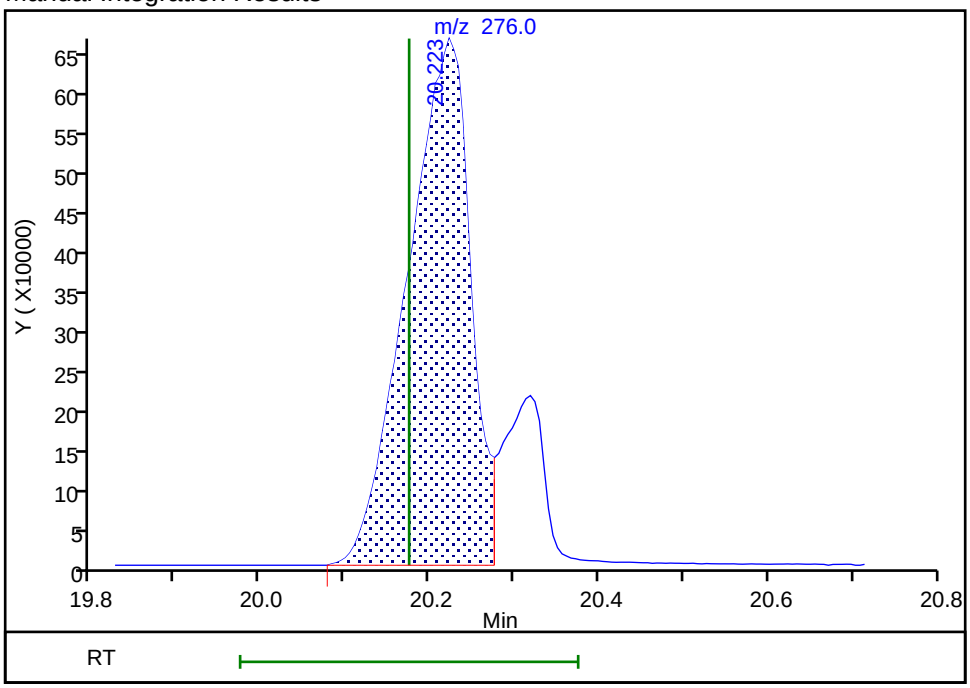
Processing Integration Results

RT: 20.22
Area: 4180620
Amount: 237.9403
Amount Units: ug/ml




Manual Integration Results

RT: 20.22
Area: 3471270
Amount: 202.6818
Amount Units: ug/ml




Reviewer: kiekeld, 09-Jan-2019 10:06:16
Audit Action: Split an Integrated Peak Audit Reason: Shouldering

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-440161/21  Calibration Date: 12/05/2018 21:22

Instrument ID: SMS_D  Calib Start Date: 12/05/2018 18:02

GC Column: Rxi-5Sil MS  ID: 0.25(mm)  Calib End Date: 12/05/2018 20:57

Lab File ID: D30620.D  Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Famphur | Ave | 0.4133 | 0.4479 | | 108000 | 100000 | 8.4 | 20.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30620.D
Lims ID: ICV FAM
Client ID:
Sample Type: ICV
Inject. Date: 05-Dec-2018 21:22:30 ALS Bottle#: 20 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV FAM
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist:

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:30 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:10:15

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.673 | 4.673 | 0.000 | 96 | 118020 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.896 | 5.896 | 0.000 | 99 | 482642 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.649 | 7.649 | -0.001 | 95 | 301746 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.139 | 9.139 | 0.000 | 98 | 658077 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.284 | 13.290 | -0.006 | 99 | 735279 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.270 | 17.280 | -0.010 | 98 | 774649 | 40.0 | 40.0 | |
| 139 Famphur | 218 | 11.917 | 11.917 | 0.000 | 99 | 823277 | 100.0 | 108.4 | |

## Reagents:

MS-FAMSSV_100_00020 Amount Added: 200.00 Units: uL

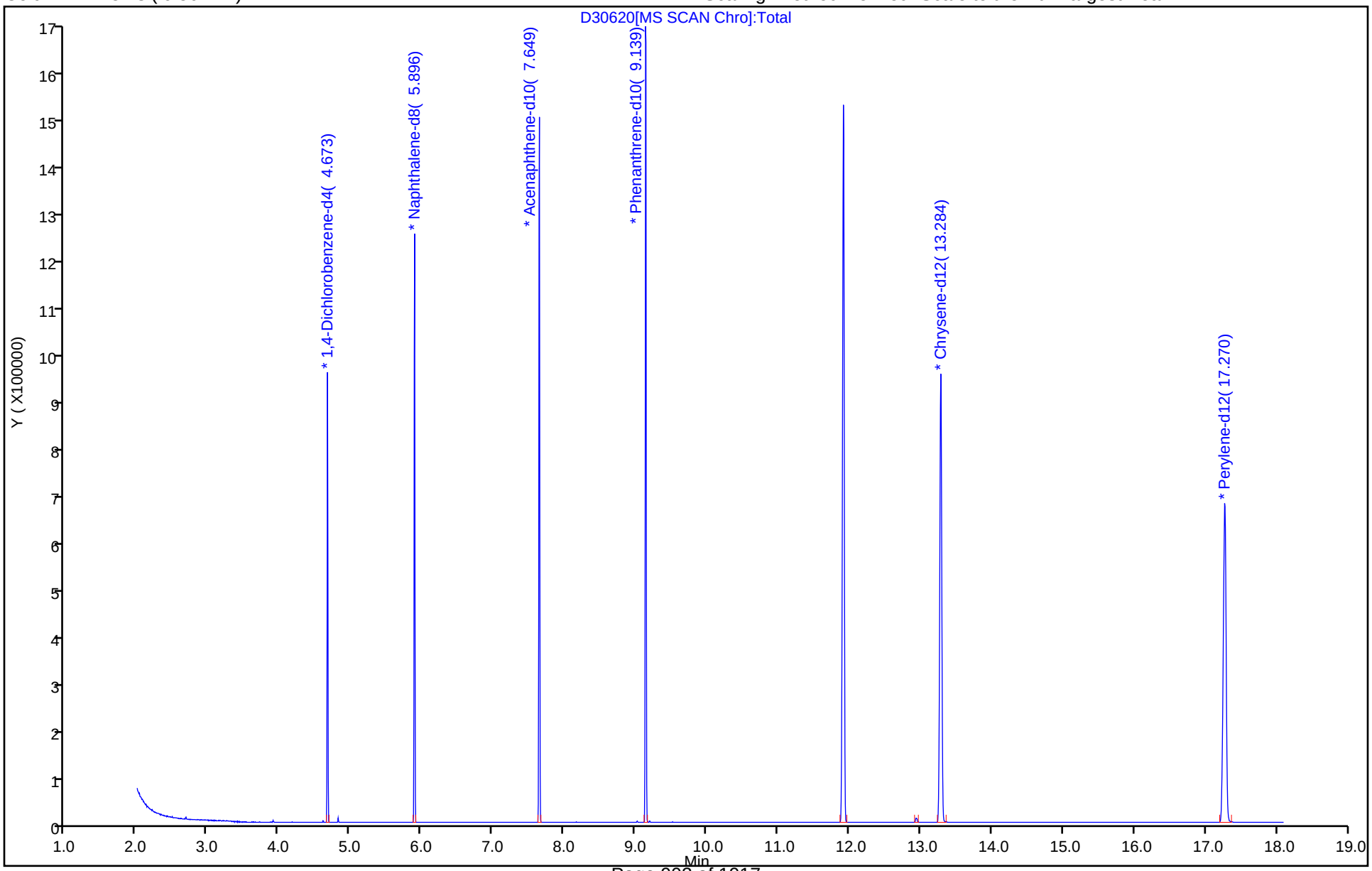
Report Date: 06-Dec-2018 12:13:31 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30620.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 21:22:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | ICV FAM | | | Worklist Smp#: | 21 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 20 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-440162/29  Calibration Date: 12/06/2018 00:40

Instrument ID: SMS_D  Calib Start Date: 12/05/2018 21:46

GC Column: Rxi-5Sil MS  ID: 0.25(mm)  Calib End Date: 12/06/2018 00:16

Lab File ID: D30628.D  Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Benzidine | Ave | 0.7923 | 0.8388 | | 106000 | 100000 | 5.9 | 20.0 |

Report Date: 06-Dec-2018 12:13:40 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30628.D
Lims ID: ICV AFC
Client ID:
Sample Type: ICV
Inject. Date: 06-Dec-2018 00:40:30 ALS Bottle#: 28 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV AFC
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist:

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:13:38 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 12:12:01

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.673 | 4.673 | 0.000 | 96 | 116885 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.896 | 5.896 | 0.000 | 99 | 486286 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.643 | 7.648 | -0.005 | 95 | 309957 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.139 | 9.139 | 0.000 | 98 | 668925 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.284 | 13.290 | -0.006 | 99 | 748478 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.269 | 17.270 | -0.001 | 98 | 775156 | 40.0 | 40.0 | |
| 133 Benzidine | 184 | 10.725 | 10.725 | 0.000 | 100 | 1569640 | 100.0 | 105.9 | |

## Reagents:

MS-AFCBSSV100_00021 Amount Added: 200.00 Units: uL

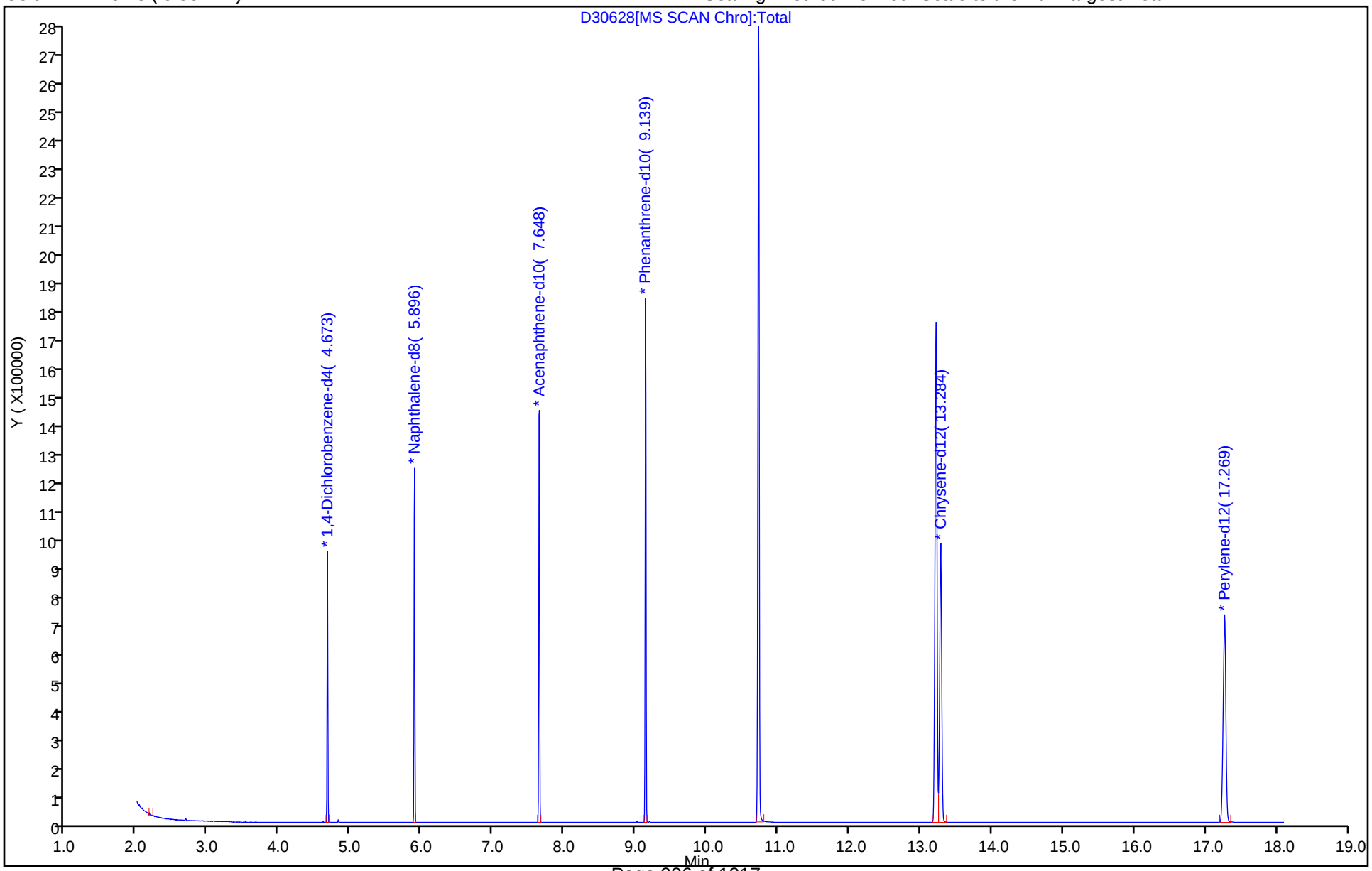
Report Date: 06-Dec-2018 12:13:40 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30628.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 06-Dec-2018 00:40:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | ICV AFC | | | Worklist Smp#: | 29 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 28 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-440302/10  Calibration Date: 12/06/2018 11:46

Instrument ID: SMS_D  Calib Start Date: 12/06/2018 08:53

GC Column: Rxi-5Sil MS  ID: 0.25(mm)  Calib End Date: 12/06/2018 11:21

Lab File ID: D30638.D  Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Benzaldehyde | Ave | 1.222 | 1.244 | | 102000 | 100000 | 1.8 | 55.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30638.D
Lims ID: ICV BZHD
Client ID:
Sample Type: ICV
Inject. Date: 06-Dec-2018 11:46:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV BZHD
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist:

Method: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 07-Dec-2018 08:57:47 Calib Date: 06-Dec-2018 18:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30653.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: kiekeld Date: 07-Dec-2018 08:56:11

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.669 | 4.673 | -0.004 | 96 | 121637 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.893 | 5.891 | 0.002 | 99 | 494669 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.645 | 7.644 | 0.001 | 94 | 310543 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.141 | 9.139 | 0.002 | 98 | 673597 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.275 | 13.274 | 0.001 | 99 | 749436 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.266 | 17.259 | 0.007 | 98 | 776570 | 40.0 | 40.0 | |
| 22 Benzaldehyde | 106 | 4.263 | 4.267 | -0.004 | 98 | 378412 | 100.0 | 101.8 | |

## Reagents:

MS-BZHDB-SSV_00023 Amount Added: 200.00 Units: uL

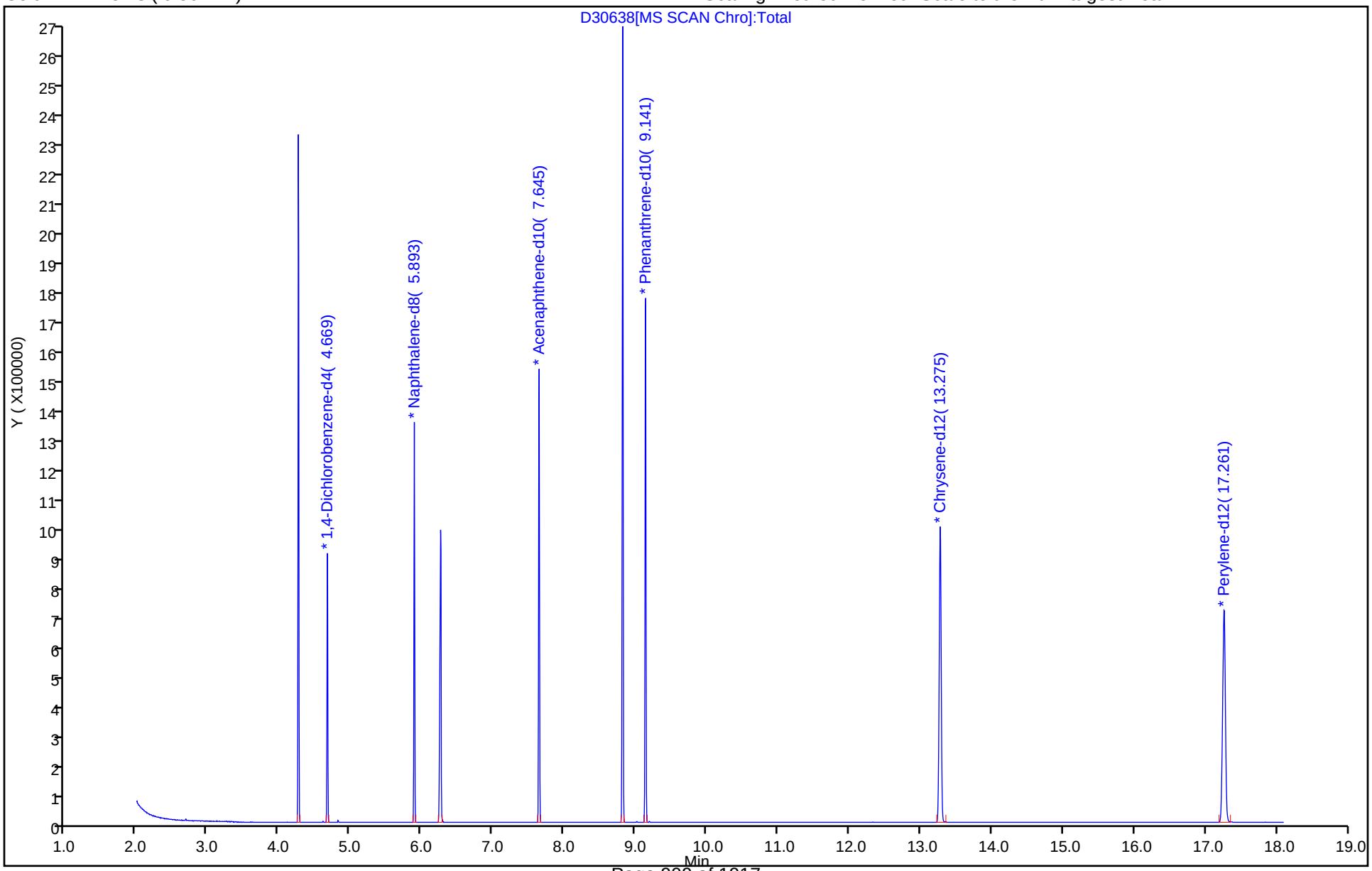
Report Date: 07-Dec-2018 08:57:49 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30638.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 06-Dec-2018 11:46:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | ICV BZHD | | | Worklist Smp#: | 10 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 9 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-443607/11 | Calibration Date: 01/08/2019 18:38

Instrument ID: SMS_D | Calib Start Date: 01/08/2019 14:43

GC Column: Rxi-5Sil MS ID: 0.25(mm) | Calib End Date: 01/08/2019 18:08

Lab File ID: D31084.D | Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | Ave | 0.7272 | 0.7333 | | 101000 | 100000 | 0.8 | 20.0 |
| N-Nitrosodimethylamine | Ave | 1.154 | 1.168 | | 101000 | 100000 | 1.2 | 20.0 |
| Pyridine | Ave | 1.849 | 2.004 | | 217000 | 200000 | 8.4 | 20.0 |
| Phenol | Ave | 2.099 | 2.148 | | 102000 | 100000 | 2.3 | 20.0 |
| Aniline | Ave | 2.625 | 2.536 | | 96600 | 100000 | -3.4 | 20.0 |
| Bis(2-chloroethyl)ether | Ave | 1.492 | 1.488 | | 99700 | 100000 | -0.3 | 20.0 |
| 2-Chlorophenol | Ave | 1.493 | 1.467 | | 98300 | 100000 | -1.7 | 20.0 |
| n-Decane | Ave | 1.572 | 1.540 | | 98000 | 100000 | -2.0 | 20.0 |
| 1,3-Dichlorobenzene | Ave | 1.561 | 1.536 | | 98400 | 100000 | -1.6 | 20.0 |
| 1,4-Dichlorobenzene | Ave | 1.569 | 1.563 | | 99600 | 100000 | -0.4 | 20.0 |
| Benzyl alcohol | Ave | 1.110 | 1.122 | | 101000 | 100000 | 1.1 | 20.0 |
| 1,2-Dichlorobenzene | Ave | 1.512 | 1.498 | | 99100 | 100000 | -0.9 | 20.0 |
| 2-Methylphenol | Ave | 1.534 | 1.557 | | 102000 | 100000 | 1.5 | 20.0 |
| 3 & 4 Methylphenol | Ave | 1.516 | 1.487 | | 98100 | 100000 | -1.9 | 20.0 |
| 3-Methylphenol | Ave | 1.516 | 1.487 | | 98100 | 100000 | -1.9 | 20.0 |
| 4-Methylphenol | Ave | 1.516 | 1.487 | | 98100 | 100000 | -1.9 | 20.0 |
| N-Nitrosodi-n-propylamine | Ave | 1.160 | 1.151 | 0.0500 | 99200 | 100000 | -0.8 | 20.0 |
| Acetophenone | Ave | 2.113 | 2.077 | | 98300 | 100000 | -1.7 | 20.0 |
| Hexachloroethane | Ave | 0.5924 | 0.5778 | | 97500 | 100000 | -2.5 | 20.0 |
| Nitrobenzene | Ave | 0.4377 | 0.4342 | | 99200 | 100000 | -0.8 | 20.0 |
| Isophorone | Ave | 0.8116 | 0.8024 | | 98900 | 100000 | -1.1 | 20.0 |
| 2-Nitrophenol | Ave | 0.1948 | 0.1965 | | 101000 | 100000 | 0.9 | 20.0 |
| 2,4-Dimethylphenol | Ave | 0.3870 | 0.3745 | | 96800 | 100000 | -3.2 | 20.0 |
| Bis(2-chloroethoxy)methane | Ave | 0.4630 | 0.4589 | | 99100 | 100000 | -0.9 | 20.0 |
| Benzoic acid | Lin2 | | 0.3417 | | 206000 | 200000 | 3.2 | 20.0 |
| 2,4-Dichlorophenol | Ave | 0.3051 | 0.3002 | | 98400 | 100000 | -1.6 | 20.0 |
| 1,2,4-Trichlorobenzene | Ave | 0.3338 | 0.3278 | | 98200 | 100000 | -1.8 | 20.0 |
| Naphthalene | Ave | 1.050 | 1.029 | | 98000 | 100000 | -2.0 | 20.0 |
| 4-Chloroaniline | Ave | 0.4713 | 0.4655 | | 98800 | 100000 | -1.2 | 20.0 |
| 2,6-Dichlorophenol | Ave | 0.3025 | 0.2995 | | 99000 | 100000 | -1.0 | 20.0 |
| Hexachlorobutadiene | Ave | 0.1757 | 0.1753 | | 99800 | 100000 | -0.2 | 20.0 |
| 4-Chloro-3-methylphenol | Ave | 0.3404 | 0.3437 | | 101000 | 100000 | 0.9 | 20.0 |
| 2-Methylnaphthalene | Ave | 0.7093 | 0.6830 | | 96300 | 100000 | -3.7 | 20.0 |
| 1-Methylnaphthalene | Ave | 0.6625 | 0.6558 | | 99000 | 100000 | -1.0 | 20.0 |
| Hexachlorocyclopentadiene | Ave | 0.3536 | 0.3499 | 0.0500 | 98900 | 100000 | -1.1 | 20.0 |
| 1,2,4,5-Tetrachlorobenzene | Ave | 0.3270 | 0.3149 | | 96300 | 100000 | -3.7 | 20.0 |
| 2,4,6-Trichlorophenol | Ave | 0.3830 | 0.3819 | | 99700 | 100000 | -0.3 | 20.0 |
| 2,4,5-Trichlorophenol | Ave | 0.4305 | 0.4402 | | 102000 | 100000 | 2.2 | 20.0 |
| 1,1'-Biphenyl | Ave | 1.450 | 1.391 | | 95900 | 100000 | -4.1 | 20.0 |
| 2-Chloronaphthalene | Ave | 1.156 | 1.114 | | 96400 | 100000 | -3.6 | 20.0 |
| 2-Nitroaniline | Ave | 0.4174 | 0.4356 | | 104000 | 100000 | 4.4 | 20.0 |

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-443607/11 Calibration Date: 01/08/2019 18:38

Instrument ID: SMS_D Calib Start Date: 01/08/2019 14:43

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:08

Lab File ID: D31084.D Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Dimethyl phthalate | Ave | 1.322 | 1.301 | | 98400 | 100000 | -1.6 | 20.0 |
| 1,3-Dinitrobenzene | Ave | 0.2344 | 0.2508 | | 107000 | 100000 | 7.0 | 20.0 |
| 2,6-Dinitrotoluene | Ave | 0.3277 | 0.3374 | | 103000 | 100000 | 3.0 | 20.0 |
| Acenaphthylene | Ave | 1.888 | 1.867 | | 98900 | 100000 | -1.1 | 20.0 |
| 3-Nitroaniline | Ave | 0.3847 | 0.3960 | | 103000 | 100000 | 3.0 | 20.0 |
| Acenaphthene | Ave | 1.136 | 1.081 | | 95200 | 100000 | -4.8 | 20.0 |
| 2,4-Dinitrophenol | Lin2 | | 0.2298 | 0.0500 | 215000 | 200000 | 7.6 | 20.0 |
| 4-Nitrophenol | Ave | 0.1959 | 0.2033 | 0.0500 | 208000 | 200000 | 3.8 | 20.0 |
| 2,4-Dinitrotoluene | Ave | 0.4479 | 0.4664 | | 104000 | 100000 | 4.1 | 20.0 |
| Dibenzofuran | Ave | 1.736 | 1.686 | | 97100 | 100000 | -2.9 | 20.0 |
| 2,3,4,6-Tetrachlorophenol | Ave | 0.3616 | 0.3693 | | 102000 | 100000 | 2.1 | 20.0 |
| Diethyl phthalate | Ave | 1.305 | 1.290 | | 98800 | 100000 | -1.2 | 20.0 |
| Hexadecane | Ave | 0.8144 | 0.7786 | | 95600 | 100000 | -4.4 | 20.0 |
| 4-Chlorophenyl phenyl ether | Ave | 0.6729 | 0.6527 | | 97000 | 100000 | -3.0 | 20.0 |
| Fluorene | Ave | 1.379 | 1.328 | | 96300 | 100000 | -3.7 | 20.0 |
| 4-Nitroaniline | Ave | 0.4100 | 0.3952 | | 96400 | 100000 | -3.6 | 20.0 |
| 4,6-Dinitro-2-methylphenol | Lin2 | | 0.1484 | | 228000 | 200000 | 13.9 | 20.0 |
| Diphenylamine | Ave | 1.234 | 1.215 | | 83700 | 85000 | -1.5 | 20.0 |
| N-Nitrosodiphenylamine | Ave | 0.5139 | 0.4899 | | 95300 | 100000 | -4.7 | 20.0 |
| 1,2-Diphenylhydrazine(as Azobenzene) | Ave | 1.577 | 1.573 | | 101000 | 101000 | -0.3 | 20.0 |
| Azobenzene | Ave | 1.595 | 1.590 | | 99700 | 100000 | -0.3 | 20.0 |
| 4-Bromophenyl phenyl ether | Ave | 0.2036 | 0.1910 | | 93800 | 100000 | -6.2 | 20.0 |
| Hexachlorobenzene | Ave | 0.1966 | 0.1933 | | 98300 | 100000 | -1.7 | 20.0 |
| Pentachlorophenol | Lin2 | | 0.1319 | | 214000 | 200000 | 7.0 | 20.0 |
| Phenanthrene | Ave | 1.022 | 0.9814 | | 96000 | 100000 | -4.0 | 20.0 |
| Anthracene | Ave | 1.058 | 1.014 | | 95800 | 100000 | -4.2 | 20.0 |
| Carbazole | Ave | 1.021 | 0.997 | | 97600 | 100000 | -2.4 | 20.0 |
| Di-n-butyl phthalate | Ave | 1.128 | 1.096 | | 97200 | 100000 | -2.8 | 20.0 |
| Fluoranthene | Ave | 1.200 | 1.162 | | 96900 | 100000 | -3.1 | 20.0 |
| Pyrene | Ave | 1.268 | 1.212 | | 95600 | 100000 | -4.4 | 20.0 |
| Butyl benzyl phthalate | Ave | 0.5391 | 0.5398 | | 100000 | 100000 | 0.1 | 20.0 |
| Benzo[a]anthracene | Ave | 1.268 | 1.199 | | 94500 | 100000 | -5.5 | 20.0 |
| Chrysene | Ave | 1.211 | 1.173 | | 96900 | 100000 | -3.1 | 20.0 |
| Bis(2-ethylhexyl) phthalate | Ave | 0.7331 | 0.7341 | | 100000 | 100000 | 0.1 | 20.0 |
| Di-n-octyl phthalate | Ave | 1.267 | 1.291 | | 102000 | 100000 | 1.9 | 20.0 |
| Benzo[b]fluoranthene | Ave | 1.186 | 1.134 | | 95600 | 100000 | -4.4 | 20.0 |
| Benzo[k]fluoranthene | Ave | 1.209 | 1.192 | | 98500 | 100000 | -1.5 | 20.0 |
| Benzo[a]pyrene | Ave | 1.180 | 1.162 | | 98500 | 100000 | -1.5 | 20.0 |
| Indeno[1,2,3-cd]pyrene | Ave | 1.062 | 1.040 | | 97900 | 100000 | -2.1 | 20.0 |
| Dibenz(a,h)anthracene | Ave | 1.042 | 1.039 | | 99700 | 100000 | -0.3 | 20.0 |

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-443607/11  Calibration Date: 01/08/2019 18:38

Instrument ID: SMS_D  Calib Start Date: 01/08/2019 14:43

GC Column: Rxi-5Sil MS  ID: 0.25(mm)  Calib End Date: 01/08/2019 18:08

Lab File ID: D31084.D  Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Benzo[g,h,i]perylene | Ave | 1.105 | 1.053 | | 95300 | 100000 | -4.7 | 20.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31084.D
Lims ID: ICV HSL 1
Client ID:
Sample Type: ICV
Inject. Date: 08-Jan-2019 18:38:30 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV HSL 1
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist:

Method: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 09-Jan-2019 10:20:23 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 09-Jan-2019 10:18:55

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.597 | 4.592 | 0.005 | 96 | 125201 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.831 | 5.832 | -0.001 | 99 | 517009 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.583 | 7.578 | 0.005 | 95 | 304800 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.073 | 9.069 | 0.004 | 98 | 642482 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.133 | 13.129 | 0.004 | 99 | 644059 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.065 | 17.050 | 0.015 | 97 | 649435 | 40.0 | 40.0 | |
| 13 1,4-Dioxane | 88 | 1.958 | 1.953 | 0.005 | 92 | 229531 | 100.0 | 100.8 | |
| 14 N-Nitrosodimethylamine | 74 | 2.198 | 2.194 | 0.004 | 93 | 365511 | 100.0 | 101.2 | |
| 15 Pyridine | 79 | 2.246 | 2.247 | -0.001 | 99 | 1254287 | 200.0 | 216.7 | |
| 23 n-Decane | 57 | 4.436 | 4.432 | 0.004 | 98 | 482059 | 100.0 | 98.0 | |
| 24 Phenol | 94 | 4.249 | 4.245 | 0.004 | 97 | 672235 | 100.0 | 102.3 | |
| 25 Aniline | 93 | 4.281 | 4.277 | 0.004 | 98 | 793783 | 100.0 | 96.6 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.324 | 4.320 | 0.004 | 96 | 465864 | 100.0 | 99.7 | |
| 28 2-Chlorophenol | 128 | 4.404 | 4.400 | 0.004 | 98 | 459272 | 100.0 | 98.3 | |
| 29 1,3-Dichlorobenzene | 146 | 4.549 | 4.544 | 0.005 | 97 | 480902 | 100.0 | 98.4 | |
| 30 1,4-Dichlorobenzene | 146 | 4.613 | 4.608 | 0.005 | 95 | 489124 | 100.0 | 99.6 | |
| 31 Benzyl alcohol | 108 | 4.714 | 4.710 | 0.004 | 93 | 351227 | 100.0 | 101.1 | |
| 32 1,2-Dichlorobenzene | 146 | 4.762 | 4.758 | 0.004 | 96 | 468867 | 100.0 | 99.1 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.842 | 4.833 | 0.009 | 93 | 575915 | 100.0 | 92.1 | |
| 35 2-Methylphenol | 108 | 4.821 | 4.817 | 0.004 | 93 | 487371 | 100.0 | 101.5 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.965 | 4.961 | 0.004 | 79 | 360304 | 100.0 | 99.2 | a |
| 39 Acetophenone | 105 | 4.971 | 4.966 | 0.005 | 93 | 650045 | 100.0 | 98.3 | |
| 40 4-Methylphenol | 108 | 4.965 | 4.961 | 0.004 | 90 | 465426 | 100.0 | 98.1 | |
| 41 3-Methylphenol | 108 | 4.965 | 4.961 | 0.004 | 86 | 465426 | 100.0 | 98.1 | |
| 42 3 & 4 Methylphenol | 108 | 4.965 | 4.961 | 0.004 | 88 | 465426 | 100.0 | 98.1 | |
| 44 Hexachloroethane | 117 | 5.093 | 5.089 | 0.004 | 95 | 180838 | 100.0 | 97.5 | |
| 45 Nitrobenzene | 77 | 5.136 | 5.132 | 0.004 | 86 | 561147 | 100.0 | 99.2 | |
| 47 Isophorone | 82 | 5.371 | 5.361 | 0.010 | 99 | 1037112 | 100.0 | 98.9 | |
| 48 2-Nitrophenol | 139 | 5.451 | 5.447 | 0.004 | 96 | 254017 | 100.0 | 100.9 | |
| 49 2,4-Dimethylphenol | 107 | 5.483 | 5.479 | 0.004 | 96 | 484042 | 100.0 | 96.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 51 Bis(2-chloroethoxy)methane | 93 | 5.564 | 5.559 | 0.005 | 99 | 593147 | 100.0 | 99.1 | |
| 52 Benzoic acid | 105 | 5.622 | 5.607 | 0.015 | 92 | 883366 | 200.0 | 206.4 | |
| 53 2,4-Dichlorophenol | 162 | 5.692 | 5.687 | 0.005 | 95 | 387992 | 100.0 | 98.4 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.777 | 5.773 | 0.004 | 93 | 423731 | 100.0 | 98.2 | |
| 56 Naphthalene | 128 | 5.857 | 5.853 | 0.004 | 97 | 1329869 | 100.0 | 98.0 | |
| 57 4-Chloroaniline | 127 | 5.895 | 5.890 | 0.005 | 96 | 601616 | 100.0 | 98.8 | |
| 58 2,6-Dichlorophenol | 162 | 5.911 | 5.906 | 0.005 | 97 | 387058 | 100.0 | 99.0 | |
| 60 Hexachlorobutadiene | 225 | 5.980 | 5.976 | 0.004 | 96 | 226591 | 100.0 | 99.8 | |
| 64 4-Chloro-3-methylphenol | 107 | 6.370 | 6.371 | -0.001 | 97 | 444169 | 100.0 | 100.9 | |
| 66 2-Methylnaphthalene | 142 | 6.536 | 6.537 | -0.001 | 93 | 882773 | 100.0 | 96.3 | |
| 67 1-Methylnaphthalene | 142 | 6.637 | 6.633 | 0.004 | 94 | 847675 | 100.0 | 99.0 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.707 | 6.702 | 0.005 | 95 | 266596 | 100.0 | 98.9 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.712 | 6.708 | 0.004 | 97 | 406945 | 100.0 | 96.3 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.819 | 6.815 | 0.004 | 91 | 291020 | 100.0 | 99.7 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.856 | 6.857 | -0.001 | 96 | 335401 | 100.0 | 102.2 | |
| 74 1,1'-Biphenyl | 154 | 7.001 | 6.996 | 0.005 | 95 | 1060282 | 100.0 | 95.9 | |
| 75 2-Chloronaphthalene | 162 | 7.027 | 7.023 | 0.004 | 96 | 848711 | 100.0 | 96.4 | |
| 77 2-Nitroaniline | 65 | 7.113 | 7.108 | 0.005 | 82 | 331911 | 100.0 | 104.4 | |
| 80 Dimethyl phthalate | 163 | 7.289 | 7.285 | 0.004 | 98 | 991539 | 100.0 | 98.4 | |
| 81 1,3-Dinitrobenzene | 168 | 7.316 | 7.311 | 0.005 | 87 | 191130 | 100.0 | 107.0 | |
| 82 2,6-Dinitrotoluene | 165 | 7.348 | 7.343 | 0.005 | 96 | 257098 | 100.0 | 103.0 | |
| 83 Acenaphthylene | 152 | 7.444 | 7.440 | 0.004 | 99 | 1422498 | 100.0 | 98.9 | |
| 84 3-Nitroaniline | 138 | 7.524 | 7.520 | 0.004 | 94 | 301784 | 100.0 | 103.0 | |
| 85 Acenaphthene | 153 | 7.615 | 7.611 | 0.004 | 95 | 823862 | 100.0 | 95.2 | |
| 86 2,4-Dinitrophenol | 184 | 7.626 | 7.621 | 0.005 | 83 | 350256 | 200.0 | 215.2 | |
| 88 4-Nitrophenol | 109 | 7.700 | 7.696 | 0.004 | 93 | 309864 | 200.0 | 207.6 | |
| 89 2,4-Dinitrotoluene | 165 | 7.754 | 7.749 | 0.005 | 93 | 355408 | 100.0 | 104.1 | |
| 90 Dibenzofuran | 168 | 7.786 | 7.787 | -0.001 | 98 | 1284767 | 100.0 | 97.1 | |
| 92 Hexadecane | 57 | 8.010 | 8.006 | 0.004 | 97 | 593312 | 100.0 | 95.6 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.914 | 7.910 | 0.004 | 72 | 281366 | 100.0 | 102.1 | |
| 95 Diethyl phthalate | 149 | 7.994 | 7.990 | 0.004 | 98 | 983093 | 100.0 | 98.8 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.117 | 8.113 | 0.004 | 91 | 497332 | 100.0 | 97.0 | |
| 99 Fluorene | 166 | 8.133 | 8.129 | 0.004 | 94 | 1011850 | 100.0 | 96.3 | |
| 100 4-Nitroaniline | 138 | 8.144 | 8.134 | 0.010 | 86 | 301131 | 100.0 | 96.4 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.176 | 8.171 | 0.005 | 88 | 476732 | 200.0 | 227.8 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.235 | 8.230 | 0.005 | 62 | 786897 | 100.0 | 95.3 | |
| 103 Diphenylamine | 169 | 8.235 | 8.230 | 0.005 | 96 | 786897 | 85.0 | 83.7 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.277 | 8.273 | 0.004 | 98 | 1211567 | 101.1 | 100.8 | |
| 106 Azobenzene | 77 | 8.277 | 8.273 | 0.004 | 98 | 1211567 | 100.0 | 99.7 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.609 | 8.604 | 0.005 | 66 | 306832 | 100.0 | 93.8 | |
| 116 Hexachlorobenzene | 284 | 8.699 | 8.695 | 0.004 | 95 | 310514 | 100.0 | 98.3 | |
| 119 Pentachlorophenol | 266 | 8.886 | 8.882 | 0.004 | 94 | 423605 | 200.0 | 214.1 | |
| 123 Phenanthrene | 178 | 9.100 | 9.096 | 0.004 | 98 | 1576286 | 100.0 | 96.0 | |
| 124 Anthracene | 178 | 9.148 | 9.144 | 0.004 | 98 | 1629050 | 100.0 | 95.8 | |
| 125 Carbazole | 167 | 9.298 | 9.293 | 0.005 | 95 | 1602084 | 100.0 | 97.6 | |
| 127 Di-n-butyl phthalate | 149 | 9.634 | 9.630 | 0.004 | 100 | 1760786 | 100.0 | 97.2 | |
| 132 Fluoranthene | 202 | 10.462 | 10.453 | 0.009 | 99 | 1867192 | 100.0 | 96.9 | |
| 134 Pyrene | 202 | 10.793 | 10.789 | 0.004 | 96 | 1951148 | 100.0 | 95.6 | |
| 141 Butyl benzyl phthalate | 149 | 11.905 | 11.900 | 0.005 | 98 | 869078 | 100.0 | 100.1 | |
| 145 Benzo[a]anthracene | 228 | 13.112 | 13.102 | 0.010 | 99 | 1930017 | 100.0 | 94.5 | |
| 146 Chrysene | 228 | 13.197 | 13.193 | 0.004 | 98 | 1888269 | 100.0 | 96.9 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.272 | 13.268 | 0.004 | 97 | 1182037 | 100.0 | 100.1 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 148 Di-n-octyl phthalate | 149 | 15.078 | 15.073 | 0.005 | 99 | 2078137 | 100.0 | 101.9 | |
| 150 Benzo[b]fluoranthene | 252 | 15.975 | 15.966 | 0.009 | 98 | 1840620 | 100.0 | 95.6 | |
| 151 Benzo[k]fluoranthene | 252 | 16.061 | 16.046 | 0.015 | 99 | 1934531 | 100.0 | 98.5 | |
| 153 Benzo[a]pyrene | 252 | 16.910 | 16.895 | 0.015 | 81 | 1886579 | 100.0 | 98.5 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 20.190 | 20.175 | 0.015 | 99 | 1673826 | 100.0 | 97.9 | |
| 157 Dibenz(a,h)anthracene | 278 | 20.281 | 20.271 | 0.010 | 94 | 1687682 | 100.0 | 99.7 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.928 | 20.918 | 0.010 | 97 | 1709062 | 100.0 | 95.3 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

MS-HSLB1B3SSV_00052 Amount Added: 200.00 Units: uL

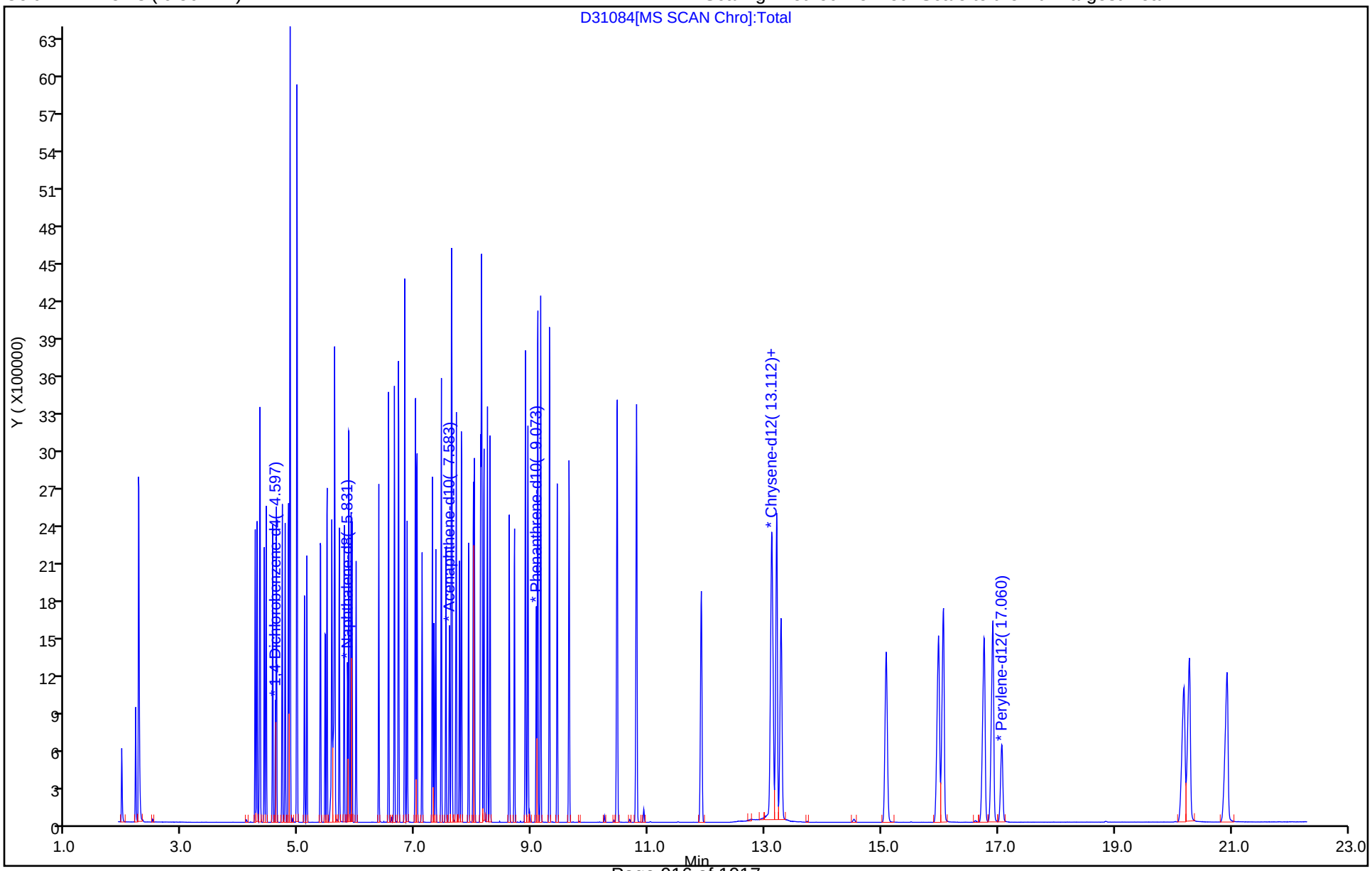
Report Date: 09-Jan-2019 10:20:27 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31084.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 18:38:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | ICV HSL 1 | | | Worklist Smp#: | 11 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 10 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

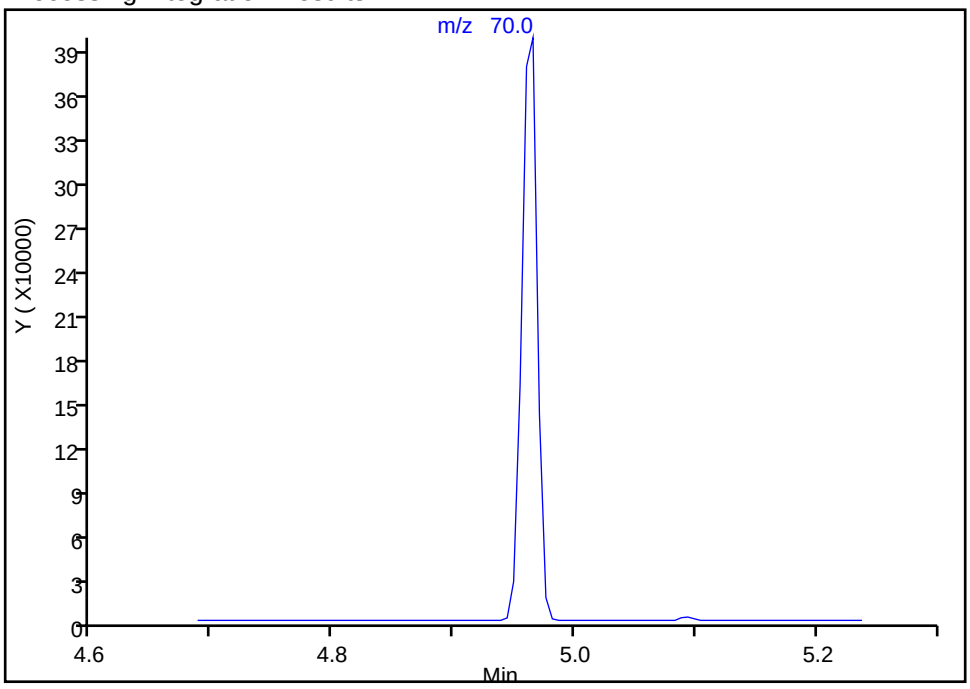
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31084.D
Injection Date: 08-Jan-2019 18:38:30 Instrument ID: SMS_D
Lims ID: ICV HSL 1
Client ID:
Operator ID: KIEKELD ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 38 N-Nitrosodi-n-propylamine, CAS: 621-64-7

Signal: 1

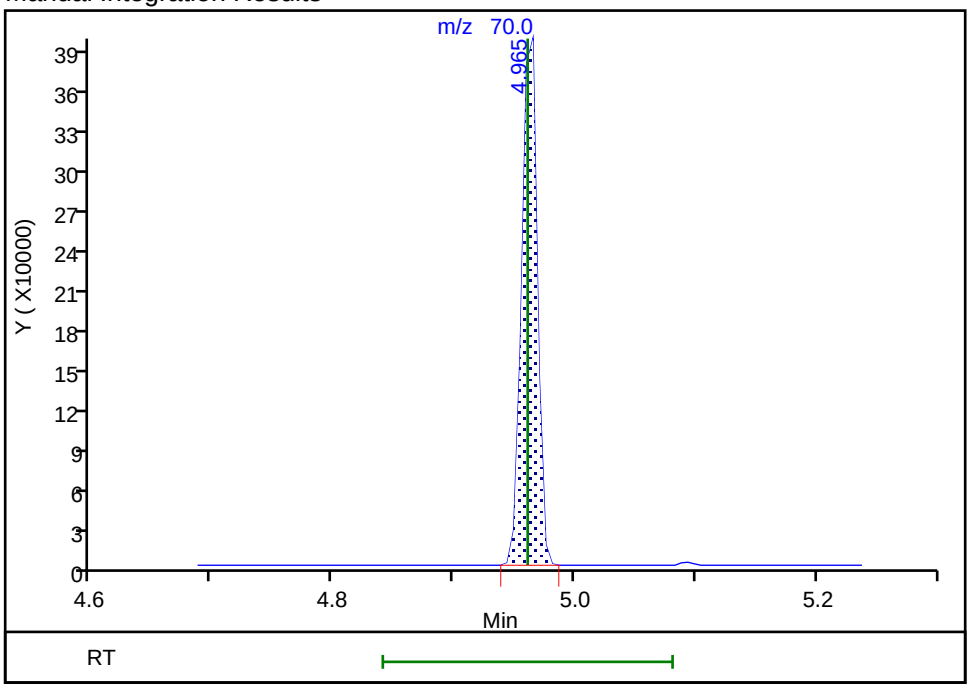
Not Detected
Expected RT: 4.96

Processing Integration Results




Manual Integration Results

RT: 4.97
Area: 360304
Amount: 99.216361
Amount Units: ug/ml




Reviewer: kiekeld, 09-Jan-2019 10:17:08
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-443607/12  Calibration Date: 01/08/2019 19:07

Instrument ID: SMS_D  Calib Start Date: 01/08/2019 14:43

GC Column: Rxi-5Sil MS  ID: 0.25(mm)  Calib End Date: 01/08/2019 18:08

Lab File ID: D31085.D  Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Caprolactam | Ave | 0.1875 | 0.1868 | | 99600 | 100000 | -0.4 | 20.0 |
| Atrazine | Ave | 0.1961 | 0.2018 | | 103000 | 100000 | 2.9 | 20.0 |
| 3,3'-Dichlorobenzidine | Ave | 0.4193 | 0.4737 | | 113000 | 100000 | 13.0 | 20.0 |

Report Date: 09-Jan-2019 10:20:29 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31085.D
Lims ID: ICV HSL 2
Client ID:
Sample Type: ICV
Inject. Date: 08-Jan-2019 19:07:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV HSL 2
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist:

Method: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 09-Jan-2019 10:20:23 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 09-Jan-2019 10:19:10

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.597 | 4.592 | 0.005 | 96 | 110316 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.831 | 5.832 | -0.001 | 99 | 443859 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.577 | 7.578 | -0.001 | 95 | 259621 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 9.068 | 9.069 | -0.001 | 98 | 546221 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 13.123 | 13.129 | -0.006 | 99 | 627075 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 17.054 | 17.050 | 0.004 | 97 | 633770 | 40.0 | 40.0 | |
| 63 Caprolactam | 55 | 6.205 | 6.232 | -0.027 | 83 | 207307 | 100.0 | 99.6 | |
| 112 Atrazine | 200 | 8.753 | 8.754 | -0.001 | 95 | 275532 | 100.0 | 102.9 | |
| 144 3,3'-Dichlorobenzidine | 252 | 13.059 | 13.059 | -0.001 | 75 | 742569 | 100.0 | 113.0 | |

## Reagents:

MS-HSLB2SSV_00047 Amount Added: 200.00 Units: uL

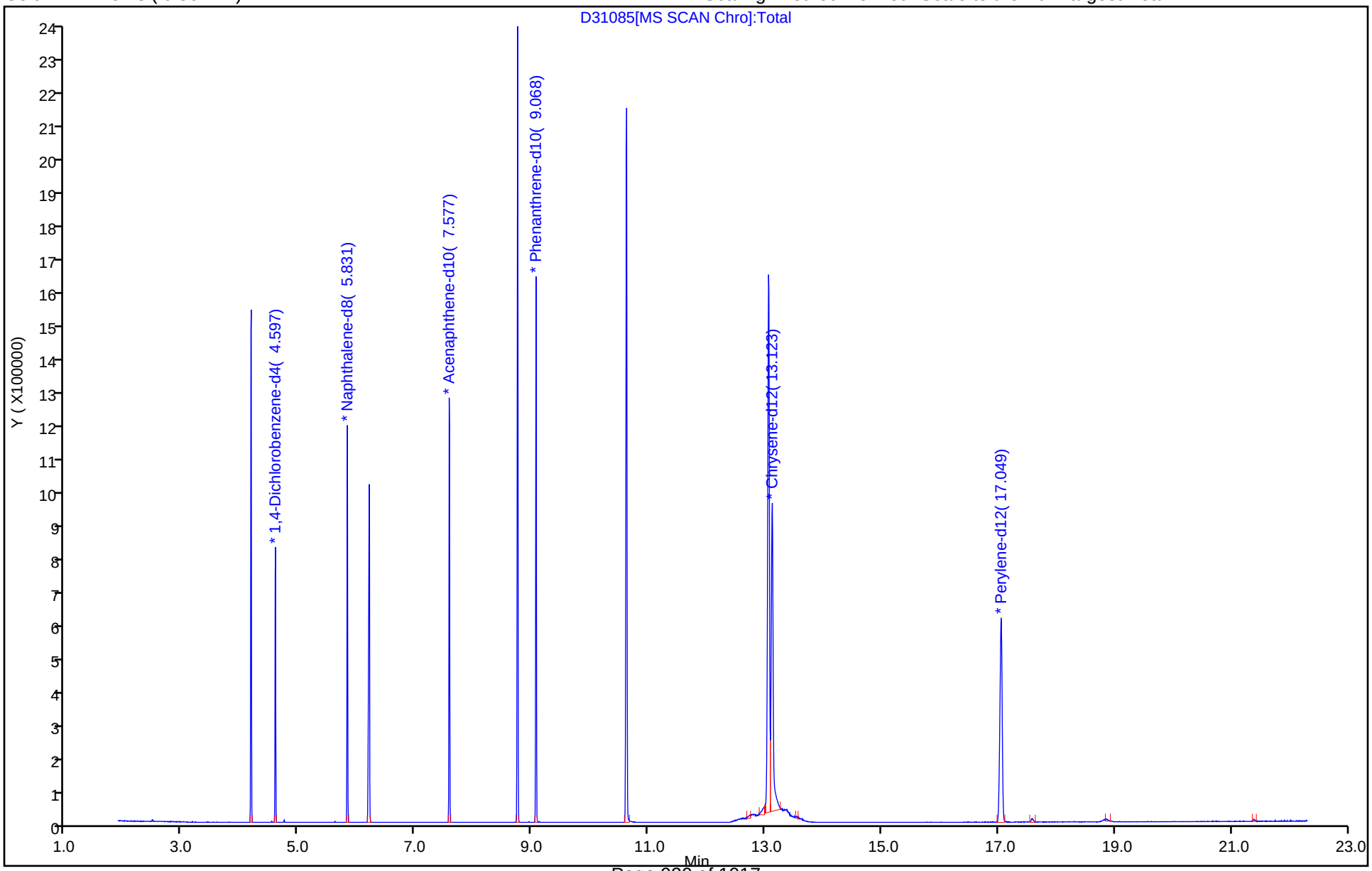
Report Date: 09-Jan-2019 10:20:29 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31085.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 19:07:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | ICV HSL 2 | | | Worklist Smp#: | 12 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 11 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445019/3  Calibration Date: 01/22/2019 13:59

Instrument ID: SMS_D  Calib Start Date: 12/05/2018 18:02

GC Column: Rxi-5Sil MS  ID: 0.25(mm)  Calib End Date: 12/05/2018 20:57

Lab File ID: D31281.D  Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Famphur | Ave | 0.4133 | 0.2997 | | 58000 | 80000 | -27.5* | 20.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31281.D
Lims ID: CCV HSL
Client ID:
Sample Type: CCV
Inject. Date: 22-Jan-2019 13:59:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub8

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:35 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 22-Jan-2019 15:53:21

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.505 | 4.505 | 0.000 | 95 | 152080 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.739 | 5.739 | 0.000 | 99 | 605546 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.481 | 7.481 | 0.000 | 94 | 347168 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 8.966 | 8.966 | 0.000 | 97 | 710100 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 12.908 | 12.908 | 0.000 | 99 | 710819 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 16.755 | 16.755 | 0.000 | 97 | 704464 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.309 | 3.309 | 0.000 | 92 | 460859 | 80.0 | 80.6 | |
| $ 8 Phenol-d5 | 99 | 4.153 | 4.153 | 0.000 | 98 | 594791 | 80.0 | 78.1 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.023 | 5.023 | 0.000 | 87 | 529900 | 80.0 | 81.2 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.797 | 6.797 | 0.000 | 99 | 1008295 | 80.0 | 83.5 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.271 | 8.271 | 0.000 | 94 | 140396 | 80.0 | 83.7 | |
| $ 12 Terphenyl-d14 | 244 | 10.857 | 10.857 | 0.000 | 98 | 1334829 | 80.0 | 81.7 | |
| 13 1,4-Dioxane | 88 | 1.856 | 1.856 | 0.000 | 92 | 215004 | 80.0 | 77.8 | |
| 14 N-Nitrosodimethylamine | 74 | 2.096 | 2.096 | 0.000 | 93 | 335392 | 80.0 | 76.5 | |
| 15 Pyridine | 79 | 2.149 | 2.149 | 0.000 | 98 | 1113198 | 160.0 | 158.3 | |
| 23 n-Decane | 57 | 4.345 | 4.345 | 0.000 | 97 | 461162 | 80.0 | 77.1 | |
| 24 Phenol | 94 | 4.169 | 4.169 | 0.000 | 98 | 637406 | 80.0 | 79.9 | |
| 25 Aniline | 93 | 4.190 | 4.190 | 0.000 | 98 | 773672 | 80.0 | 77.5 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.233 | 4.233 | 0.000 | 93 | 442317 | 80.0 | 78.0 | |
| 28 2-Chlorophenol | 128 | 4.313 | 4.313 | 0.000 | 97 | 457187 | 80.0 | 80.5 | |
| 29 1,3-Dichlorobenzene | 146 | 4.457 | 4.457 | 0.000 | 97 | 481218 | 80.0 | 81.1 | |
| 30 1,4-Dichlorobenzene | 146 | 4.521 | 4.521 | 0.000 | 93 | 489223 | 80.0 | 82.0 | |
| 31 Benzyl alcohol | 108 | 4.623 | 4.623 | 0.000 | 94 | 334872 | 80.0 | 79.3 | |
| 32 1,2-Dichlorobenzene | 146 | 4.671 | 4.671 | 0.000 | 96 | 471288 | 80.0 | 82.0 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.746 | 4.746 | 0.000 | 94 | 580191 | 80.0 | 76.3 | |
| 35 2-Methylphenol | 108 | 4.735 | 4.735 | 0.000 | 95 | 463129 | 80.0 | 79.4 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.874 | 4.874 | 0.000 | 86 | 343388 | 80.0 | 77.8 | |
| 39 Acetophenone | 105 | 4.879 | 4.879 | 0.000 | 90 | 635679 | 80.0 | 79.1 | |
| 40 4-Methylphenol | 108 | 4.879 | 4.879 | 0.000 | 93 | 462897 | 80.0 | 80.3 | |
| 41 3-Methylphenol | 108 | 4.879 | 4.879 | 0.000 | 92 | 462897 | 80.0 | 80.3 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.879 | 4.879 | 0.000 | 73 | 462897 | 80.0 | 80.3 | |
| 44 Hexachloroethane | 117 | 4.997 | 4.997 | 0.000 | 94 | 182076 | 80.0 | 80.8 | |
| 45 Nitrobenzene | 77 | 5.045 | 5.045 | 0.000 | 85 | 532044 | 80.0 | 80.3 | |
| 47 Isophorone | 82 | 5.275 | 5.275 | 0.000 | 99 | 955596 | 80.0 | 77.8 | |
| 48 2-Nitrophenol | 139 | 5.355 | 5.355 | 0.000 | 96 | 246198 | 80.0 | 83.5 | |
| 49 2,4-Dimethylphenol | 107 | 5.392 | 5.392 | 0.000 | 96 | 481491 | 80.0 | 82.2 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.472 | 5.472 | 0.000 | 99 | 567635 | 80.0 | 81.0 | |
| 52 Benzoic acid | 105 | 5.536 | 5.536 | 0.000 | 88 | 786558 | 160.0 | 158.1 | |
| 53 2,4-Dichlorophenol | 162 | 5.600 | 5.600 | 0.000 | 93 | 395732 | 80.0 | 85.7 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.681 | 5.681 | 0.000 | 93 | 421171 | 80.0 | 83.3 | |
| 56 Naphthalene | 128 | 5.761 | 5.761 | 0.000 | 97 | 1323788 | 80.0 | 83.3 | |
| 57 4-Chloroaniline | 127 | 5.798 | 5.798 | 0.000 | 96 | 583776 | 80.0 | 81.8 | |
| 58 2,6-Dichlorophenol | 162 | 5.819 | 5.819 | 0.000 | 97 | 387073 | 80.0 | 84.5 | |
| 60 Hexachlorobutadiene | 225 | 5.884 | 5.884 | 0.000 | 96 | 226387 | 80.0 | 85.1 | |
| 63 Caprolactam | 55 | 6.145 | 6.145 | 0.000 | 88 | 207327 | 80.0 | 73.0 | M |
| 64 4-Chloro-3-methylphenol | 107 | 6.290 | 6.290 | 0.000 | 96 | 419780 | 80.0 | 81.5 | |
| 66 2-Methylnaphthalene | 142 | 6.439 | 6.439 | 0.000 | 93 | 895880 | 80.0 | 83.4 | |
| 67 1-Methylnaphthalene | 142 | 6.541 | 6.541 | 0.000 | 94 | 842577 | 80.0 | 84.0 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.610 | 6.610 | 0.000 | 95 | 269598 | 80.0 | 87.8 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.615 | 6.615 | 0.000 | 97 | 414101 | 80.0 | 83.6 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.722 | 6.722 | 0.000 | 93 | 284893 | 80.0 | 85.7 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.765 | 6.765 | 0.000 | 96 | 321205 | 80.0 | 86.0 | |
| 74 1,1'-Biphenyl | 154 | 6.899 | 6.899 | 0.000 | 95 | 1053308 | 80.0 | 83.7 | |
| 75 2-Chloronaphthalene | 162 | 6.925 | 6.925 | 0.000 | 97 | 827910 | 80.0 | 82.5 | |
| 77 2-Nitroaniline | 65 | 7.016 | 7.016 | 0.000 | 83 | 288341 | 80.0 | 79.6 | |
| 80 Dimethyl phthalate | 163 | 7.192 | 7.192 | 0.000 | 98 | 941120 | 80.0 | 82.0 | |
| 81 1,3-Dinitrobenzene | 168 | 7.219 | 7.219 | 0.000 | 86 | 168679 | 80.0 | 82.9 | |
| 82 2,6-Dinitrotoluene | 165 | 7.251 | 7.251 | 0.000 | 96 | 236770 | 80.0 | 83.2 | |
| 83 Acenaphthylene | 152 | 7.342 | 7.342 | 0.000 | 99 | 1357333 | 80.0 | 82.8 | |
| 84 3-Nitroaniline | 138 | 7.427 | 7.427 | 0.000 | 95 | 270743 | 80.0 | 81.1 | |
| 85 Acenaphthene | 153 | 7.513 | 7.513 | 0.000 | 95 | 810339 | 80.0 | 82.2 | |
| 86 2,4-Dinitrophenol | 184 | 7.529 | 7.529 | 0.000 | 83 | 289490 | 160.0 | 157.8 | |
| 88 4-Nitrophenol | 109 | 7.609 | 7.609 | 0.000 | 93 | 293745 | 160.0 | 172.8 | |
| 89 2,4-Dinitrotoluene | 165 | 7.657 | 7.657 | 0.000 | 94 | 324921 | 80.0 | 83.6 | |
| 90 Dibenzofuran | 168 | 7.684 | 7.684 | 0.000 | 98 | 1222760 | 80.0 | 81.1 | |
| 92 Hexadecane | 57 | 7.914 | 7.914 | 0.000 | 97 | 564406 | 80.0 | 79.8 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.812 | 7.812 | 0.000 | 72 | 268888 | 80.0 | 85.7 | |
| 95 Diethyl phthalate | 149 | 7.892 | 7.892 | 0.000 | 98 | 940426 | 80.0 | 83.0 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.015 | 8.015 | 0.000 | 92 | 474015 | 80.0 | 81.2 | |
| 99 Fluorene | 166 | 8.026 | 8.026 | 0.000 | 94 | 974453 | 80.0 | 81.4 | |
| 100 4-Nitroaniline | 138 | 8.042 | 8.042 | 0.000 | 86 | 287108 | 80.0 | 80.7 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.074 | 8.074 | 0.000 | 90 | 373541 | 160.0 | 162.5 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.133 | 8.133 | 0.000 | 61 | 742439 | 80.0 | 81.4 | |
| 103 Diphenylamine | 169 | 8.133 | 8.133 | 0.000 | 96 | 742439 | 68.0 | 69.3 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.175 | 8.175 | 0.000 | 98 | 1104798 | 80.9 | 80.7 | |
| 106 Azobenzene | 77 | 8.175 | 8.175 | 0.000 | 98 | 1104798 | 80.0 | 79.8 | |
| 112 Atrazine | 200 | 8.656 | 8.656 | 0.000 | 95 | 270548 | 80.0 | 77.7 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.507 | 8.507 | 0.000 | 65 | 297381 | 80.0 | 82.3 | |
| 116 Hexachlorobenzene | 284 | 8.592 | 8.592 | 0.000 | 95 | 288365 | 80.0 | 82.6 | |
| 119 Pentachlorophenol | 266 | 8.784 | 8.784 | 0.000 | 93 | 368800 | 160.0 | 169.0 | |
| 123 Phenanthrene | 178 | 8.993 | 8.993 | 0.000 | 98 | 1463291 | 80.0 | 80.6 | |
| 124 Anthracene | 178 | 9.041 | 9.041 | 0.000 | 98 | 1516181 | 80.0 | 80.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.196 | 9.196 | 0.000 | 95 | 1465094 | 80.0 | 80.8 | |
| 127 Di-n-butyl phthalate | 149 | 9.527 | 9.527 | 0.000 | 100 | 1649203 | 80.0 | 82.4 | |
| 132 Fluoranthene | 202 | 10.312 | 10.312 | 0.000 | 98 | 1736612 | 80.0 | 81.5 | |
| 134 Pyrene | 202 | 10.638 | 10.638 | 0.000 | 97 | 1819194 | 80.0 | 80.8 | |
| 139 Famphur | 218 | 11.600 | 11.600 | 0.000 | 99 | 425993 | 80.0 | 58.0 | |
| 141 Butyl benzyl phthalate | 149 | 11.717 | 11.717 | 0.000 | 98 | 800373 | 80.0 | 83.5 | |
| 144 3,3'-Dichlorobenzidine | 252 | 12.850 | 12.850 | 0.000 | 73 | 599451 | 80.0 | 80.4 | |
| 145 Benzo[a]anthracene | 228 | 12.887 | 12.887 | 0.000 | 99 | 1847066 | 80.0 | 82.0 | |
| 146 Chrysene | 228 | 12.973 | 12.973 | 0.000 | 97 | 1779075 | 80.0 | 82.7 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.053 | 13.053 | 0.000 | 97 | 1102334 | 80.0 | 84.6 | |
| 148 Di-n-octyl phthalate | 149 | 14.821 | 14.821 | 0.000 | 99 | 1899070 | 80.0 | 84.4 | |
| 150 Benzo[b]fluoranthene | 252 | 15.686 | 15.686 | 0.000 | 98 | 1773210 | 80.0 | 84.9 | |
| 151 Benzo[k]fluoranthene | 252 | 15.766 | 15.766 | 0.000 | 99 | 1810273 | 80.0 | 85.0 | |
| 153 Benzo[a]pyrene | 252 | 16.600 | 16.600 | 0.000 | 78 | 1751258 | 80.0 | 84.3 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 19.837 | 19.837 | 0.000 | 98 | 1526449 | 80.0 | 80.9 | |
| 157 Dibenz(a,h)anthracene | 278 | 19.939 | 19.939 | 0.000 | 93 | 1527225 | 80.0 | 83.2 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.574 | 20.574 | 0.000 | 97 | 1606530 | 80.0 | 82.5 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

MS-HSLACCV080_00178 Amount Added: 200.00 Units: uL

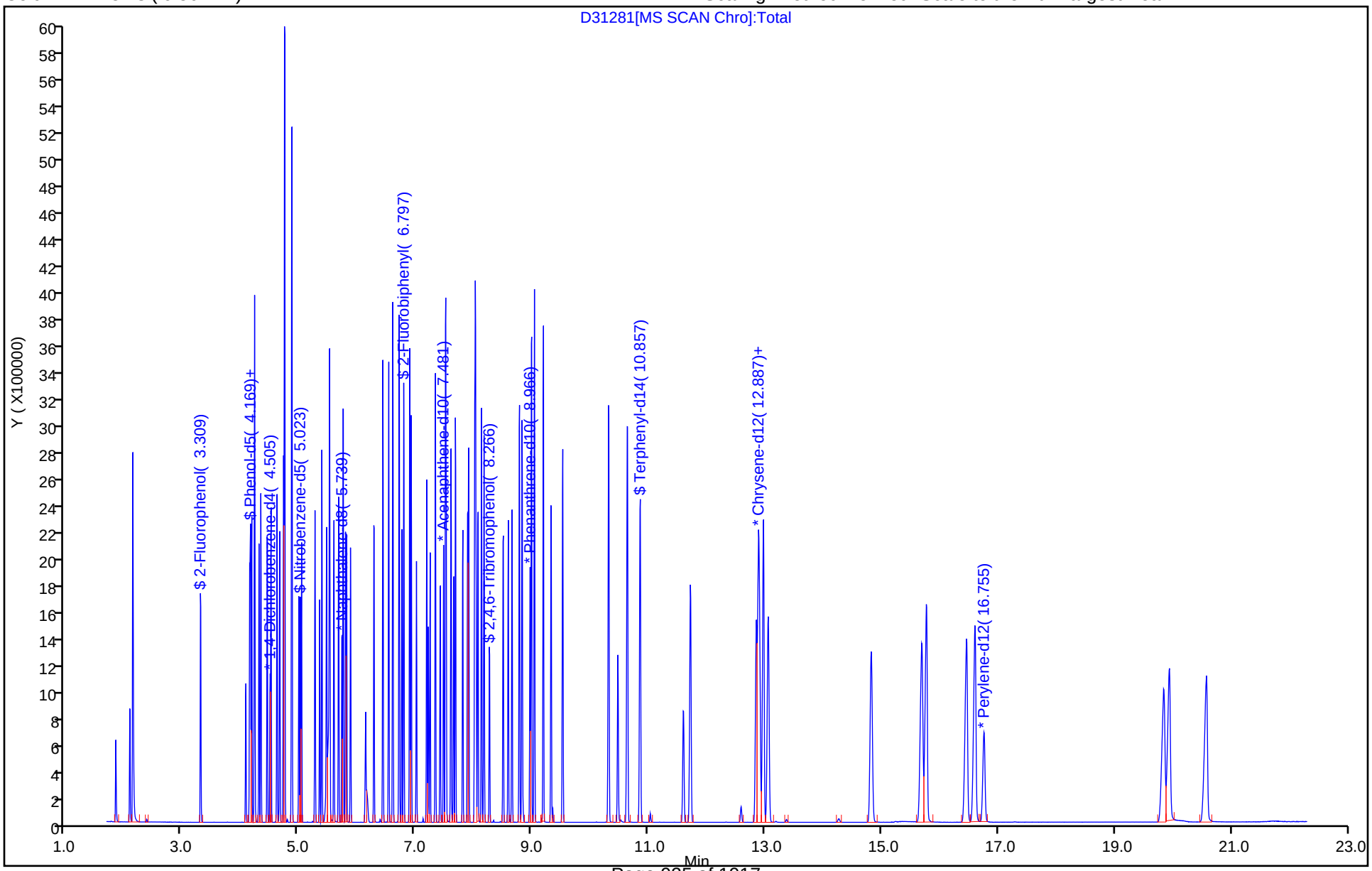
Report Date: 23-Jan-2019 10:44:36 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31281.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 13:59:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | CCV HSL | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445019/3 Calibration Date: 01/22/2019 13:59

Instrument ID: SMS_D Calib Start Date: 01/08/2019 14:43

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:08

Lab File ID: D31281.D Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | Ave | 0.7272 | 0.7069 | | 77800 | 80000 | -2.8 | 20.0 |
| N-Nitrosodimethylamine | Ave | 1.154 | 1.103 | | 76500 | 80000 | -4.4 | 20.0 |
| Pyridine | Ave | 1.849 | 1.830 | | 158000 | 160000 | -1.0 | 20.0 |
| Phenol | Ave | 2.099 | 2.096 | | 79900 | 80000 | -0.2 | 20.0 |
| Aniline | Ave | 2.625 | 2.544 | | 77500 | 80000 | -3.1 | 20.0 |
| Bis(2-chloroethyl)ether | Ave | 1.492 | 1.454 | | 78000 | 80000 | -2.6 | 20.0 |
| 2-Chlorophenol | Ave | 1.493 | 1.503 | | 80500 | 80000 | 0.7 | 20.0 |
| n-Decane | Ave | 1.572 | 1.516 | | 77100 | 80000 | -3.6 | 20.0 |
| 1,3-Dichlorobenzene | Ave | 1.561 | 1.582 | | 81100 | 80000 | 1.4 | 20.0 |
| 1,4-Dichlorobenzene | Ave | 1.569 | 1.608 | | 82000 | 80000 | 2.5 | 20.0 |
| Benzyl alcohol | Ave | 1.110 | 1.101 | | 79300 | 80000 | -0.8 | 20.0 |
| 1,2-Dichlorobenzene | Ave | 1.512 | 1.549 | | 82000 | 80000 | 2.5 | 20.0 |
| 2-Methylphenol | Ave | 1.534 | 1.523 | | 79400 | 80000 | -0.7 | 20.0 |
| N-Nitrosodi-n-propylamine | Ave | 1.160 | 1.129 | 0.0500 | 77800 | 80000 | -2.7 | 20.0 |
| 3 & 4 Methylphenol | Ave | 1.516 | 1.522 | | 80300 | 80000 | 0.4 | 20.0 |
| 3-Methylphenol | Ave | 1.516 | 1.522 | | 80300 | 80000 | 0.4 | 20.0 |
| 4-Methylphenol | Ave | 1.516 | 1.522 | | 80300 | 80000 | 0.4 | 20.0 |
| Acetophenone | Ave | 2.113 | 2.090 | | 79100 | 80000 | -1.1 | 20.0 |
| Hexachloroethane | Ave | 0.5924 | 0.5986 | | 80800 | 80000 | 1.0 | 20.0 |
| Nitrobenzene | Ave | 0.4377 | 0.4393 | | 80300 | 80000 | 0.4 | 20.0 |
| Isophorone | Ave | 0.8116 | 0.7890 | | 77800 | 80000 | -2.8 | 20.0 |
| 2-Nitrophenol | Ave | 0.1948 | 0.2033 | | 83500 | 80000 | 4.3 | 20.0 |
| 2,4-Dimethylphenol | Ave | 0.3870 | 0.3976 | | 82200 | 80000 | 2.7 | 20.0 |
| Bis(2-chloroethoxy)methane | Ave | 0.4630 | 0.4687 | | 81000 | 80000 | 1.2 | 20.0 |
| Benzoic acid | Lin2 | | 0.3247 | | 158000 | 160000 | -1.2 | 20.0 |
| 2,4-Dichlorophenol | Ave | 0.3051 | 0.3268 | | 85700 | 80000 | 7.1 | 20.0 |
| 1,2,4-Trichlorobenzene | Ave | 0.3338 | 0.3478 | | 83300 | 80000 | 4.2 | 20.0 |
| Naphthalene | Ave | 1.050 | 1.093 | | 83300 | 80000 | 4.1 | 20.0 |
| 4-Chloroaniline | Ave | 0.4713 | 0.4820 | | 81800 | 80000 | 2.3 | 20.0 |
| 2,6-Dichlorophenol | Ave | 0.3025 | 0.3196 | | 84500 | 80000 | 5.7 | 20.0 |
| Hexachlorobutadiene | Ave | 0.1757 | 0.1869 | | 85100 | 80000 | 6.4 | 20.0 |
| Caprolactam | Ave | 0.1875 | 0.1712 | | 73000 | 80000 | -8.7 | 20.0 |
| 4-Chloro-3-methylphenol | Ave | 0.3404 | 0.3466 | | 81500 | 80000 | 1.8 | 20.0 |
| 2-Methylnaphthalene | Ave | 0.7093 | 0.7397 | | 83400 | 80000 | 4.3 | 20.0 |
| 1-Methylnaphthalene | Ave | 0.6625 | 0.6957 | | 84000 | 80000 | 5.0 | 20.0 |
| Hexachlorocyclopentadiene | Ave | 0.3536 | 0.3883 | 0.0500 | 87800 | 80000 | 9.8 | 20.0 |
| 1,2,4,5-Tetrachlorobenzene | Ave | 0.3270 | 0.3419 | | 83600 | 80000 | 4.6 | 20.0 |
| 2,4,6-Trichlorophenol | Ave | 0.3830 | 0.4103 | | 85700 | 80000 | 7.1 | 20.0 |
| 2,4,5-Trichlorophenol | Ave | 0.4305 | 0.4626 | | 86000 | 80000 | 7.5 | 20.0 |
| 1,1'-Biphenyl | Ave | 1.450 | 1.517 | | 83700 | 80000 | 4.6 | 20.0 |
| 2-Chloronaphthalene | Ave | 1.156 | 1.192 | | 82500 | 80000 | 3.2 | 20.0 |

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445019/3  Calibration Date: 01/22/2019 13:59

Instrument ID: SMS_D  Calib Start Date: 01/08/2019 14:43

GC Column: Rxi-5Sil MS  ID: 0.25(mm)  Calib End Date: 01/08/2019 18:08

Lab File ID: D31281.D  Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | Ave | 0.4174 | 0.4153 | | 79600 | 80000 | -0.5 | 20.0 |
| Dimethyl phthalate | Ave | 1.322 | 1.355 | | 82000 | 80000 | 2.5 | 20.0 |
| 1,3-Dinitrobenzene | Ave | 0.2344 | 0.2429 | | 82900 | 80000 | 3.7 | 20.0 |
| 2,6-Dinitrotoluene | Ave | 0.3277 | 0.3410 | | 83200 | 80000 | 4.1 | 20.0 |
| Acenaphthylene | Ave | 1.888 | 1.955 | | 82800 | 80000 | 3.5 | 20.0 |
| 3-Nitroaniline | Ave | 0.3847 | 0.3899 | | 81100 | 80000 | 1.4 | 20.0 |
| Acenaphthene | Ave | 1.136 | 1.167 | | 82200 | 80000 | 2.8 | 20.0 |
| 2,4-Dinitrophenol | Lin2 | | 0.2085 | 0.0500 | 158000 | 160000 | -1.4 | 20.0 |
| 4-Nitrophenol | Ave | 0.1959 | 0.2115 | 0.0500 | 173000 | 160000 | 8.0 | 20.0 |
| 2,4-Dinitrotoluene | Ave | 0.4479 | 0.4680 | | 83600 | 80000 | 4.5 | 20.0 |
| Dibenzofuran | Ave | 1.736 | 1.761 | | 81100 | 80000 | 1.4 | 20.0 |
| 2,3,4,6-Tetrachlorophenol | Ave | 0.3616 | 0.3873 | | 85700 | 80000 | 7.1 | 20.0 |
| Diethyl phthalate | Ave | 1.305 | 1.354 | | 83000 | 80000 | 3.8 | 20.0 |
| Hexadecane | Ave | 0.8144 | 0.8129 | | 79800 | 80000 | -0.2 | 20.0 |
| 4-Chlorophenyl phenyl ether | Ave | 0.6729 | 0.6827 | | 81200 | 80000 | 1.5 | 20.0 |
| Fluorene | Ave | 1.379 | 1.403 | | 81400 | 80000 | 1.8 | 20.0 |
| 4-Nitroaniline | Ave | 0.4100 | 0.4135 | | 80700 | 80000 | 0.8 | 20.0 |
| 4,6-Dinitro-2-methylphenol | Lin2 | | 0.1315 | | 162000 | 160000 | 1.6 | 20.0 |
| Diphenylamine | Ave | 1.234 | 1.258 | | 69300 | 68000 | 2.0 | 20.0 |
| N-Nitrosodiphenylamine | Ave | 0.5139 | 0.5228 | | 81400 | 80000 | 1.7 | 20.0 |
| 1,2-Diphenylhydrazine(as Azobenzene) | Ave | 1.577 | 1.574 | | 80700 | 80900 | -0.2 | 20.0 |
| Azobenzene | Ave | 1.595 | 1.591 | | 79800 | 80000 | -0.2 | 20.0 |
| 4-Bromophenyl phenyl ether | Ave | 0.2036 | 0.2094 | | 82300 | 80000 | 2.9 | 20.0 |
| Hexachlorobenzene | Ave | 0.1966 | 0.2031 | | 82600 | 80000 | 3.3 | 20.0 |
| Atrazine | Ave | 0.1961 | 0.1905 | | 77700 | 80000 | -2.9 | 20.0 |
| Pentachlorophenol | Lin2 | | 0.1298 | | 169000 | 160000 | 5.6 | 20.0 |
| Phenanthrene | Ave | 1.022 | 1.030 | | 80600 | 80000 | 0.8 | 20.0 |
| Anthracene | Ave | 1.058 | 1.068 | | 80700 | 80000 | 0.9 | 20.0 |
| Carbazole | Ave | 1.021 | 1.032 | | 80800 | 80000 | 1.0 | 20.0 |
| Di-n-butyl phthalate | Ave | 1.128 | 1.161 | | 82400 | 80000 | 3.0 | 20.0 |
| Fluoranthene | Ave | 1.200 | 1.223 | | 81500 | 80000 | 1.9 | 20.0 |
| Pyrene | Ave | 1.268 | 1.280 | | 80800 | 80000 | 0.9 | 20.0 |
| Butyl benzyl phthalate | Ave | 0.5391 | 0.5630 | | 83500 | 80000 | 4.4 | 20.0 |
| 3,3'-Dichlorobenzidine | Ave | 0.4193 | 0.4217 | | 80400 | 80000 | 0.6 | 20.0 |
| Benzo[a]anthracene | Ave | 1.268 | 1.299 | | 82000 | 80000 | 2.4 | 20.0 |
| Chrysene | Ave | 1.211 | 1.251 | | 82700 | 80000 | 3.4 | 20.0 |
| Bis(2-ethylhexyl) phthalate | Ave | 0.7331 | 0.7754 | | 84600 | 80000 | 5.8 | 20.0 |
| Di-n-octyl phthalate | Ave | 1.267 | 1.336 | | 84400 | 80000 | 5.5 | 20.0 |
| Benzo[b]fluoranthene | Ave | 1.186 | 1.259 | | 84900 | 80000 | 6.2 | 20.0 |
| Benzo[k]fluoranthene | Ave | 1.209 | 1.285 | | 85000 | 80000 | 6.2 | 20.0 |

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445019/3  Calibration Date: 01/22/2019 13:59

Instrument ID: SMS_D  Calib Start Date: 01/08/2019 14:43

GC Column: Rxi-5Sil MS  ID: 0.25(mm)  Calib End Date: 01/08/2019 18:08

Lab File ID: D31281.D  Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Benzo[a]pyrene | Ave | 1.180 | 1.243 | | 84300 | 80000 | 5.4 | 20.0 |
| Indeno[1,2,3-cd]pyrene | Ave | 1.062 | 1.074 | | 80900 | 80000 | 1.1 | 20.0 |
| Dibenz(a,h)anthracene | Ave | 1.042 | 1.084 | | 83200 | 80000 | 4.0 | 20.0 |
| Benzo[g,h,i]perylene | Ave | 1.105 | 1.140 | | 82500 | 80000 | 3.2 | 20.0 |
| 2-Fluorophenol (Surr) | Ave | 1.503 | 1.515 | | 80600 | 80000 | 0.8 | 20.0 |
| Phenol-d5 (Surr) | Ave | 2.002 | 1.956 | | 78100 | 80000 | -2.3 | 20.0 |
| Nitrobenzene-d5 (Surr) | Ave | 0.4310 | 0.4375 | | 81200 | 80000 | 1.5 | 20.0 |
| 2-Fluorobiphenyl | Ave | 1.391 | 1.452 | | 83500 | 80000 | 4.4 | 20.0 |
| 2,4,6-Tribromophenol (Surr) | Ave | 0.1932 | 0.2022 | | 83700 | 80000 | 4.6 | 20.0 |
| Terphenyl-d14 (Surr) | Ave | 0.9194 | 0.9389 | | 81700 | 80000 | 2.1 | 20.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31281.D
Lims ID: CCV HSL
Client ID:
Sample Type: CCV
Inject. Date: 22-Jan-2019 13:59:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub8

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:35 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 22-Jan-2019 15:53:21

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.505 | 4.505 | 0.000 | 95 | 152080 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.739 | 5.739 | 0.000 | 99 | 605546 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.481 | 7.481 | 0.000 | 94 | 347168 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 8.966 | 8.966 | 0.000 | 97 | 710100 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 12.908 | 12.908 | 0.000 | 99 | 710819 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 16.755 | 16.755 | 0.000 | 97 | 704464 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.309 | 3.309 | 0.000 | 92 | 460859 | 80.0 | 80.6 | |
| $ 8 Phenol-d5 | 99 | 4.153 | 4.153 | 0.000 | 98 | 594791 | 80.0 | 78.1 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.023 | 5.023 | 0.000 | 87 | 529900 | 80.0 | 81.2 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.797 | 6.797 | 0.000 | 99 | 1008295 | 80.0 | 83.5 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.271 | 8.271 | 0.000 | 94 | 140396 | 80.0 | 83.7 | |
| $ 12 Terphenyl-d14 | 244 | 10.857 | 10.857 | 0.000 | 98 | 1334829 | 80.0 | 81.7 | |
| 13 1,4-Dioxane | 88 | 1.856 | 1.856 | 0.000 | 92 | 215004 | 80.0 | 77.8 | |
| 14 N-Nitrosodimethylamine | 74 | 2.096 | 2.096 | 0.000 | 93 | 335392 | 80.0 | 76.5 | |
| 15 Pyridine | 79 | 2.149 | 2.149 | 0.000 | 98 | 1113198 | 160.0 | 158.3 | |
| 23 n-Decane | 57 | 4.345 | 4.345 | 0.000 | 97 | 461162 | 80.0 | 77.1 | |
| 24 Phenol | 94 | 4.169 | 4.169 | 0.000 | 98 | 637406 | 80.0 | 79.9 | |
| 25 Aniline | 93 | 4.190 | 4.190 | 0.000 | 98 | 773672 | 80.0 | 77.5 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.233 | 4.233 | 0.000 | 93 | 442317 | 80.0 | 78.0 | |
| 28 2-Chlorophenol | 128 | 4.313 | 4.313 | 0.000 | 97 | 457187 | 80.0 | 80.5 | |
| 29 1,3-Dichlorobenzene | 146 | 4.457 | 4.457 | 0.000 | 97 | 481218 | 80.0 | 81.1 | |
| 30 1,4-Dichlorobenzene | 146 | 4.521 | 4.521 | 0.000 | 93 | 489223 | 80.0 | 82.0 | |
| 31 Benzyl alcohol | 108 | 4.623 | 4.623 | 0.000 | 94 | 334872 | 80.0 | 79.3 | |
| 32 1,2-Dichlorobenzene | 146 | 4.671 | 4.671 | 0.000 | 96 | 471288 | 80.0 | 82.0 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.746 | 4.746 | 0.000 | 94 | 580191 | 80.0 | 76.3 | |
| 35 2-Methylphenol | 108 | 4.735 | 4.735 | 0.000 | 95 | 463129 | 80.0 | 79.4 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.874 | 4.874 | 0.000 | 86 | 343388 | 80.0 | 77.8 | |
| 39 Acetophenone | 105 | 4.879 | 4.879 | 0.000 | 90 | 635679 | 80.0 | 79.1 | |
| 40 4-Methylphenol | 108 | 4.879 | 4.879 | 0.000 | 93 | 462897 | 80.0 | 80.3 | |
| 41 3-Methylphenol | 108 | 4.879 | 4.879 | 0.000 | 92 | 462897 | 80.0 | 80.3 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.879 | 4.879 | 0.000 | 73 | 462897 | 80.0 | 80.3 | |
| 44 Hexachloroethane | 117 | 4.997 | 4.997 | 0.000 | 94 | 182076 | 80.0 | 80.8 | |
| 45 Nitrobenzene | 77 | 5.045 | 5.045 | 0.000 | 85 | 532044 | 80.0 | 80.3 | |
| 47 Isophorone | 82 | 5.275 | 5.275 | 0.000 | 99 | 955596 | 80.0 | 77.8 | |
| 48 2-Nitrophenol | 139 | 5.355 | 5.355 | 0.000 | 96 | 246198 | 80.0 | 83.5 | |
| 49 2,4-Dimethylphenol | 107 | 5.392 | 5.392 | 0.000 | 96 | 481491 | 80.0 | 82.2 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.472 | 5.472 | 0.000 | 99 | 567635 | 80.0 | 81.0 | |
| 52 Benzoic acid | 105 | 5.536 | 5.536 | 0.000 | 88 | 786558 | 160.0 | 158.1 | |
| 53 2,4-Dichlorophenol | 162 | 5.600 | 5.600 | 0.000 | 93 | 395732 | 80.0 | 85.7 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.681 | 5.681 | 0.000 | 93 | 421171 | 80.0 | 83.3 | |
| 56 Naphthalene | 128 | 5.761 | 5.761 | 0.000 | 97 | 1323788 | 80.0 | 83.3 | |
| 57 4-Chloroaniline | 127 | 5.798 | 5.798 | 0.000 | 96 | 583776 | 80.0 | 81.8 | |
| 58 2,6-Dichlorophenol | 162 | 5.819 | 5.819 | 0.000 | 97 | 387073 | 80.0 | 84.5 | |
| 60 Hexachlorobutadiene | 225 | 5.884 | 5.884 | 0.000 | 96 | 226387 | 80.0 | 85.1 | |
| 63 Caprolactam | 55 | 6.145 | 6.145 | 0.000 | 88 | 207327 | 80.0 | 73.0 | M |
| 64 4-Chloro-3-methylphenol | 107 | 6.290 | 6.290 | 0.000 | 96 | 419780 | 80.0 | 81.5 | |
| 66 2-Methylnaphthalene | 142 | 6.439 | 6.439 | 0.000 | 93 | 895880 | 80.0 | 83.4 | |
| 67 1-Methylnaphthalene | 142 | 6.541 | 6.541 | 0.000 | 94 | 842577 | 80.0 | 84.0 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.610 | 6.610 | 0.000 | 95 | 269598 | 80.0 | 87.8 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.615 | 6.615 | 0.000 | 97 | 414101 | 80.0 | 83.6 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.722 | 6.722 | 0.000 | 93 | 284893 | 80.0 | 85.7 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.765 | 6.765 | 0.000 | 96 | 321205 | 80.0 | 86.0 | |
| 74 1,1'-Biphenyl | 154 | 6.899 | 6.899 | 0.000 | 95 | 1053308 | 80.0 | 83.7 | |
| 75 2-Chloronaphthalene | 162 | 6.925 | 6.925 | 0.000 | 97 | 827910 | 80.0 | 82.5 | |
| 77 2-Nitroaniline | 65 | 7.016 | 7.016 | 0.000 | 83 | 288341 | 80.0 | 79.6 | |
| 80 Dimethyl phthalate | 163 | 7.192 | 7.192 | 0.000 | 98 | 941120 | 80.0 | 82.0 | |
| 81 1,3-Dinitrobenzene | 168 | 7.219 | 7.219 | 0.000 | 86 | 168679 | 80.0 | 82.9 | |
| 82 2,6-Dinitrotoluene | 165 | 7.251 | 7.251 | 0.000 | 96 | 236770 | 80.0 | 83.2 | |
| 83 Acenaphthylene | 152 | 7.342 | 7.342 | 0.000 | 99 | 1357333 | 80.0 | 82.8 | |
| 84 3-Nitroaniline | 138 | 7.427 | 7.427 | 0.000 | 95 | 270743 | 80.0 | 81.1 | |
| 85 Acenaphthene | 153 | 7.513 | 7.513 | 0.000 | 95 | 810339 | 80.0 | 82.2 | |
| 86 2,4-Dinitrophenol | 184 | 7.529 | 7.529 | 0.000 | 83 | 289490 | 160.0 | 157.8 | |
| 88 4-Nitrophenol | 109 | 7.609 | 7.609 | 0.000 | 93 | 293745 | 160.0 | 172.8 | |
| 89 2,4-Dinitrotoluene | 165 | 7.657 | 7.657 | 0.000 | 94 | 324921 | 80.0 | 83.6 | |
| 90 Dibenzofuran | 168 | 7.684 | 7.684 | 0.000 | 98 | 1222760 | 80.0 | 81.1 | |
| 92 Hexadecane | 57 | 7.914 | 7.914 | 0.000 | 97 | 564406 | 80.0 | 79.8 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.812 | 7.812 | 0.000 | 72 | 268888 | 80.0 | 85.7 | |
| 95 Diethyl phthalate | 149 | 7.892 | 7.892 | 0.000 | 98 | 940426 | 80.0 | 83.0 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.015 | 8.015 | 0.000 | 92 | 474015 | 80.0 | 81.2 | |
| 99 Fluorene | 166 | 8.026 | 8.026 | 0.000 | 94 | 974453 | 80.0 | 81.4 | |
| 100 4-Nitroaniline | 138 | 8.042 | 8.042 | 0.000 | 86 | 287108 | 80.0 | 80.7 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.074 | 8.074 | 0.000 | 90 | 373541 | 160.0 | 162.5 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.133 | 8.133 | 0.000 | 61 | 742439 | 80.0 | 81.4 | |
| 103 Diphenylamine | 169 | 8.133 | 8.133 | 0.000 | 96 | 742439 | 68.0 | 69.3 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.175 | 8.175 | 0.000 | 98 | 1104798 | 80.9 | 80.7 | |
| 106 Azobenzene | 77 | 8.175 | 8.175 | 0.000 | 98 | 1104798 | 80.0 | 79.8 | |
| 112 Atrazine | 200 | 8.656 | 8.656 | 0.000 | 95 | 270548 | 80.0 | 77.7 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.507 | 8.507 | 0.000 | 65 | 297381 | 80.0 | 82.3 | |
| 116 Hexachlorobenzene | 284 | 8.592 | 8.592 | 0.000 | 95 | 288365 | 80.0 | 82.6 | |
| 119 Pentachlorophenol | 266 | 8.784 | 8.784 | 0.000 | 93 | 368800 | 160.0 | 169.0 | |
| 123 Phenanthrene | 178 | 8.993 | 8.993 | 0.000 | 98 | 1463291 | 80.0 | 80.6 | |
| 124 Anthracene | 178 | 9.041 | 9.041 | 0.000 | 98 | 1516181 | 80.0 | 80.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.196 | 9.196 | 0.000 | 95 | 1465094 | 80.0 | 80.8 | |
| 127 Di-n-butyl phthalate | 149 | 9.527 | 9.527 | 0.000 | 100 | 1649203 | 80.0 | 82.4 | |
| 132 Fluoranthene | 202 | 10.312 | 10.312 | 0.000 | 98 | 1736612 | 80.0 | 81.5 | |
| 134 Pyrene | 202 | 10.638 | 10.638 | 0.000 | 97 | 1819194 | 80.0 | 80.8 | |
| 139 Famphur | 218 | 11.600 | 11.600 | 0.000 | 99 | 425993 | 80.0 | 58.0 | |
| 141 Butyl benzyl phthalate | 149 | 11.717 | 11.717 | 0.000 | 98 | 800373 | 80.0 | 83.5 | |
| 144 3,3'-Dichlorobenzidine | 252 | 12.850 | 12.850 | 0.000 | 73 | 599451 | 80.0 | 80.4 | |
| 145 Benzo[a]anthracene | 228 | 12.887 | 12.887 | 0.000 | 99 | 1847066 | 80.0 | 82.0 | |
| 146 Chrysene | 228 | 12.973 | 12.973 | 0.000 | 97 | 1779075 | 80.0 | 82.7 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.053 | 13.053 | 0.000 | 97 | 1102334 | 80.0 | 84.6 | |
| 148 Di-n-octyl phthalate | 149 | 14.821 | 14.821 | 0.000 | 99 | 1899070 | 80.0 | 84.4 | |
| 150 Benzo[b]fluoranthene | 252 | 15.686 | 15.686 | 0.000 | 98 | 1773210 | 80.0 | 84.9 | |
| 151 Benzo[k]fluoranthene | 252 | 15.766 | 15.766 | 0.000 | 99 | 1810273 | 80.0 | 85.0 | |
| 153 Benzo[a]pyrene | 252 | 16.600 | 16.600 | 0.000 | 78 | 1751258 | 80.0 | 84.3 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 19.837 | 19.837 | 0.000 | 98 | 1526449 | 80.0 | 80.9 | |
| 157 Dibenz(a,h)anthracene | 278 | 19.939 | 19.939 | 0.000 | 93 | 1527225 | 80.0 | 83.2 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.574 | 20.574 | 0.000 | 97 | 1606530 | 80.0 | 82.5 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

MS-HSLACCV080_00178 Amount Added: 200.00 Units: uL

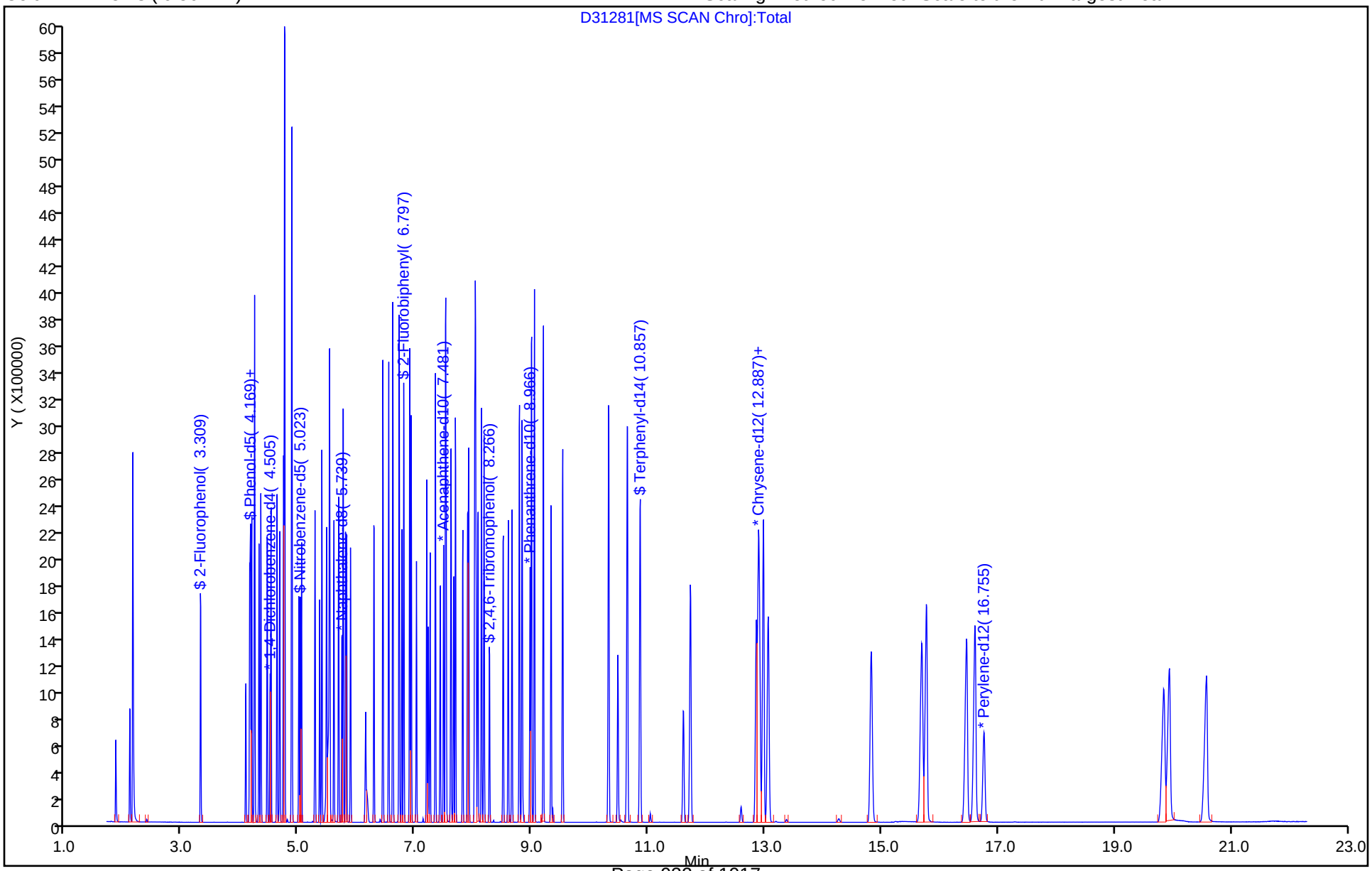
Report Date: 23-Jan-2019 10:44:36 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31281.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 13:59:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | CCV HSL | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

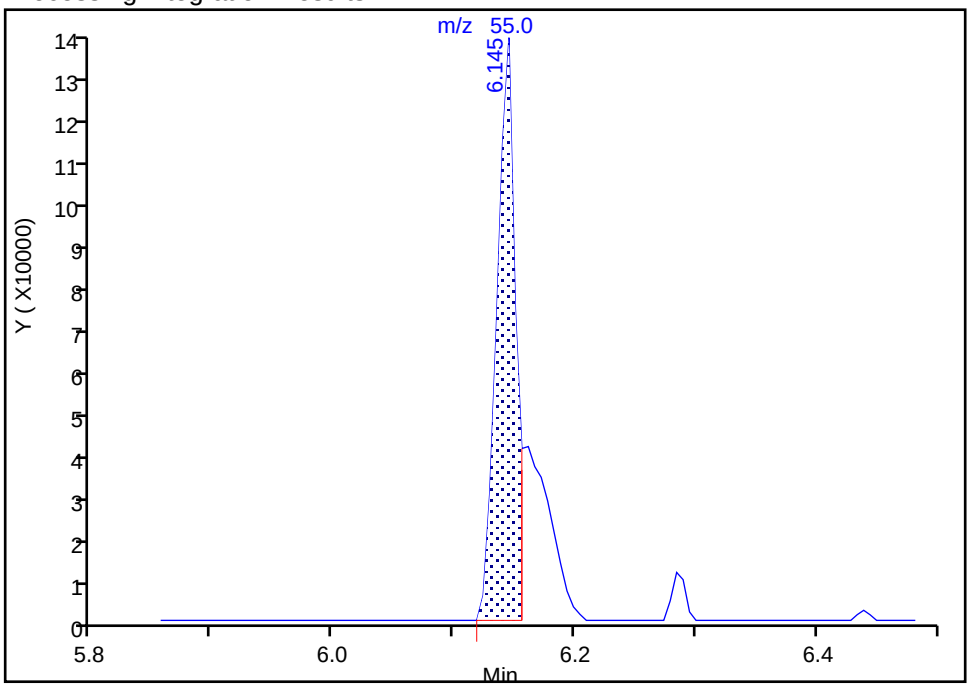
Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31281.D
Injection Date: 22-Jan-2019 13:59:30 Instrument ID: SMS_D
Lims ID: CCV HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 63 Caprolactam, CAS: 105-60-2

Signal: 1

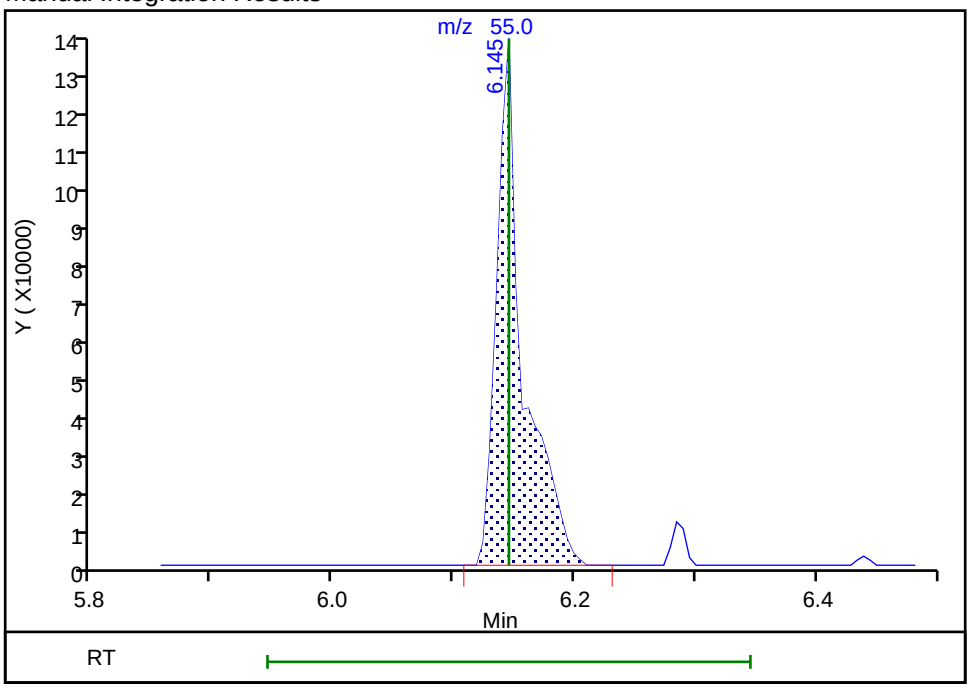
Processing Integration Results

RT: 6.15
Area: 148436
Amount: 52.281928
Amount Units: ug/ml




Manual Integration Results

RT: 6.15
Area: 207327
Amount: 73.024437
Amount Units: ug/ml




Reviewer: kiekeld, 22-Jan-2019 14:27:53
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445019/4  Calibration Date: 01/22/2019 14:29

Instrument ID: SMS_D  Calib Start Date: 12/05/2018 21:46

GC Column: Rxi-5Sil MS  ID: 0.25(mm)  Calib End Date: 12/06/2018 00:16

Lab File ID: D31282.D  Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Benzidine | Ave | 0.7923 | 0.8648 | | 87300 | 80000 | 9.2 | 20.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31282.D
Lims ID: CCV AFC
Client ID:
Sample Type: CCV
Inject. Date: 22-Jan-2019 14:29:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV AFC
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub10

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:37 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 22-Jan-2019 15:53:31

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.504 | 4.504 | 0.000 | 96 | 130916 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.738 | 5.738 | 0.000 | 99 | 524852 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.480 | 7.480 | 0.000 | 95 | 301972 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 8.965 | 8.965 | 0.000 | 97 | 602486 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 12.897 | 12.897 | 0.000 | 99 | 612471 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 16.743 | 16.743 | 0.000 | 98 | 598458 | 40.0 | 40.0 | |
| 133 Benzidine | 184 | 10.477 | 10.477 | 0.000 | 100 | 1059349 | 80.0 | 87.3 | |

## Reagents:

MS-AFCACCV080_00080 Amount Added: 200.00 Units: uL

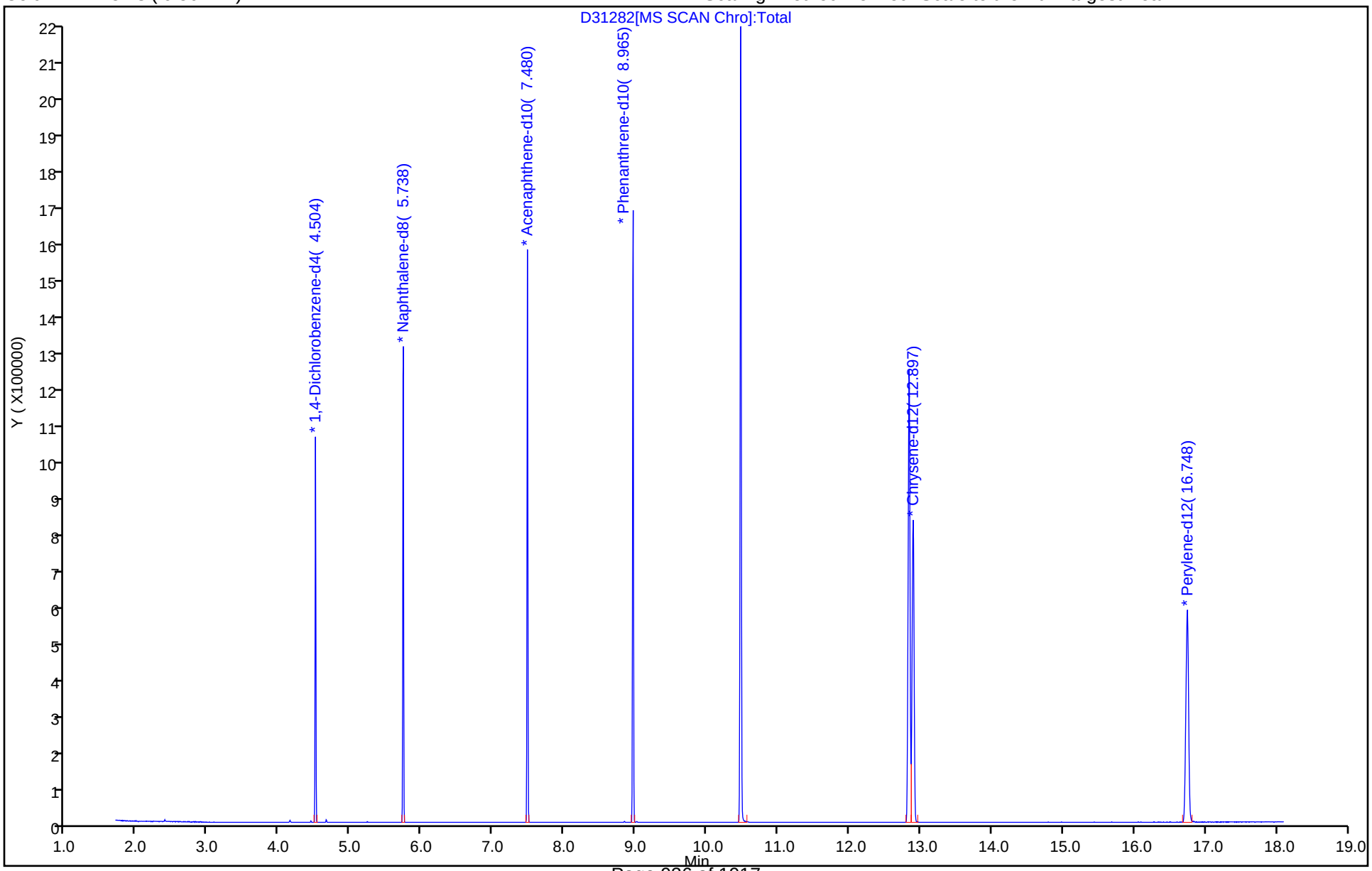
Report Date: 23-Jan-2019 10:44:38 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31282.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 14:29:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | CCV AFC | | | Worklist Smp#: | 4 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 3 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445019/5  Calibration Date: 01/22/2019 14:54

Instrument ID: SMS_D  Calib Start Date: 12/05/2018 18:02

GC Column: Rxi-5Sil MS  ID: 0.25(mm)  Calib End Date: 12/05/2018 20:57

Lab File ID: D31283.D  Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Famphur | Ave | 0.4133 | 0.4432 | | 85800 | 80000 | 7.2 | 20.0 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31283.D
Lims ID: CCV FAM
Client ID:
Sample Type: CCV
Inject. Date: 22-Jan-2019 14:54:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV FAM
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub15

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:39 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 22-Jan-2019 15:53:44

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.503 | 4.503 | 0.000 | 97 | 156088 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.737 | 5.737 | 0.000 | 99 | 623656 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.484 | 7.484 | 0.000 | 94 | 358059 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 8.964 | 8.964 | 0.000 | 97 | 739697 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 12.901 | 12.901 | 0.000 | 99 | 759793 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 16.752 | 16.752 | 0.000 | 97 | 777964 | 40.0 | 40.0 | |
| 139 Famphur | 218 | 11.603 | 11.603 | 0.000 | 99 | 673471 | 80.0 | 85.8 | |

## Reagents:

MS-FAM CCV_00002 Amount Added: 200.00 Units: uL

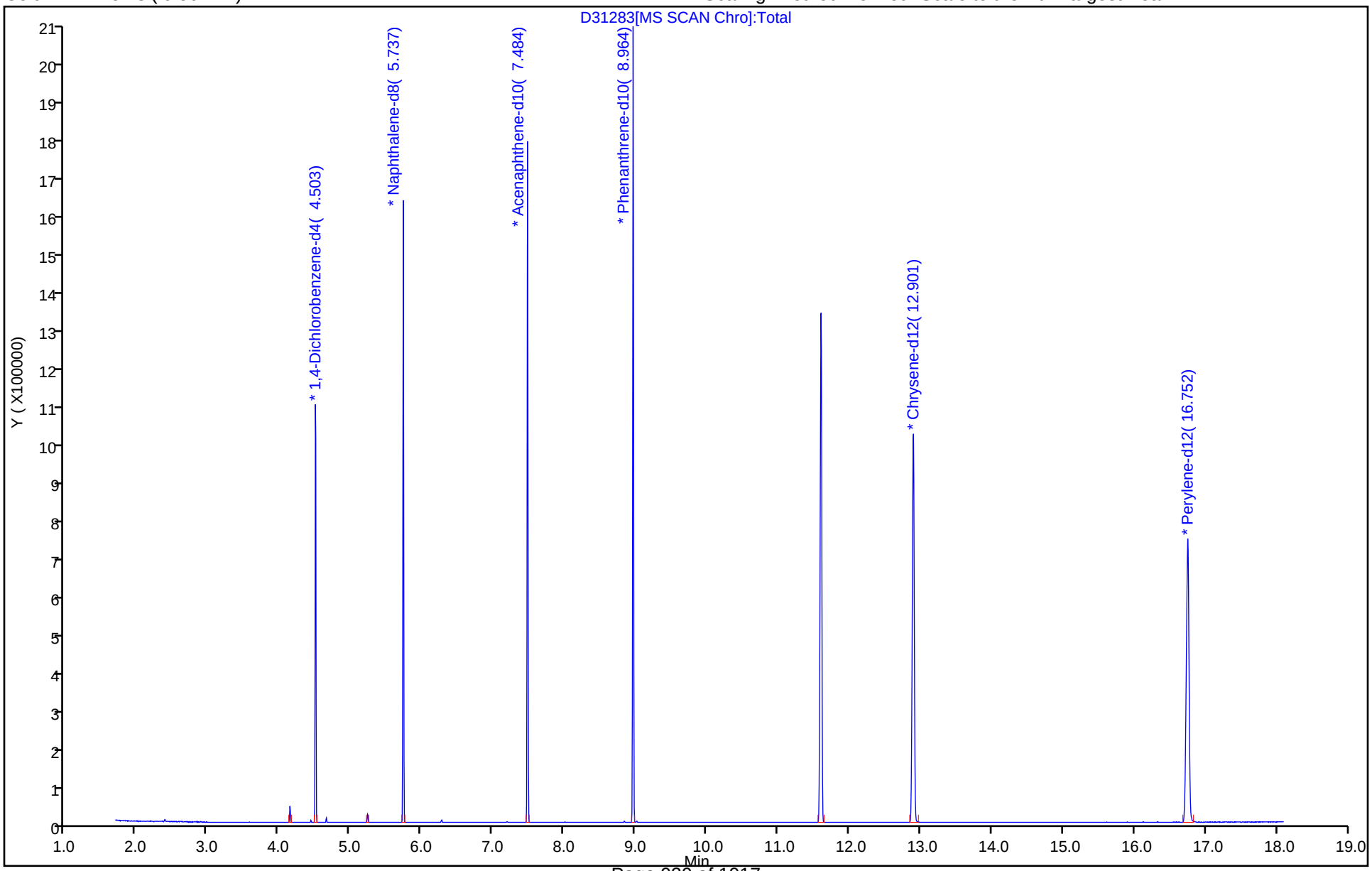
Report Date: 23-Jan-2019 10:44:40 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31283.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 14:54:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | CCV FAM | | | Worklist Smp#: | 5 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 4 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-445019/6  Calibration Date: 01/22/2019 15:47

Instrument ID: SMS_D  Calib Start Date: 12/06/2018 08:53

GC Column: Rxi-5Sil MS  ID: 0.25(mm)  Calib End Date: 12/06/2018 11:21

Lab File ID: D31285.D  Conc. Units: ug/L

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Benzaldehyde | Ave | 1.222 | 1.251 | | 81900 | 80000 | 2.3 | 50.0 |

Report Date: 23-Jan-2019 10:44:41 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31285.D
Lims ID: CCV BZHD
Client ID:
Sample Type: CCV
Inject. Date: 22-Jan-2019 15:47:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV BZHD
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMS_D_8270D*sub6

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:40 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 22-Jan-2019 16:07:04

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.508 | 4.508 | 0.000 | 96 | 140784 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.737 | 5.737 | 0.000 | 99 | 555420 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.483 | 7.483 | 0.000 | 94 | 328488 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 8.963 | 8.963 | 0.000 | 98 | 666770 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 12.900 | 12.900 | 0.000 | 99 | 676799 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 16.757 | 16.757 | 0.000 | 97 | 696625 | 40.0 | 40.0 | |
| 22 Benzaldehyde | 106 | 4.091 | 4.091 | 0.000 | 98 | 352248 | 80.0 | 81.9 | |

## Reagents:

MS-BZHDA-CCV_00052 Amount Added: 200.00 Units: uL

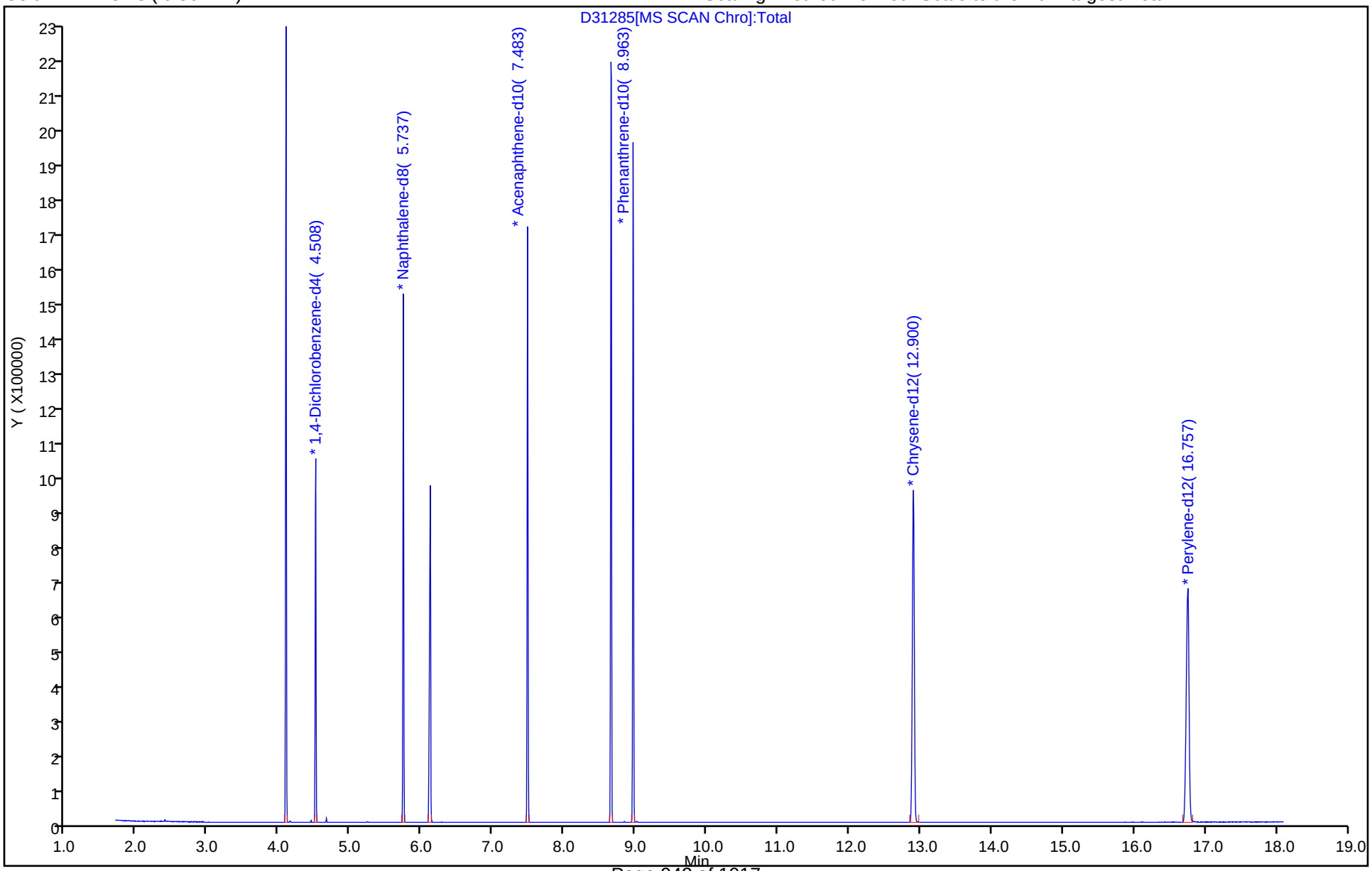
Report Date: 23-Jan-2019 10:44:41 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31285.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 15:47:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | CCV BZHD | | | Worklist Smp#: | 6 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 6 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 05-Dec-2018 12:48:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:12:53 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 11:45:41

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 20 Pentachlorophenol_T | 266 | 3.795 | 3.795 | 0.000 | 93 | 102516 | NR | NR | |
| 33 Benzidine_T | 184 | 4.878 | 4.878 | 0.000 | 100 | 747950 | NR | NR | |
| 162 DFTPP | | | | | | | | | |
| 163 4,4'-DDE | 246 | 5.014 | 5.014 | 0.000 | 1 | 505 | NR | NR | a |
| 164 4,4'-DDD | 235 | 5.307 | 5.307 | 0.000 | 94 | 4058 | NR | NR | |
| 165 4,4'-DDT | 235 | 5.528 | 5.528 | 0.000 | 99 | 299727 | NR | NR | |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

## Reagents:

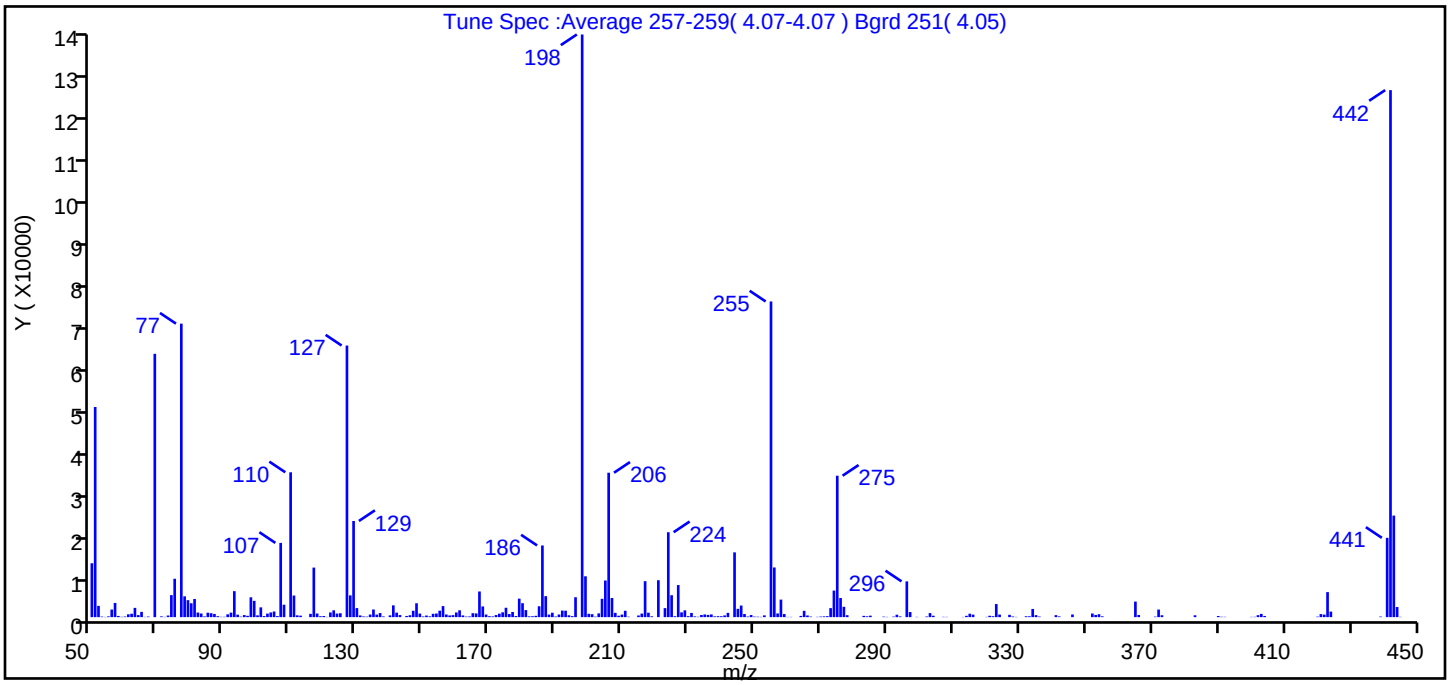
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D
Injection Date: 05-Dec-2018 12:48:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Tune Method: DFTPP Method 8270

162 DFTPP




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 198 | Base peak, 100% relative abundance | 100.0 |
| 51 | 30-60% of mass 198 | 36.1 |
| 68 | <2% of mass 69 | 0.0 (0.0) |
| 69 | Present | 45.2 |
| 70 | <2% of mass 69 | 0.0 (0.0) |
| 127 | 40-60% of mass 198 | 46.6 |
| 197 | <1% of mass 198 | 0.0 |
| 199 | 5-9% of mass 198 | 7.0 |
| 275 | 10-30% of mass 198 | 24.3 |
| 365 | >1% of mass 198 | 2.7 |
| 441 | Present but less than mass 443 | 13.6 (78.1) |
| 442 | >40% of mass 198 | 90.5 |
| 443 | 17-23% of mass 442 | 17.4 (19.3) |

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 05-Dec-2018 12:48:30
Spectrum: Tune Spec :Average 257-259( 4.07-4.07 ) Bgrd 251( 4.05)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 275

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 50.00 | 12117 | 125.00 | 878 | 198.00 | 130944 | 276.00 | 4306 |
| 51.00 | 47224 | 127.00 | 61040 | 199.00 | 9183 | 277.00 | 2327 |
| 52.00 | 2540 | 128.00 | 4892 | 200.00 | 752 | 278.00 | 435 |
| 53.00 | 125 | 129.00 | 21608 | 201.00 | 665 | 283.00 | 287 |
| 54.00 | 50 | 130.00 | 2036 | 202.00 | 106 | 284.00 | 188 |
| 55.00 | 174 | 131.00 | 386 | 203.00 | 842 | 285.00 | 332 |
| 56.00 | 1707 | 132.00 | 155 | 204.00 | 4120 | 289.00 | 108 |
| 57.00 | 3190 | 133.00 | 115 | 205.00 | 8234 | 290.00 | 59 |
| 58.00 | 270 | 134.00 | 582 | 206.00 | 32456 | 292.00 | 118 |
| 59.00 | 73 | 135.00 | 1719 | 207.00 | 4300 | 293.00 | 547 |
| 60.00 | 140 | 136.00 | 574 | 208.00 | 963 | 294.00 | 164 |
| 61.00 | 635 | 137.00 | 915 | 209.00 | 317 | 296.00 | 8041 |
| 62.00 | 770 | 138.00 | 154 | 210.00 | 577 | 297.00 | 1147 |
| 63.00 | 2083 | 140.00 | 395 | 211.00 | 1431 | 299.00 | 61 |
| 64.00 | 459 | 141.00 | 2649 | 212.00 | 100 | 302.00 | 142 |
| 65.00 | 1187 | 142.00 | 1013 | 215.00 | 374 | 303.00 | 913 |
| 66.00 | 56 | 143.00 | 471 | 216.00 | 797 | 304.00 | 315 |
| 67.00 | 136 | 145.00 | 266 | 217.00 | 8083 | 307.00 | 69 |
| 69.00 | 59176 | 146.00 | 427 | 218.00 | 997 | 308.00 | 58 |
| 71.00 | 173 | 147.00 | 1436 | 219.00 | 188 | 313.00 | 50 |
| 72.00 | 57 | 148.00 | 3119 | 221.00 | 8301 | 314.00 | 302 |
| 73.00 | 367 | 149.00 | 803 | 223.00 | 2030 | 315.00 | 768 |
| 74.00 | 4947 | 150.00 | 149 | 224.00 | 19088 | 316.00 | 568 |
| 75.00 | 8626 | 151.00 | 362 | 225.00 | 4927 | 320.00 | 54 |
| 77.00 | 65960 | 152.00 | 180 | 226.00 | 207 | 321.00 | 308 |
| 78.00 | 4679 | 153.00 | 753 | 227.00 | 7209 | 322.00 | 210 |
| 79.00 | 3816 | 154.00 | 817 | 228.00 | 1077 | 323.00 | 2941 |
| 80.00 | 3116 | 155.00 | 1448 | 229.00 | 1532 | 324.00 | 583 |
| 81.00 | 4080 | 156.00 | 2484 | 230.00 | 221 | 327.00 | 522 |
| 82.00 | 1034 | 157.00 | 597 | 231.00 | 940 | 328.00 | 153 |
| 83.00 | 818 | 158.00 | 383 | 232.00 | 168 | 329.00 | 53 |
| 84.00 | 161 | 159.00 | 458 | 233.00 | 84 | 332.00 | 197 |
| 85.00 | 995 | 160.00 | 1049 | 234.00 | 490 | 333.00 | 196 |

Report Date: 06-Dec-2018 12:12:54 Chrom Revision: 2.3 03-Dec-2018 18:32:22
Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 05-Dec-2018 12:48:30
Spectrum: Tune Spec :Average 257-259( 4.07-4.07 ) Bgrd 251( 4.05)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 275

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 86.00 | 881 | 161.00 | 1541 | 235.00 | 608 | 334.00 | 1841 |
| 87.00 | 718 | 162.00 | 385 | 236.00 | 505 | 335.00 | 447 |
| 88.00 | 211 | 163.00 | 124 | 237.00 | 610 | 336.00 | 135 |
| 89.00 | 75 | 164.00 | 159 | 238.00 | 170 | 341.00 | 448 |
| 90.00 | 79 | 165.00 | 891 | 239.00 | 216 | 342.00 | 166 |
| 91.00 | 630 | 166.00 | 836 | 240.00 | 203 | 346.00 | 602 |
| 92.00 | 1015 | 167.00 | 5767 | 241.00 | 386 | 352.00 | 819 |
| 93.00 | 5841 | 168.00 | 2403 | 242.00 | 961 | 353.00 | 501 |
| 94.00 | 557 | 169.00 | 589 | 244.00 | 14559 | 354.00 | 659 |
| 95.00 | 111 | 170.00 | 212 | 245.00 | 1871 | 355.00 | 183 |
| 96.00 | 469 | 171.00 | 159 | 246.00 | 2609 | 365.00 | 3496 |
| 97.00 | 304 | 172.00 | 472 | 247.00 | 705 | 366.00 | 487 |
| 98.00 | 4458 | 173.00 | 781 | 248.00 | 135 | 371.00 | 117 |
| 99.00 | 3666 | 174.00 | 1090 | 249.00 | 473 | 372.00 | 1704 |
| 100.00 | 405 | 175.00 | 2108 | 250.00 | 119 | 373.00 | 427 |
| 101.00 | 2198 | 176.00 | 695 | 251.00 | 96 | 383.00 | 417 |
| 102.00 | 244 | 177.00 | 1155 | 252.00 | 66 | 390.00 | 253 |
| 103.00 | 795 | 178.00 | 245 | 253.00 | 399 | 391.00 | 85 |
| 104.00 | 1053 | 179.00 | 4156 | 255.00 | 70944 | 392.00 | 69 |
| 105.00 | 1269 | 180.00 | 3138 | 256.00 | 11165 | 400.00 | 63 |
| 106.00 | 233 | 181.00 | 1587 | 257.00 | 829 | 401.00 | 70 |
| 107.00 | 16688 | 182.00 | 180 | 258.00 | 3942 | 402.00 | 440 |
| 108.00 | 2793 | 183.00 | 206 | 259.00 | 697 | 403.00 | 730 |
| 110.00 | 32552 | 184.00 | 297 | 260.00 | 52 | 404.00 | 266 |
| 111.00 | 4858 | 185.00 | 2444 | 261.00 | 59 | 420.00 | 113 |
| 112.00 | 407 | 186.00 | 16110 | 264.00 | 280 | 421.00 | 688 |
| 113.00 | 336 | 187.00 | 4720 | 265.00 | 1423 | 422.00 | 572 |
| 116.00 | 736 | 188.00 | 579 | 266.00 | 378 | 423.00 | 5624 |
| 117.00 | 11137 | 189.00 | 992 | 267.00 | 124 | 424.00 | 1247 |
| 118.00 | 813 | 190.00 | 136 | 269.00 | 65 | 439.00 | 134 |
| 119.00 | 207 | 191.00 | 590 | 270.00 | 126 | 441.00 | 17824 |
| 120.00 | 253 | 192.00 | 1477 | 271.00 | 172 | 442.00 | 118440 |
| 121.00 | 56 | 193.00 | 1446 | 272.00 | 212 | 443.00 | 22824 |
| 122.00 | 1052 | 194.00 | 421 | 273.00 | 2029 | 444.00 | 2274 |

Report Date: 06-Dec-2018 12:12:54 Chrom Revision: 2.3 03-Dec-2018 18:32:22
Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 05-Dec-2018 12:48:30
Spectrum: Tune Spec :Average 257-259( 4.07-4.07 ) Bgrd 251( 4.05)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 275

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 123.00 | 1534 | 195.00 | 227 | 274.00 | 5969 | 445.00 | 62 |
| 124.00 | 802 | 196.00 | 4476 | 275.00 | 31784 | | |

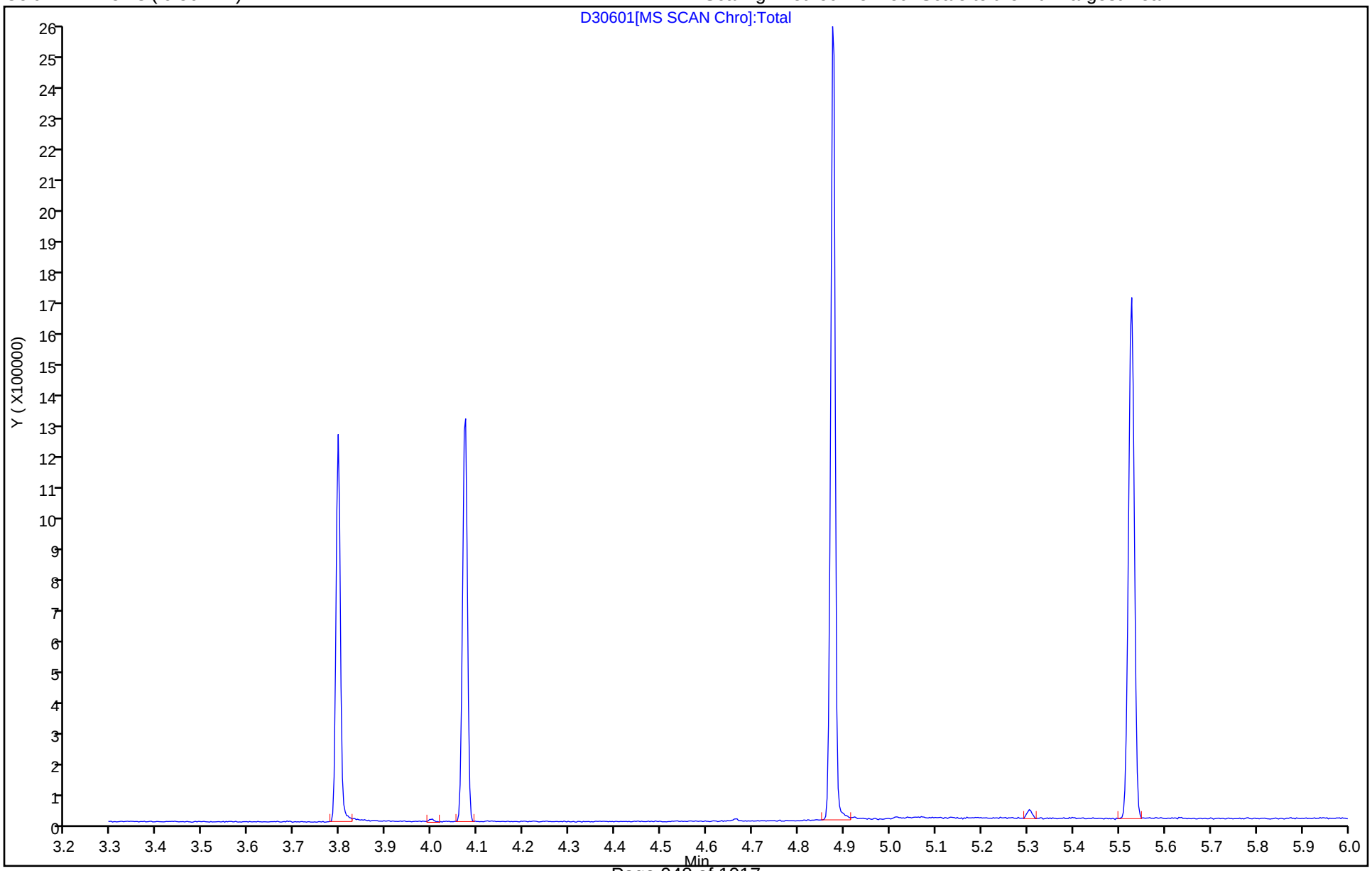
Report Date: 06-Dec-2018 12:12:54 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 12:48:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | DFTPP | | | Worklist Smp#: | 2 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 1 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 05-Dec-2018 12:48:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 06-Dec-2018 12:12:53 Calib Date: 06-Dec-2018 00:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30627.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: kiekeld Date: 06-Dec-2018 11:45:41

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 20 Pentachlorophenol_T | 266 | 3.795 | 3.795 | 0.000 | 93 | 102516 | NR | NR | |
| 33 Benzidine_T | 184 | 4.878 | 4.878 | 0.000 | 100 | 747950 | NR | NR | |
| 162 DFTPP | | | | | | | | | |
| 163 4,4'-DDE | 246 | 5.014 | 5.014 | 0.000 | 1 | 505 | NR | NR | a |
| 164 4,4'-DDD | 235 | 5.307 | 5.307 | 0.000 | 94 | 4058 | NR | NR | |
| 165 4,4'-DDT | 235 | 5.528 | 5.528 | 0.000 | 99 | 299727 | NR | NR | |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

## Reagents:

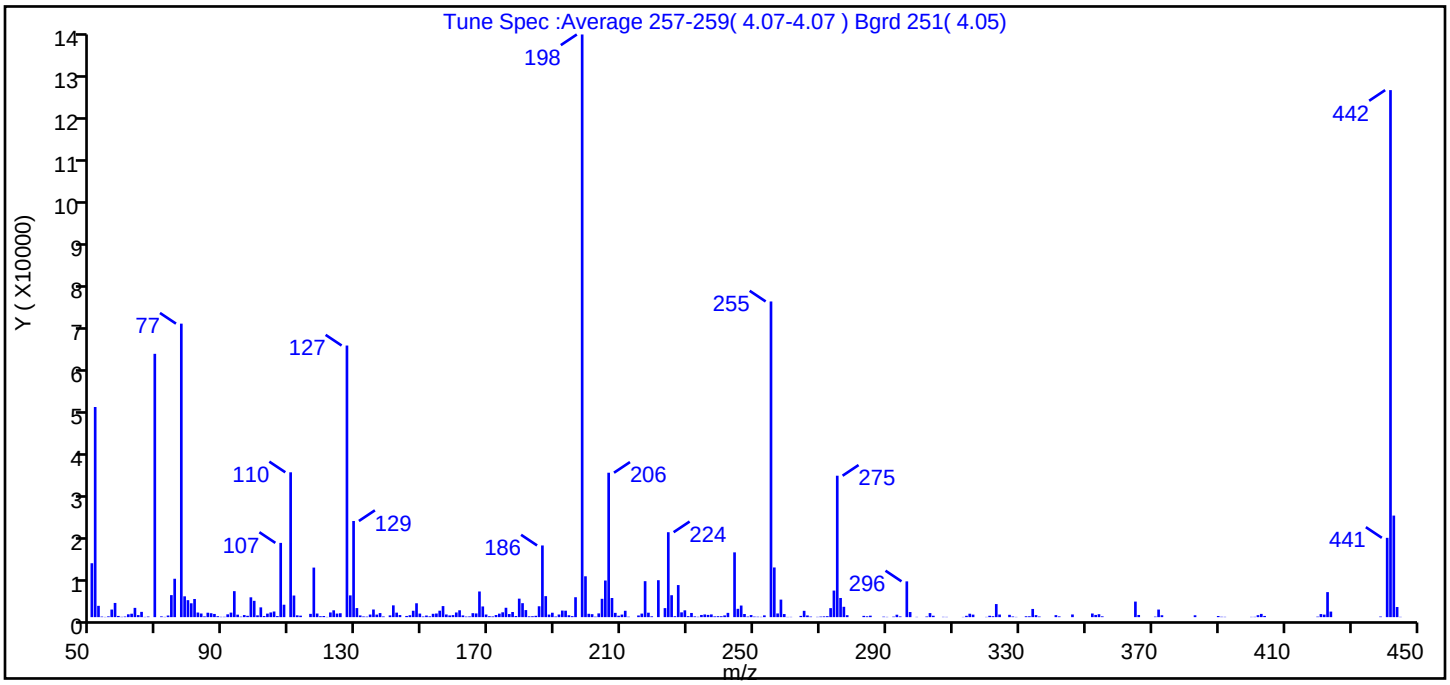
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D
Injection Date: 05-Dec-2018 12:48:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Tune Method: DFTPP Method 8270

162 DFTPP




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 198 | Base peak, 100% relative abundance | 100.0 |
| 51 | 30-60% of mass 198 | 36.1 |
| 68 | <2% of mass 69 | 0.0 (0.0) |
| 69 | Present | 45.2 |
| 70 | <2% of mass 69 | 0.0 (0.0) |
| 127 | 40-60% of mass 198 | 46.6 |
| 197 | <1% of mass 198 | 0.0 |
| 199 | 5-9% of mass 198 | 7.0 |
| 275 | 10-30% of mass 198 | 24.3 |
| 365 | >1% of mass 198 | 2.7 |
| 441 | Present but less than mass 443 | 13.6 (78.1) |
| 442 | >40% of mass 198 | 90.5 |
| 443 | 17-23% of mass 442 | 17.4 (19.3) |

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 05-Dec-2018 12:48:30
Spectrum: Tune Spec :Average 257-259( 4.07-4.07 ) Bgrd 251( 4.05)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 275

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 50.00 | 12117 | 125.00 | 878 | 198.00 | 130944 | 276.00 | 4306 |
| 51.00 | 47224 | 127.00 | 61040 | 199.00 | 9183 | 277.00 | 2327 |
| 52.00 | 2540 | 128.00 | 4892 | 200.00 | 752 | 278.00 | 435 |
| 53.00 | 125 | 129.00 | 21608 | 201.00 | 665 | 283.00 | 287 |
| 54.00 | 50 | 130.00 | 2036 | 202.00 | 106 | 284.00 | 188 |
| 55.00 | 174 | 131.00 | 386 | 203.00 | 842 | 285.00 | 332 |
| 56.00 | 1707 | 132.00 | 155 | 204.00 | 4120 | 289.00 | 108 |
| 57.00 | 3190 | 133.00 | 115 | 205.00 | 8234 | 290.00 | 59 |
| 58.00 | 270 | 134.00 | 582 | 206.00 | 32456 | 292.00 | 118 |
| 59.00 | 73 | 135.00 | 1719 | 207.00 | 4300 | 293.00 | 547 |
| 60.00 | 140 | 136.00 | 574 | 208.00 | 963 | 294.00 | 164 |
| 61.00 | 635 | 137.00 | 915 | 209.00 | 317 | 296.00 | 8041 |
| 62.00 | 770 | 138.00 | 154 | 210.00 | 577 | 297.00 | 1147 |
| 63.00 | 2083 | 140.00 | 395 | 211.00 | 1431 | 299.00 | 61 |
| 64.00 | 459 | 141.00 | 2649 | 212.00 | 100 | 302.00 | 142 |
| 65.00 | 1187 | 142.00 | 1013 | 215.00 | 374 | 303.00 | 913 |
| 66.00 | 56 | 143.00 | 471 | 216.00 | 797 | 304.00 | 315 |
| 67.00 | 136 | 145.00 | 266 | 217.00 | 8083 | 307.00 | 69 |
| 69.00 | 59176 | 146.00 | 427 | 218.00 | 997 | 308.00 | 58 |
| 71.00 | 173 | 147.00 | 1436 | 219.00 | 188 | 313.00 | 50 |
| 72.00 | 57 | 148.00 | 3119 | 221.00 | 8301 | 314.00 | 302 |
| 73.00 | 367 | 149.00 | 803 | 223.00 | 2030 | 315.00 | 768 |
| 74.00 | 4947 | 150.00 | 149 | 224.00 | 19088 | 316.00 | 568 |
| 75.00 | 8626 | 151.00 | 362 | 225.00 | 4927 | 320.00 | 54 |
| 77.00 | 65960 | 152.00 | 180 | 226.00 | 207 | 321.00 | 308 |
| 78.00 | 4679 | 153.00 | 753 | 227.00 | 7209 | 322.00 | 210 |
| 79.00 | 3816 | 154.00 | 817 | 228.00 | 1077 | 323.00 | 2941 |
| 80.00 | 3116 | 155.00 | 1448 | 229.00 | 1532 | 324.00 | 583 |
| 81.00 | 4080 | 156.00 | 2484 | 230.00 | 221 | 327.00 | 522 |
| 82.00 | 1034 | 157.00 | 597 | 231.00 | 940 | 328.00 | 153 |
| 83.00 | 818 | 158.00 | 383 | 232.00 | 168 | 329.00 | 53 |
| 84.00 | 161 | 159.00 | 458 | 233.00 | 84 | 332.00 | 197 |
| 85.00 | 995 | 160.00 | 1049 | 234.00 | 490 | 333.00 | 196 |

Report Date: 06-Dec-2018 12:12:55 Chrom Revision: 2.3 03-Dec-2018 18:32:22
Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 05-Dec-2018 12:48:30
Spectrum: Tune Spec :Average 257-259( 4.07-4.07 ) Bgrd 251( 4.05)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 275

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 86.00 | 881 | 161.00 | 1541 | 235.00 | 608 | 334.00 | 1841 |
| 87.00 | 718 | 162.00 | 385 | 236.00 | 505 | 335.00 | 447 |
| 88.00 | 211 | 163.00 | 124 | 237.00 | 610 | 336.00 | 135 |
| 89.00 | 75 | 164.00 | 159 | 238.00 | 170 | 341.00 | 448 |
| 90.00 | 79 | 165.00 | 891 | 239.00 | 216 | 342.00 | 166 |
| 91.00 | 630 | 166.00 | 836 | 240.00 | 203 | 346.00 | 602 |
| 92.00 | 1015 | 167.00 | 5767 | 241.00 | 386 | 352.00 | 819 |
| 93.00 | 5841 | 168.00 | 2403 | 242.00 | 961 | 353.00 | 501 |
| 94.00 | 557 | 169.00 | 589 | 244.00 | 14559 | 354.00 | 659 |
| 95.00 | 111 | 170.00 | 212 | 245.00 | 1871 | 355.00 | 183 |
| 96.00 | 469 | 171.00 | 159 | 246.00 | 2609 | 365.00 | 3496 |
| 97.00 | 304 | 172.00 | 472 | 247.00 | 705 | 366.00 | 487 |
| 98.00 | 4458 | 173.00 | 781 | 248.00 | 135 | 371.00 | 117 |
| 99.00 | 3666 | 174.00 | 1090 | 249.00 | 473 | 372.00 | 1704 |
| 100.00 | 405 | 175.00 | 2108 | 250.00 | 119 | 373.00 | 427 |
| 101.00 | 2198 | 176.00 | 695 | 251.00 | 96 | 383.00 | 417 |
| 102.00 | 244 | 177.00 | 1155 | 252.00 | 66 | 390.00 | 253 |
| 103.00 | 795 | 178.00 | 245 | 253.00 | 399 | 391.00 | 85 |
| 104.00 | 1053 | 179.00 | 4156 | 255.00 | 70944 | 392.00 | 69 |
| 105.00 | 1269 | 180.00 | 3138 | 256.00 | 11165 | 400.00 | 63 |
| 106.00 | 233 | 181.00 | 1587 | 257.00 | 829 | 401.00 | 70 |
| 107.00 | 16688 | 182.00 | 180 | 258.00 | 3942 | 402.00 | 440 |
| 108.00 | 2793 | 183.00 | 206 | 259.00 | 697 | 403.00 | 730 |
| 110.00 | 32552 | 184.00 | 297 | 260.00 | 52 | 404.00 | 266 |
| 111.00 | 4858 | 185.00 | 2444 | 261.00 | 59 | 420.00 | 113 |
| 112.00 | 407 | 186.00 | 16110 | 264.00 | 280 | 421.00 | 688 |
| 113.00 | 336 | 187.00 | 4720 | 265.00 | 1423 | 422.00 | 572 |
| 116.00 | 736 | 188.00 | 579 | 266.00 | 378 | 423.00 | 5624 |
| 117.00 | 11137 | 189.00 | 992 | 267.00 | 124 | 424.00 | 1247 |
| 118.00 | 813 | 190.00 | 136 | 269.00 | 65 | 439.00 | 134 |
| 119.00 | 207 | 191.00 | 590 | 270.00 | 126 | 441.00 | 17824 |
| 120.00 | 253 | 192.00 | 1477 | 271.00 | 172 | 442.00 | 118440 |
| 121.00 | 56 | 193.00 | 1446 | 272.00 | 212 | 443.00 | 22824 |
| 122.00 | 1052 | 194.00 | 421 | 273.00 | 2029 | 444.00 | 2274 |

Report Date: 06-Dec-2018 12:12:55 Chrom Revision: 2.3 03-Dec-2018 18:32:22
Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 05-Dec-2018 12:48:30
Spectrum: Tune Spec :Average 257-259( 4.07-4.07 ) Bgrd 251( 4.05)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 275

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 123.00 | 1534 | 195.00 | 227 | 274.00 | 5969 | 445.00 | 62 |
| 124.00 | 802 | 196.00 | 4476 | 275.00 | 31784 | | |

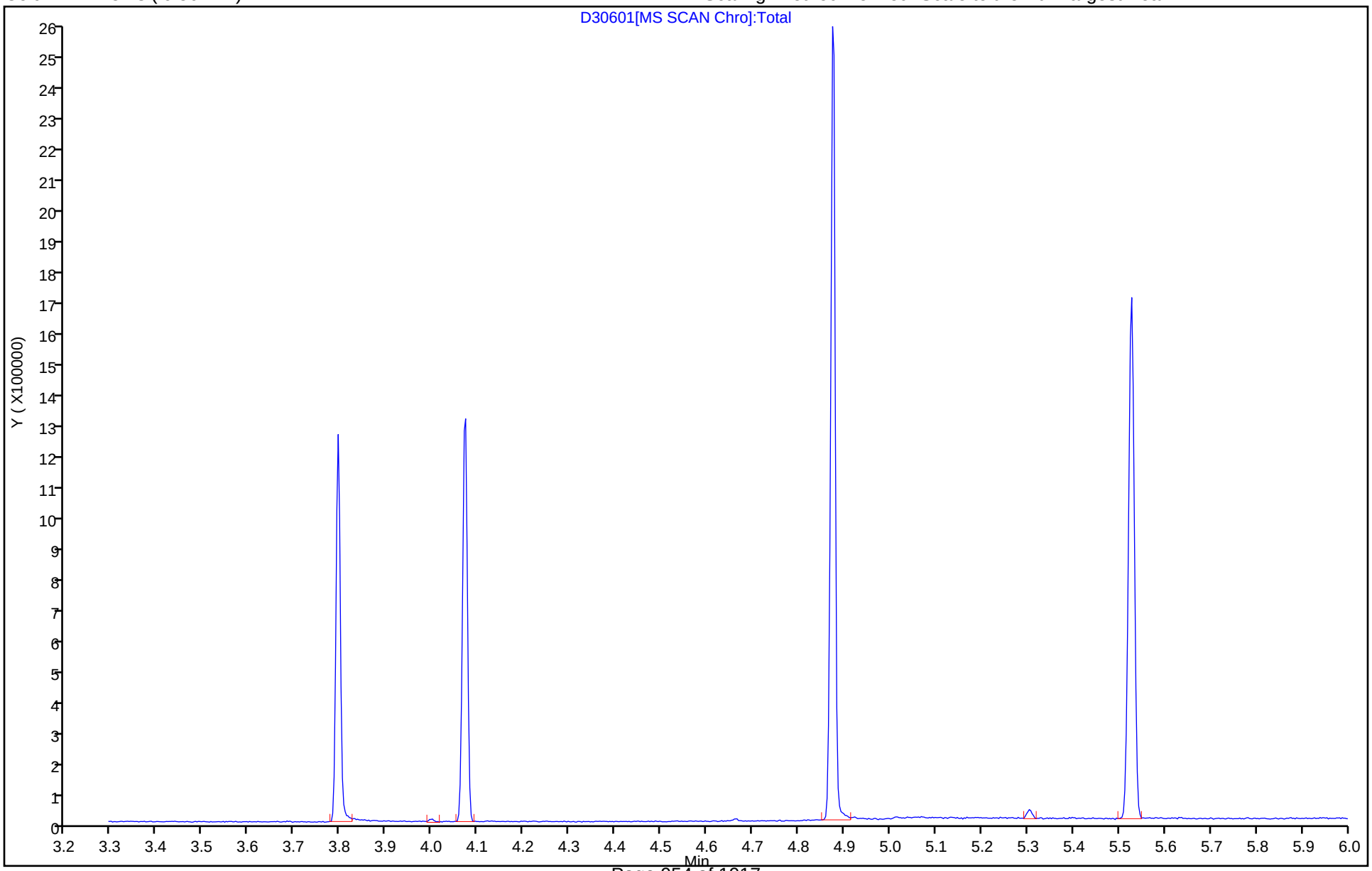
Report Date: 06-Dec-2018 12:12:55 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181206-76895.b\D30601.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Dec-2018 12:48:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | DFTPP | | | Worklist Smp#: | 2 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 1 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30630.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 06-Dec-2018 08:39:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 07-Dec-2018 08:57:38 Calib Date: 06-Dec-2018 18:25:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30653.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: kiekeld Date: 07-Dec-2018 07:53:04

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 20 Pentachlorophenol_T | 266 | 3.792 | 3.792 | 0.000 | 94 | 118878 | NR | NR | |
| 33 Benzidine_T | 184 | 4.875 | 4.875 | 0.000 | 100 | 762951 | NR | NR | |
| 162 DFTPP | | | | | | | | | |
| 163 4,4'-DDE | 246 | 5.011 | 5.011 | 0.000 | 84 | 658 | NR | NR | |
| 164 4,4'-DDD | 235 | 5.298 | 5.298 | 0.000 | 95 | 3809 | NR | NR | |
| 165 4,4'-DDT | 235 | 5.522 | 5.522 | 0.000 | 99 | 332909 | NR | NR | |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard

## Reagents:

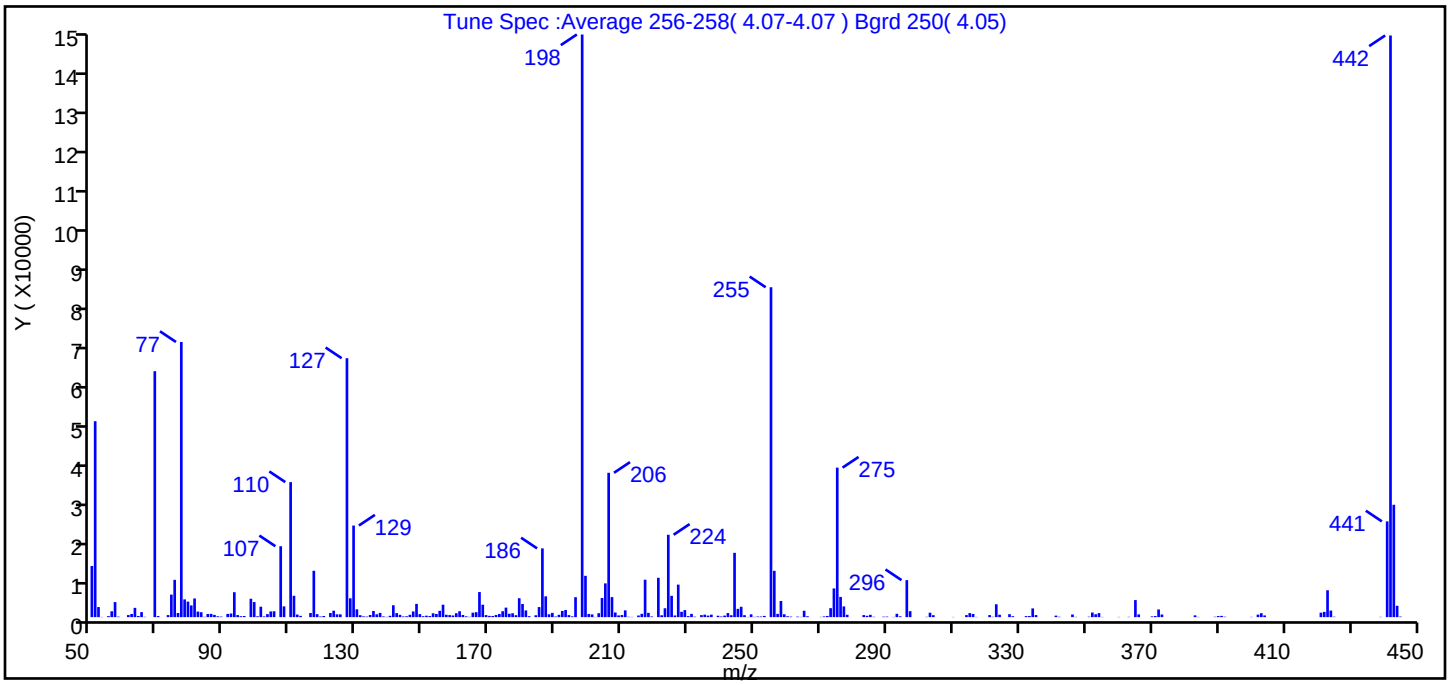
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30630.D
Injection Date: 06-Dec-2018 08:39:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Tune Method: DFTPP Method 8270

162 DFTPP




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 198 | Base peak, 100% relative abundance | 100.0 |
| 51 | 30-60% of mass 198 | 33.6 |
| 68 | <2% of mass 69 | 0.0 (0.0) |
| 69 | Present | 42.2 |
| 70 | <2% of mass 69 | 0.2 (0.4) |
| 127 | 40-60% of mass 198 | 44.4 |
| 197 | <1% of mass 198 | 0.0 |
| 199 | 5-9% of mass 198 | 7.1 |
| 275 | 10-30% of mass 198 | 25.7 |
| 365 | >1% of mass 198 | 2.9 |
| 441 | Present but less than mass 443 | 16.4 (85.2) |
| 442 | >40% of mass 198 | 99.8 |
| 443 | 17-23% of mass 442 | 19.3 (19.3) |

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30630.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 06-Dec-2018 08:39:30
Spectrum: Tune Spec :Average 256-258( 4.07-4.07 ) Bgrd 250( 4.05)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 270

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 50.00 | 13059 | 133.00 | 143 | 203.00 | 1007 | 284.00 | 345 |
| 51.00 | 50032 | 134.00 | 544 | 204.00 | 4885 | 285.00 | 601 |
| 52.00 | 2579 | 135.00 | 1571 | 205.00 | 8625 | 286.00 | 88 |
| 53.00 | 58 | 136.00 | 720 | 206.00 | 36864 | 289.00 | 125 |
| 55.00 | 261 | 137.00 | 1082 | 207.00 | 5119 | 290.00 | 141 |
| 56.00 | 1496 | 138.00 | 181 | 208.00 | 1186 | 292.00 | 60 |
| 57.00 | 3846 | 139.00 | 74 | 209.00 | 435 | 293.00 | 857 |
| 58.00 | 137 | 140.00 | 346 | 210.00 | 532 | 294.00 | 216 |
| 61.00 | 529 | 141.00 | 3041 | 211.00 | 1734 | 296.00 | 9454 |
| 62.00 | 807 | 142.00 | 1035 | 212.00 | 98 | 297.00 | 1525 |
| 63.00 | 2374 | 143.00 | 593 | 213.00 | 60 | 302.00 | 80 |
| 64.00 | 305 | 144.00 | 174 | 215.00 | 420 | 303.00 | 1128 |
| 65.00 | 1284 | 145.00 | 219 | 216.00 | 857 | 304.00 | 499 |
| 66.00 | 82 | 146.00 | 598 | 217.00 | 9556 | 310.00 | 51 |
| 69.00 | 62808 | 147.00 | 1457 | 218.00 | 1094 | 314.00 | 522 |
| 70.00 | 275 | 148.00 | 3389 | 219.00 | 174 | 315.00 | 1035 |
| 73.00 | 527 | 149.00 | 773 | 221.00 | 10050 | 316.00 | 814 |
| 74.00 | 5753 | 150.00 | 237 | 222.00 | 477 | 317.00 | 56 |
| 75.00 | 9523 | 151.00 | 379 | 223.00 | 2270 | 321.00 | 522 |
| 76.00 | 1061 | 152.00 | 278 | 224.00 | 21040 | 322.00 | 87 |
| 77.00 | 70272 | 153.00 | 988 | 225.00 | 5449 | 323.00 | 3289 |
| 78.00 | 4535 | 154.00 | 815 | 226.00 | 428 | 324.00 | 613 |
| 79.00 | 3968 | 155.00 | 1614 | 227.00 | 8303 | 327.00 | 754 |
| 80.00 | 2993 | 156.00 | 3178 | 228.00 | 1367 | 328.00 | 239 |
| 81.00 | 4770 | 157.00 | 608 | 229.00 | 1805 | 332.00 | 268 |
| 82.00 | 1420 | 158.00 | 524 | 230.00 | 264 | 333.00 | 286 |
| 83.00 | 1260 | 159.00 | 432 | 231.00 | 836 | 334.00 | 2229 |
| 84.00 | 85 | 160.00 | 1007 | 232.00 | 121 | 335.00 | 526 |
| 85.00 | 808 | 161.00 | 1515 | 234.00 | 520 | 341.00 | 389 |
| 86.00 | 837 | 162.00 | 546 | 235.00 | 643 | 342.00 | 98 |
| 87.00 | 568 | 163.00 | 206 | 236.00 | 393 | 346.00 | 676 |
| 88.00 | 215 | 164.00 | 86 | 237.00 | 635 | 347.00 | 72 |
| 89.00 | 142 | 165.00 | 1139 | 239.00 | 360 | 351.00 | 118 |

Report Date: 07-Dec-2018 08:57:39 Chrom Revision: 2.3 03-Dec-2018 18:32:22
Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30630.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 06-Dec-2018 08:39:30
Spectrum: Tune Spec :Average 256-258( 4.07-4.07 ) Bgrd 250( 4.05)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 270

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 91.00 | 826 | 166.00 | 1269 | 240.00 | 162 | 352.00 | 1181 |
| 92.00 | 933 | 167.00 | 6406 | 241.00 | 392 | 353.00 | 737 |
| 93.00 | 6367 | 168.00 | 3166 | 242.00 | 1049 | 354.00 | 1036 |
| 94.00 | 530 | 169.00 | 521 | 243.00 | 479 | 355.00 | 54 |
| 95.00 | 242 | 170.00 | 332 | 244.00 | 16424 | 360.00 | 59 |
| 96.00 | 285 | 171.00 | 302 | 245.00 | 2117 | 363.00 | 80 |
| 98.00 | 4694 | 172.00 | 560 | 246.00 | 2642 | 365.00 | 4353 |
| 99.00 | 3856 | 173.00 | 816 | 247.00 | 499 | 366.00 | 698 |
| 100.00 | 216 | 174.00 | 1510 | 248.00 | 52 | 370.00 | 189 |
| 101.00 | 2667 | 175.00 | 2431 | 249.00 | 728 | 371.00 | 282 |
| 102.00 | 183 | 176.00 | 862 | 250.00 | 70 | 372.00 | 1960 |
| 103.00 | 768 | 177.00 | 994 | 251.00 | 155 | 373.00 | 676 |
| 104.00 | 1456 | 178.00 | 496 | 252.00 | 161 | 383.00 | 455 |
| 105.00 | 1501 | 179.00 | 4833 | 253.00 | 312 | 384.00 | 61 |
| 107.00 | 18112 | 180.00 | 3355 | 255.00 | 84248 | 389.00 | 96 |
| 108.00 | 2749 | 181.00 | 1715 | 256.00 | 11829 | 390.00 | 285 |
| 110.00 | 34488 | 182.00 | 256 | 257.00 | 836 | 391.00 | 325 |
| 111.00 | 5455 | 184.00 | 482 | 258.00 | 4125 | 392.00 | 105 |
| 112.00 | 669 | 185.00 | 2570 | 259.00 | 734 | 400.00 | 68 |
| 113.00 | 330 | 186.00 | 17560 | 260.00 | 224 | 402.00 | 641 |
| 116.00 | 1051 | 187.00 | 5312 | 261.00 | 133 | 403.00 | 1009 |
| 117.00 | 11838 | 188.00 | 733 | 263.00 | 135 | 404.00 | 437 |
| 118.00 | 763 | 189.00 | 1095 | 264.00 | 64 | 421.00 | 1141 |
| 119.00 | 164 | 190.00 | 153 | 265.00 | 1632 | 422.00 | 1346 |
| 120.00 | 293 | 191.00 | 599 | 266.00 | 226 | 423.00 | 6869 |
| 122.00 | 1062 | 192.00 | 1584 | 270.00 | 61 | 424.00 | 1682 |
| 123.00 | 1647 | 193.00 | 1829 | 271.00 | 185 | 425.00 | 105 |
| 124.00 | 723 | 194.00 | 520 | 272.00 | 305 | 439.00 | 72 |
| 125.00 | 718 | 195.00 | 203 | 273.00 | 2297 | 441.00 | 24456 |
| 127.00 | 66128 | 196.00 | 5088 | 274.00 | 7332 | 442.00 | 148544 |
| 128.00 | 4810 | 198.00 | 148800 | 275.00 | 38184 | 443.00 | 28696 |
| 129.00 | 23392 | 199.00 | 10551 | 276.00 | 5161 | 444.00 | 2901 |
| 130.00 | 1989 | 200.00 | 813 | 277.00 | 2739 | 445.00 | 143 |
| 131.00 | 498 | 201.00 | 691 | 278.00 | 608 | | |

Report Date: 07-Dec-2018 08:57:39 Chrom Revision: 2.3 03-Dec-2018 18:32:22
Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30630.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 06-Dec-2018 08:39:30
Spectrum: Tune Spec :Average 256-258( 4.07-4.07 ) Bgrd 250( 4.05)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 270

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 132.00 | 195 | 202.00 | 54 | 283.00 | 527 | | |

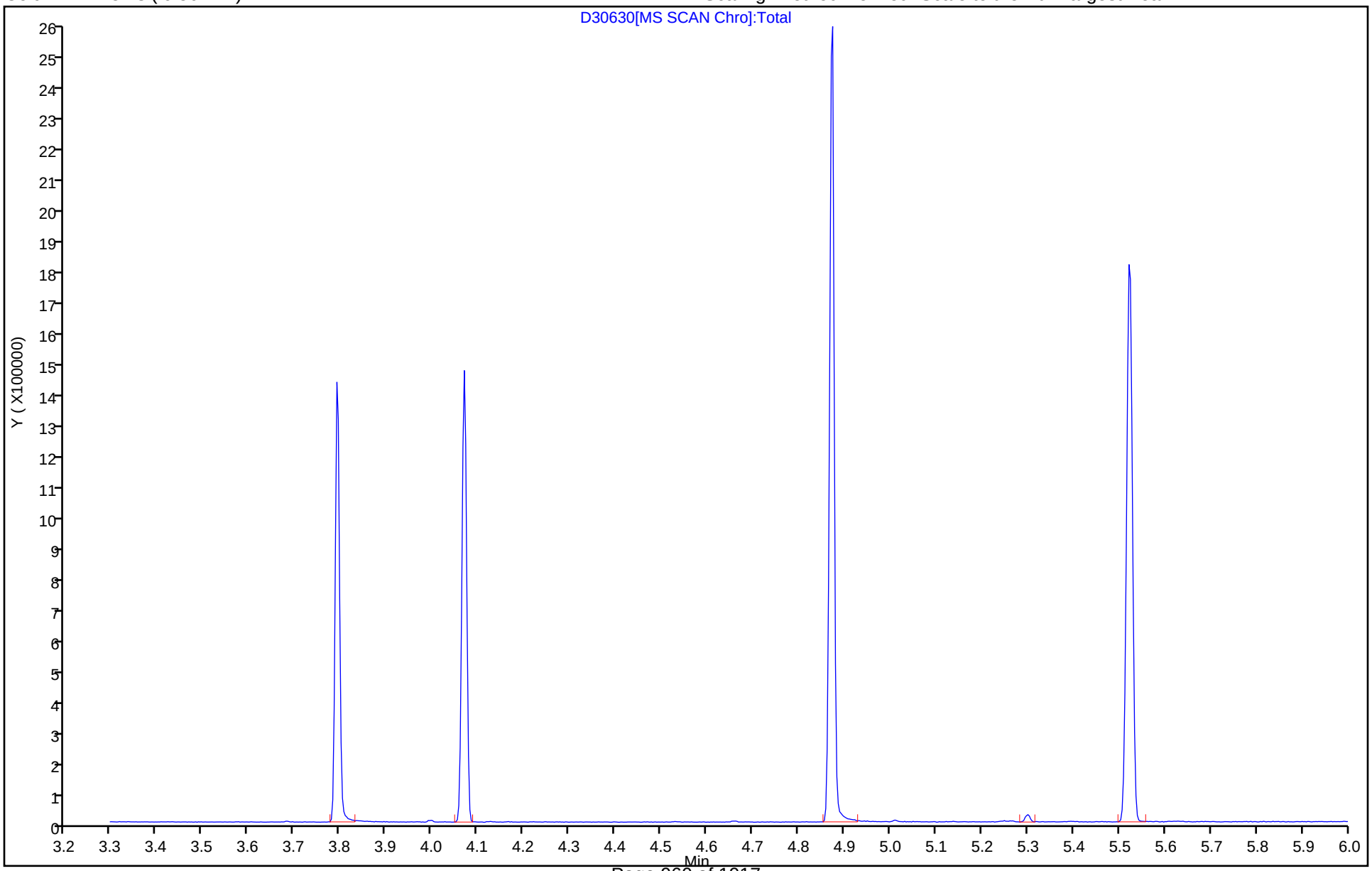
Report Date: 07-Dec-2018 08:57:39 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20181207-76932.b\D30630.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 06-Dec-2018 08:39:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | DFTPP | | | Worklist Smp#: | 2 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 1 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31075.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 08-Jan-2019 14:30:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 09-Jan-2019 10:19:52 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 08-Jan-2019 15:47:05

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 20 Pentachlorophenol_T | 266 | 3.724 | 3.724 | 0.000 | 92 | 62314 | NR | NR | |
| 33 Benzidine_T | 184 | 4.804 | 4.804 | 0.000 | 100 | 503994 | NR | NR | |
| 162 DFTPP | | | | | | | | | |
| 163 4,4'-DDE | 246 | 4.940 | 4.940 | 0.000 | 1 | 248 | NR | NR | a |
| 164 4,4'-DDD | 235 | 5.225 | 5.225 | 0.000 | 94 | 2349 | NR | NR | |
| 165 4,4'-DDT | 235 | 5.436 | 5.436 | 0.000 | 98 | 189744 | NR | NR | |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

## Reagents:

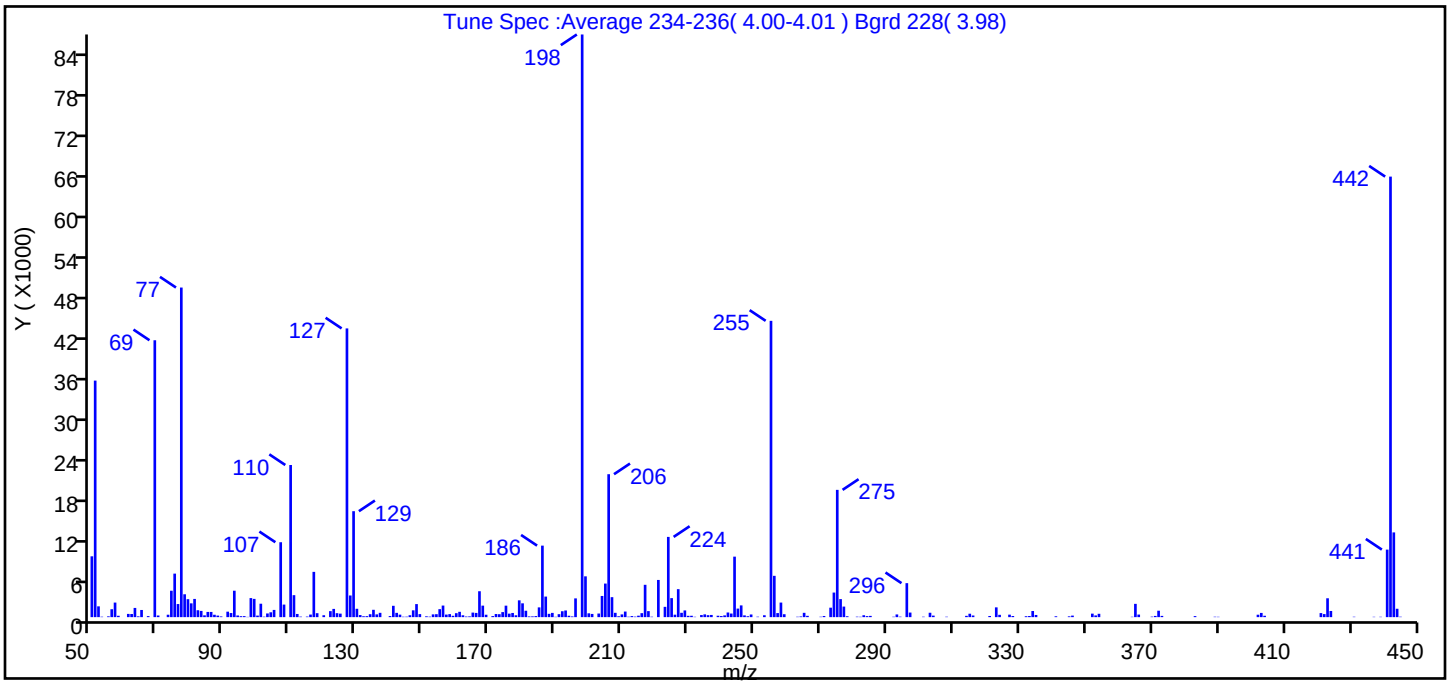
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31075.D
Injection Date: 08-Jan-2019 14:30:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Tune Method: DFTPP Method 8270

162 DFTPP




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 198 | Base peak, 100% relative abundance | 100.0 |
| 51 | 30-60% of mass 198 | 40.6 |
| 68 | <2% of mass 69 | 0.0 (0.0) |
| 69 | Present | 47.5 |
| 70 | <2% of mass 69 | 0.3 (0.6) |
| 127 | 40-60% of mass 198 | 49.6 |
| 197 | <1% of mass 198 | 0.0 |
| 199 | 5-9% of mass 198 | 7.0 |
| 275 | 10-30% of mass 198 | 21.8 |
| 365 | >1% of mass 198 | 2.3 |
| 441 | Present but less than mass 443 | 11.6 (79.7) |
| 442 | >40% of mass 198 | 75.6 |
| 443 | 17-23% of mass 442 | 14.5 (19.2) |

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31075.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 08-Jan-2019 14:30:30
Spectrum: Tune Spec :Average 234-236( 4.00-4.01 ) Bgrd 228( 3.98)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 252

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 50.00 | 9046 | 127.00 | 42936 | 194.00 | 207 | 273.00 | 1406 |
| 51.00 | 35176 | 128.00 | 3221 | 195.00 | 104 | 274.00 | 3655 |
| 52.00 | 1606 | 129.00 | 15756 | 196.00 | 2790 | 275.00 | 18928 |
| 53.00 | 65 | 130.00 | 1243 | 198.00 | 86648 | 276.00 | 2683 |
| 55.00 | 118 | 131.00 | 312 | 199.00 | 6069 | 277.00 | 1571 |
| 56.00 | 1178 | 132.00 | 130 | 200.00 | 569 | 278.00 | 132 |
| 57.00 | 2166 | 133.00 | 146 | 201.00 | 478 | 281.00 | 70 |
| 58.00 | 204 | 134.00 | 436 | 203.00 | 536 | 282.00 | 54 |
| 61.00 | 482 | 135.00 | 1093 | 204.00 | 3149 | 283.00 | 282 |
| 62.00 | 465 | 136.00 | 411 | 205.00 | 4993 | 284.00 | 156 |
| 63.00 | 1370 | 137.00 | 643 | 206.00 | 21256 | 285.00 | 188 |
| 64.00 | 115 | 140.00 | 159 | 207.00 | 2970 | 292.00 | 61 |
| 65.00 | 1066 | 141.00 | 1686 | 208.00 | 643 | 293.00 | 401 |
| 67.00 | 154 | 142.00 | 638 | 209.00 | 132 | 294.00 | 73 |
| 69.00 | 41176 | 143.00 | 373 | 210.00 | 408 | 296.00 | 5054 |
| 70.00 | 243 | 144.00 | 61 | 211.00 | 831 | 297.00 | 681 |
| 73.00 | 360 | 145.00 | 69 | 212.00 | 64 | 301.00 | 64 |
| 74.00 | 3929 | 146.00 | 282 | 213.00 | 158 | 303.00 | 653 |
| 75.00 | 6472 | 147.00 | 1014 | 214.00 | 77 | 304.00 | 226 |
| 76.00 | 1948 | 148.00 | 1941 | 215.00 | 217 | 308.00 | 63 |
| 77.00 | 49016 | 149.00 | 450 | 216.00 | 593 | 314.00 | 194 |
| 78.00 | 3402 | 151.00 | 123 | 217.00 | 4809 | 315.00 | 508 |
| 79.00 | 2672 | 152.00 | 74 | 218.00 | 897 | 316.00 | 243 |
| 80.00 | 2052 | 153.00 | 410 | 219.00 | 66 | 321.00 | 172 |
| 81.00 | 2709 | 154.00 | 439 | 221.00 | 5531 | 323.00 | 1455 |
| 82.00 | 1028 | 155.00 | 1188 | 223.00 | 1532 | 324.00 | 346 |
| 83.00 | 928 | 156.00 | 1722 | 224.00 | 11933 | 327.00 | 371 |
| 84.00 | 268 | 157.00 | 380 | 225.00 | 2829 | 328.00 | 168 |
| 85.00 | 775 | 158.00 | 450 | 226.00 | 365 | 332.00 | 135 |
| 86.00 | 774 | 159.00 | 201 | 227.00 | 4161 | 333.00 | 167 |
| 87.00 | 354 | 160.00 | 590 | 228.00 | 645 | 334.00 | 911 |
| 88.00 | 230 | 161.00 | 793 | 229.00 | 999 | 335.00 | 322 |
| 89.00 | 105 | 162.00 | 275 | 230.00 | 198 | 341.00 | 128 |

Report Date: 09-Jan-2019 10:19:53 Chrom Revision: 2.3 19-Dec-2018 21:47:38
Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31075.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 08-Jan-2019 14:30:30
Spectrum: Tune Spec :Average 234-236( 4.00-4.01 ) Bgrd 228( 3.98)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 252

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 91.00 | 813 | 163.00 | 89 | 231.00 | 205 | 345.00 | 118 |
| 92.00 | 610 | 164.00 | 112 | 232.00 | 52 | 346.00 | 229 |
| 93.00 | 3930 | 165.00 | 676 | 234.00 | 310 | 352.00 | 521 |
| 94.00 | 247 | 166.00 | 629 | 235.00 | 415 | 353.00 | 254 |
| 95.00 | 143 | 167.00 | 3853 | 236.00 | 292 | 354.00 | 499 |
| 96.00 | 150 | 168.00 | 1711 | 237.00 | 326 | 364.00 | 54 |
| 97.00 | 38 | 169.00 | 358 | 239.00 | 209 | 365.00 | 1976 |
| 98.00 | 2834 | 171.00 | 157 | 240.00 | 163 | 366.00 | 383 |
| 99.00 | 2715 | 172.00 | 465 | 241.00 | 259 | 370.00 | 77 |
| 100.00 | 231 | 173.00 | 438 | 242.00 | 690 | 371.00 | 181 |
| 101.00 | 1996 | 174.00 | 750 | 243.00 | 536 | 372.00 | 956 |
| 102.00 | 72 | 175.00 | 1707 | 244.00 | 8997 | 373.00 | 186 |
| 103.00 | 549 | 176.00 | 520 | 245.00 | 1273 | 383.00 | 154 |
| 104.00 | 722 | 177.00 | 622 | 246.00 | 1747 | 389.00 | 62 |
| 105.00 | 1075 | 178.00 | 277 | 247.00 | 261 | 390.00 | 51 |
| 107.00 | 11141 | 179.00 | 2500 | 248.00 | 135 | 402.00 | 360 |
| 108.00 | 1868 | 180.00 | 2055 | 249.00 | 396 | 403.00 | 628 |
| 110.00 | 22624 | 181.00 | 952 | 251.00 | 67 | 404.00 | 205 |
| 111.00 | 3268 | 182.00 | 106 | 253.00 | 281 | 421.00 | 602 |
| 112.00 | 474 | 183.00 | 113 | 255.00 | 44064 | 422.00 | 454 |
| 113.00 | 77 | 184.00 | 155 | 256.00 | 6143 | 423.00 | 2806 |
| 115.00 | 83 | 185.00 | 1451 | 257.00 | 604 | 424.00 | 918 |
| 116.00 | 383 | 186.00 | 10635 | 258.00 | 2167 | 431.00 | 59 |
| 117.00 | 6733 | 187.00 | 3058 | 259.00 | 435 | 437.00 | 50 |
| 118.00 | 588 | 188.00 | 492 | 263.00 | 60 | 439.00 | 54 |
| 120.00 | 283 | 189.00 | 632 | 264.00 | 101 | 441.00 | 10042 |
| 122.00 | 892 | 190.00 | 50 | 265.00 | 642 | 442.00 | 65512 |
| 123.00 | 1226 | 191.00 | 441 | 266.00 | 196 | 443.00 | 12601 |
| 124.00 | 590 | 192.00 | 879 | 270.00 | 59 | 444.00 | 1246 |
| 125.00 | 522 | 193.00 | 990 | 271.00 | 164 | 445.00 | 63 |

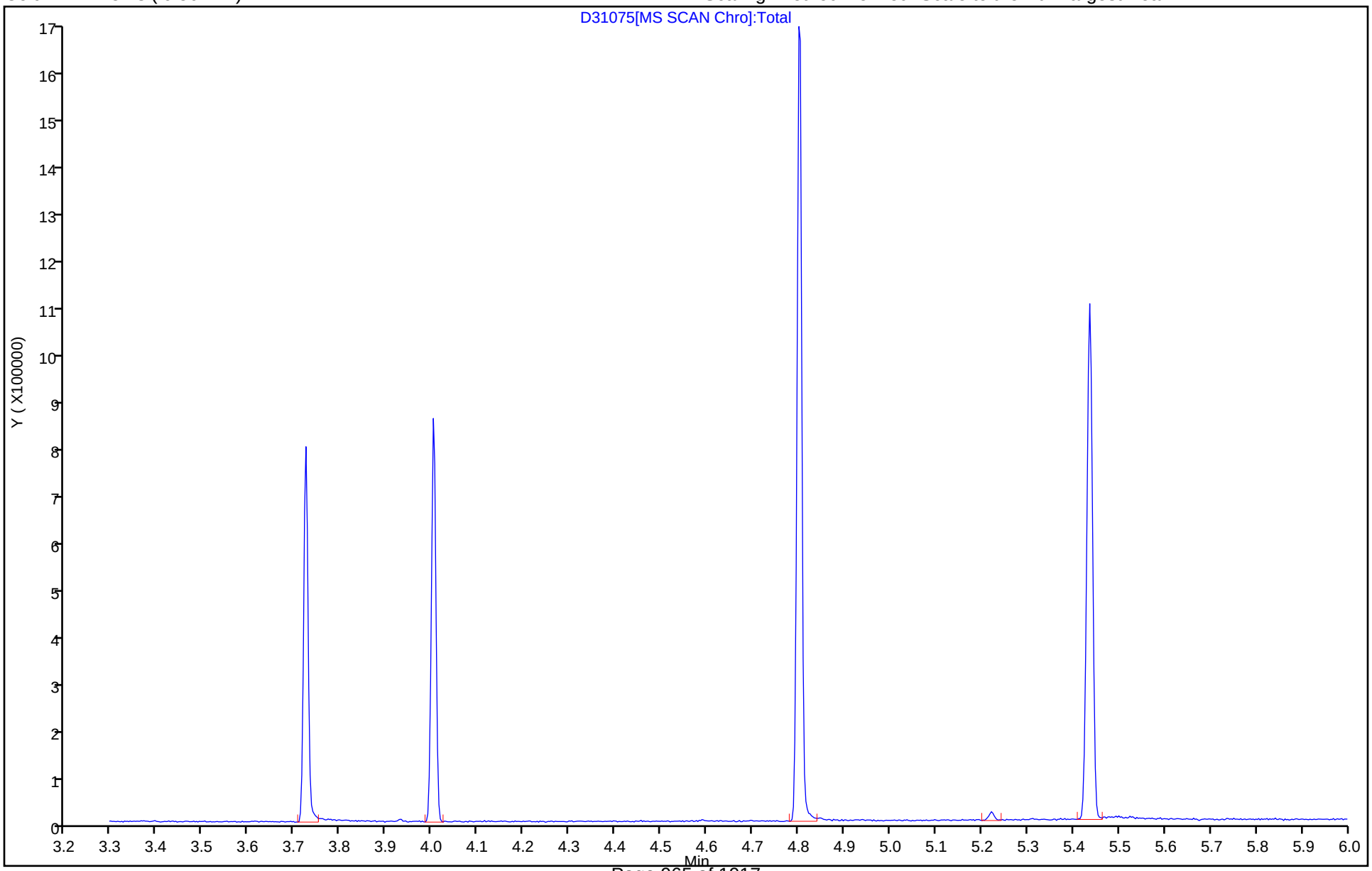
Report Date: 09-Jan-2019 10:19:53 Chrom Revision: 2.3 19-Dec-2018 21:47:38

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31075.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Jan-2019 14:30:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | DFTPP | | | Worklist Smp#: | 2 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 1 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31280.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 22-Jan-2019 13:47:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:33 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 22-Jan-2019 14:24:08

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 20 Pentachlorophenol_T | 266 | 3.643 | 3.643 | 0.000 | 93 | 73445 | NR | NR | |
| 33 Benzidine_T | 184 | 4.720 | 4.720 | 0.000 | 100 | 524841 | NR | NR | |
| 162 DFTPP | | | | | | | | | |
| 163 4,4'-DDE | 246 | | 4.912 | | | | ND | ND | |
| 164 4,4'-DDD | 235 | 5.132 | 5.132 | 0.000 | 94 | 2276 | NR | NR | |
| 165 4,4'-DDT | 235 | 5.337 | 5.337 | 0.000 | 98 | 221646 | NR | NR | |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard
ND - Not Detected or Marked ND

## Reagents:

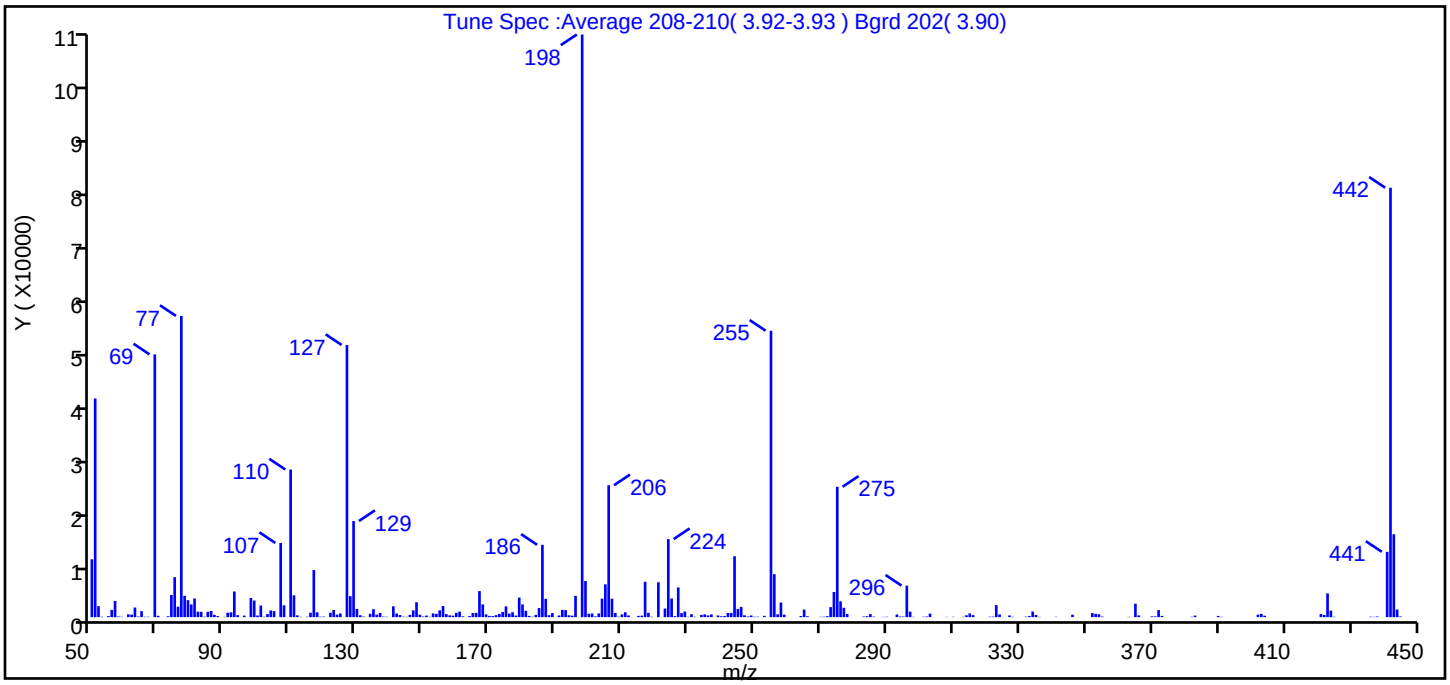
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31280.D
Injection Date: 22-Jan-2019 13:47:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Tune Method: DFTPP Method 8270

162 DFTPP




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 198 | Base peak, 100% relative abundance | 100.0 |
| 51 | 30-60% of mass 198 | 37.5 |
| 68 | <2% of mass 69 | 0.0 (0.0) |
| 69 | Present | 45.1 |
| 70 | <2% of mass 69 | 0.2 (0.5) |
| 127 | 40-60% of mass 198 | 46.7 |
| 197 | <1% of mass 198 | 0.0 |
| 199 | 5-9% of mass 198 | 6.2 |
| 275 | 10-30% of mass 198 | 22.4 |
| 365 | >1% of mass 198 | 2.3 |
| 441 | Present but less than mass 443 | 11.2 (78.8) |
| 442 | >40% of mass 198 | 73.7 |
| 443 | 17-23% of mass 442 | 14.2 (19.3) |

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31280.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 22-Jan-2019 13:47:30
Spectrum: Tune Spec :Average 208-210( 3.92-3.93 ) Bgrd 202( 3.90)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 261

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 50.00 | 10620 | 129.00 | 17640 | 200.00 | 617 | 285.00 | 557 |
| 51.00 | 40128 | 130.00 | 1508 | 201.00 | 676 | 286.00 | 94 |
| 52.00 | 2013 | 131.00 | 351 | 202.00 | 134 | 289.00 | 50 |
| 53.00 | 80 | 132.00 | 108 | 203.00 | 687 | 290.00 | 70 |
| 55.00 | 197 | 134.00 | 608 | 204.00 | 3391 | 293.00 | 480 |
| 56.00 | 1336 | 135.00 | 1465 | 205.00 | 6017 | 294.00 | 118 |
| 57.00 | 2971 | 136.00 | 451 | 206.00 | 24208 | 295.00 | 106 |
| 58.00 | 119 | 137.00 | 787 | 207.00 | 3383 | 296.00 | 5784 |
| 59.00 | 66 | 138.00 | 105 | 208.00 | 766 | 297.00 | 1006 |
| 61.00 | 523 | 139.00 | 66 | 209.00 | 79 | 298.00 | 52 |
| 62.00 | 465 | 141.00 | 1986 | 210.00 | 499 | 301.00 | 70 |
| 63.00 | 1765 | 142.00 | 667 | 211.00 | 895 | 302.00 | 115 |
| 64.00 | 104 | 143.00 | 390 | 212.00 | 311 | 303.00 | 652 |
| 65.00 | 1105 | 144.00 | 81 | 215.00 | 237 | 308.00 | 51 |
| 66.00 | 68 | 145.00 | 56 | 216.00 | 273 | 310.00 | 63 |
| 67.00 | 70 | 146.00 | 408 | 217.00 | 6492 | 313.00 | 66 |
| 69.00 | 48224 | 147.00 | 1246 | 218.00 | 792 | 314.00 | 343 |
| 70.00 | 245 | 148.00 | 2739 | 219.00 | 69 | 315.00 | 684 |
| 73.00 | 169 | 149.00 | 447 | 221.00 | 6393 | 316.00 | 374 |
| 74.00 | 4072 | 150.00 | 116 | 223.00 | 1571 | 321.00 | 79 |
| 75.00 | 7333 | 151.00 | 293 | 224.00 | 14326 | 322.00 | 97 |
| 76.00 | 1914 | 152.00 | 60 | 225.00 | 3421 | 323.00 | 2211 |
| 77.00 | 55280 | 153.00 | 689 | 226.00 | 186 | 324.00 | 487 |
| 78.00 | 3911 | 154.00 | 609 | 227.00 | 5453 | 327.00 | 310 |
| 79.00 | 3114 | 155.00 | 1247 | 228.00 | 749 | 328.00 | 62 |
| 80.00 | 2341 | 156.00 | 2031 | 229.00 | 1034 | 332.00 | 90 |
| 81.00 | 3423 | 157.00 | 556 | 230.00 | 52 | 333.00 | 189 |
| 82.00 | 1005 | 158.00 | 333 | 231.00 | 540 | 334.00 | 1032 |
| 83.00 | 987 | 159.00 | 285 | 232.00 | 71 | 335.00 | 400 |
| 84.00 | 70 | 160.00 | 786 | 234.00 | 409 | 336.00 | 60 |
| 85.00 | 980 | 161.00 | 1013 | 235.00 | 517 | 341.00 | 68 |
| 86.00 | 1145 | 162.00 | 148 | 236.00 | 315 | 346.00 | 447 |
| 87.00 | 423 | 164.00 | 188 | 237.00 | 503 | 352.00 | 745 |

Report Date: 23-Jan-2019 10:44:33 Chrom Revision: 2.3 15-Jan-2019 08:51:34
Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31280.D\SMS_D_8270D.rslt\spectra.d
Injection Date: 22-Jan-2019 13:47:30
Spectrum: Tune Spec :Average 208-210( 3.92-3.93 ) Bgrd 202( 3.90)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 261

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 88.00 | 197 | 165.00 | 756 | 239.00 | 309 | 353.00 | 603 |
| 90.00 | 52 | 166.00 | 782 | 240.00 | 160 | 354.00 | 533 |
| 91.00 | 812 | 167.00 | 4778 | 241.00 | 193 | 355.00 | 105 |
| 92.00 | 880 | 168.00 | 2342 | 242.00 | 765 | 363.00 | 56 |
| 93.00 | 4708 | 169.00 | 504 | 243.00 | 768 | 365.00 | 2466 |
| 94.00 | 365 | 170.00 | 234 | 244.00 | 11174 | 366.00 | 318 |
| 96.00 | 286 | 171.00 | 197 | 245.00 | 1514 | 370.00 | 143 |
| 98.00 | 3523 | 172.00 | 364 | 246.00 | 1874 | 371.00 | 140 |
| 99.00 | 3050 | 173.00 | 591 | 247.00 | 347 | 372.00 | 1294 |
| 100.00 | 307 | 174.00 | 938 | 248.00 | 113 | 373.00 | 235 |
| 101.00 | 2129 | 175.00 | 1972 | 249.00 | 305 | 382.00 | 66 |
| 102.00 | 68 | 176.00 | 647 | 250.00 | 79 | 383.00 | 293 |
| 103.00 | 563 | 177.00 | 903 | 251.00 | 84 | 390.00 | 224 |
| 104.00 | 1230 | 178.00 | 290 | 253.00 | 240 | 391.00 | 58 |
| 105.00 | 1114 | 179.00 | 3587 | 255.00 | 52560 | 402.00 | 447 |
| 107.00 | 13613 | 180.00 | 2336 | 256.00 | 7887 | 403.00 | 606 |
| 108.00 | 2174 | 181.00 | 1170 | 257.00 | 517 | 404.00 | 266 |
| 110.00 | 27096 | 182.00 | 233 | 258.00 | 2675 | 421.00 | 581 |
| 111.00 | 4006 | 183.00 | 63 | 259.00 | 462 | 422.00 | 405 |
| 112.00 | 334 | 184.00 | 404 | 264.00 | 201 | 423.00 | 4360 |
| 113.00 | 57 | 185.00 | 1679 | 265.00 | 1390 | 424.00 | 1189 |
| 115.00 | 75 | 186.00 | 13281 | 266.00 | 169 | 425.00 | 75 |
| 116.00 | 804 | 187.00 | 3365 | 270.00 | 62 | 436.00 | 79 |
| 117.00 | 8646 | 188.00 | 356 | 271.00 | 83 | 437.00 | 56 |
| 118.00 | 889 | 189.00 | 749 | 272.00 | 177 | 438.00 | 121 |
| 119.00 | 79 | 191.00 | 299 | 273.00 | 1839 | 441.00 | 11983 |
| 120.00 | 99 | 192.00 | 1336 | 274.00 | 4607 | 442.00 | 78816 |
| 122.00 | 818 | 193.00 | 1299 | 275.00 | 23928 | 443.00 | 15215 |
| 123.00 | 1314 | 194.00 | 350 | 276.00 | 2906 | 444.00 | 1392 |
| 124.00 | 455 | 195.00 | 271 | 277.00 | 1728 | 445.00 | 124 |
| 125.00 | 681 | 196.00 | 3904 | 278.00 | 576 | | |
| 127.00 | 49952 | 198.00 | 106936 | 283.00 | 112 | | |
| 128.00 | 3861 | 199.00 | 6627 | 284.00 | 173 | | |

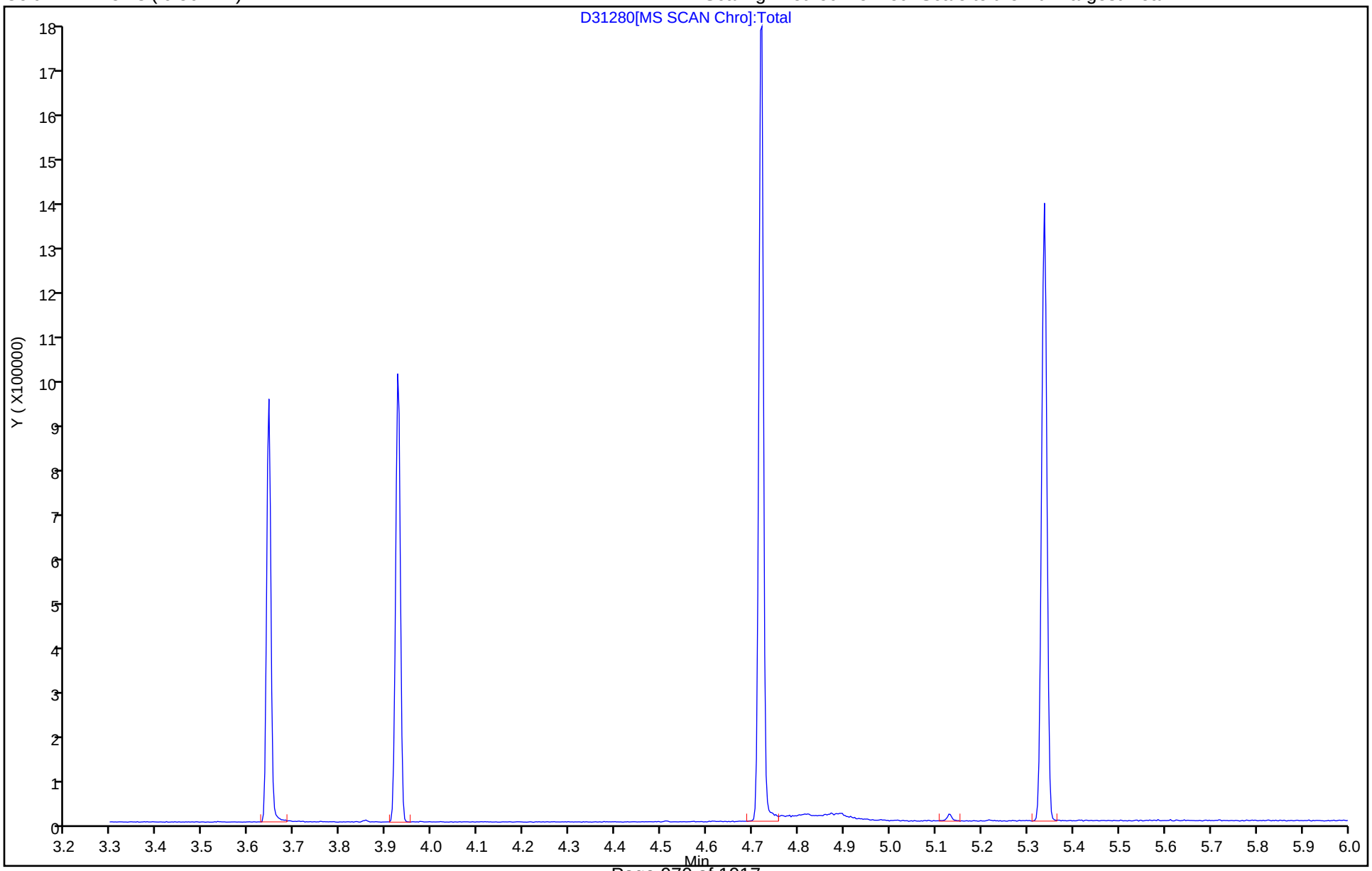
Report Date: 23-Jan-2019 10:44:33 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31280.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 13:47:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | DFTPP | | | Worklist Smp#: | 2 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 1 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-444835/1-A

Matrix: Water | Lab File ID: D31289.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 1000(mL) | Date Analyzed: 01/22/2019 17:40

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 92-52-4 | 1,1'-Biphenyl | 0.41 | U | 10 | 0.41 |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 2.0 | U | 10 | 2.0 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 2.0 | U | 5.0 | 2.0 |
| 95-50-1 | 1,2-Dichlorobenzene | 2.0 | U | 5.0 | 2.0 |
| 122-66-7 | 1,2-Diphenylhydrazine(as Azobenzene) | 0.54 | U | 10 | 0.54 |
| 541-73-1 | 1,3-Dichlorobenzene | 2.0 | U | 10 | 2.0 |
| 99-65-0 | 1,3-Dinitrobenzene | 0.97 | U | 10 | 0.97 |
| 106-46-7 | 1,4-Dichlorobenzene | 2.0 | U | 5.0 | 2.0 |
| 123-91-1 | 1,4-Dioxane | 0.71 | U | 20 | 0.71 |
| 90-12-0 | 1-Methylnaphthalene | 0.35 | U | 4.0 | 0.35 |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 0.96 | U | 50 | 0.96 |
| 95-95-4 | 2,4,5-Trichlorophenol | 0.52 | U | 10 | 0.52 |
| 88-06-2 | 2,4,6-Trichlorophenol | 0.74 | U | 10 | 0.74 |
| 120-83-2 | 2,4-Dichlorophenol | 0.68 | U | 10 | 0.68 |
| 105-67-9 | 2,4-Dimethylphenol | 0.67 | U | 10 | 0.67 |
| 51-28-5 | 2,4-Dinitrophenol | 7.5 | U | 30 | 7.5 |
| 121-14-2 | 2,4-Dinitrotoluene | 0.93 | U | 10 | 0.93 |
| 87-65-0 | 2,6-Dichlorophenol | 0.75 | U | 10 | 0.75 |
| 606-20-2 | 2,6-Dinitrotoluene | 0.72 | U | 10 | 0.72 |
| 91-58-7 | 2-Chloronaphthalene | 0.46 | U | 4.0 | 0.46 |
| 95-57-8 | 2-Chlorophenol | 0.43 | U | 10 | 0.43 |
| 91-57-6 | 2-Methylnaphthalene | 0.41 | U | 4.0 | 0.41 |
| 95-48-7 | 2-Methylphenol | 0.56 | U | 10 | 0.56 |
| 88-74-4 | 2-Nitroaniline | 0.90 | U | 10 | 0.90 |
| 88-75-5 | 2-Nitrophenol | 0.62 | U | 10 | 0.62 |
| 15831-10-4 | 3 & 4 Methylphenol | 0.40 | U | 10 | 0.40 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 0.83 | U | 50 | 0.83 |
| 108-39-4 | 3-Methylphenol | 0.40 | U | 10 | 0.40 |
| 99-09-2 | 3-Nitroaniline | 0.78 | U | 10 | 0.78 |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 5.9 | U | 50 | 5.9 |
| 101-55-3 | 4-Bromophenyl phenyl ether | 0.41 | U | 10 | 0.41 |
| 59-50-7 | 4-Chloro-3-methylphenol | 0.45 | U | 10 | 0.45 |
| 106-47-8 | 4-Chloroaniline | 0.56 | U | 10 | 0.56 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 0.63 | U | 10 | 0.63 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-444835/1-A

Matrix: Water | Lab File ID: D31289.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 1000(mL) | Date Analyzed: 01/22/2019 17:40

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 106-44-5 | 4-Methylphenol | 0.40 | U | 10 | 0.40 |
| 100-01-6 | 4-Nitroaniline | 0.84 | U | 10 | 0.84 |
| 100-02-7 | 4-Nitrophenol | 1.0 | U | 10 | 1.0 |
| 83-32-9 | Acenaphthene | 0.45 | U | 4.0 | 0.45 |
| 208-96-8 | Acenaphthylene | 0.50 | U | 4.0 | 0.50 |
| 98-86-2 | Acetophenone | 0.52 | U | 10 | 0.52 |
| 62-53-3 | Aniline | 0.88 | U | 10 | 0.88 |
| 120-12-7 | Anthracene | 0.45 | U | 4.0 | 0.45 |
| 103-33-3 | Azobenzene | 0.54 | U | 4.0 | 0.54 |
| 100-52-7 | Benzaldehyde | 0.53 | U | 10 | 0.53 |
| 92-87-5 | Benzidine | 4.4 | U | 100 | 4.4 |
| 56-55-3 | Benzo[a]anthracene | 0.58 | U | 4.0 | 0.58 |
| 50-32-8 | Benzo[a]pyrene | 0.64 | U | 4.0 | 0.64 |
| 205-99-2 | Benzo[b]fluoranthene | 0.53 | U | 4.0 | 0.53 |
| 191-24-2 | Benzo[g,h,i]perylene | 0.79 | U | 4.0 | 0.79 |
| 207-08-9 | Benzo[k]fluoranthene | 0.56 | U | 4.0 | 0.56 |
| 65-85-0 | Benzoic acid | 5.7 | U | 25 | 5.7 |
| 100-51-6 | Benzyl alcohol | 0.35 | U | 10 | 0.35 |
| 108-60-1 | bis (2-chloroisopropyl) ether | 0.42 | U | 10 | 0.42 |
| 111-91-1 | Bis(2-chloroethoxy)methane | 0.61 | U | 10 | 0.61 |
| 111-44-4 | Bis(2-chloroethyl)ether | 0.49 | U | 10 | 0.49 |
| 117-81-7 | Bis(2-ethylhexyl) phthalate | 1.1 | U | 10 | 1.1 |
| 85-68-7 | Butyl benzyl phthalate | 2.0 | U | 5.0 | 2.0 |
| 105-60-2 | Caprolactam | 1.2 | U | 10 | 1.2 |
| 86-74-8 | Carbazole | 0.45 | U | 4.0 | 0.45 |
| 218-01-9 | Chrysene | 0.52 | U | 4.0 | 0.52 |
| 53-70-3 | Dibenz(a,h)anthracene | 0.65 | U | 4.0 | 0.65 |
| 132-64-9 | Dibenzofuran | 0.36 | U | 4.0 | 0.36 |
| 84-66-2 | Diethyl phthalate | 0.75 | U | 4.0 | 0.75 |
| 131-11-3 | Dimethyl phthalate | 0.53 | U | 4.0 | 0.53 |
| 84-74-2 | Di-n-butyl phthalate | 0.88 | U | 4.0 | 0.88 |
| 117-84-0 | Di-n-octyl phthalate | 1.6 | U | 5.0 | 1.6 |
| 122-39-4 | Diphenylamine | 0.49 | U | 10 | 0.49 |
| 52-85-7 | Famphur | 2.0 | U | 100 | 2.0 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-444835/1-A

Matrix: Water | Lab File ID: D31289.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 1000(mL) | Date Analyzed: 01/22/2019 17:40

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 206-44-0 | Fluoranthene | 0.64 | U | 4.0 | 0.64 |
| 86-73-7 | Fluorene | 0.49 | U | 4.0 | 0.49 |
| 118-74-1 | Hexachlorobenzene | 0.96 | U | 10 | 0.96 |
| 87-68-3 | Hexachlorobutadiene | 7.5 | U | 30 | 7.5 |
| 77-47-4 | Hexachlorocyclopentadiene | 6.6 | U | 50 | 6.6 |
| 67-72-1 | Hexachloroethane | 7.6 | U | 30 | 7.6 |
| 544-76-3 | Hexadecane | 0.35 | U | 10 | 0.35 |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 1.6 | U | 4.0 | 1.6 |
| 78-59-1 | Isophorone | 0.67 | U | 10 | 0.67 |
| 91-20-3 | Naphthalene | 0.40 | U | 4.0 | 0.40 |
| 98-95-3 | Nitrobenzene | 0.43 | U | 10 | 0.43 |
| 62-75-9 | N-Nitrosodimethylamine | 0.62 | U | 10 | 0.62 |
| 621-64-7 | N-Nitrosodi-n-propylamine | 0.56 | U | 10 | 0.56 |
| 86-30-6 | N-Nitrosodiphenylamine | 0.61 | U | 10 | 0.61 |
| 87-86-5 | Pentachlorophenol | 5.5 | U | 50 | 5.5 |
| 85-01-8 | Phenanthrene | 0.28 | U | 4.0 | 0.28 |
| 108-95-2 | Phenol | 0.56 | U | 10 | 0.56 |
| 129-00-0 | Pyrene | 0.43 | U | 10 | 0.43 |
| 110-86-1 | Pyridine | 1.8 | U | 20 | 1.8 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 118-79-6 | 2,4,6-Tribromophenol (Surr) | 73 | | 52-123 |
| 321-60-8 | 2-Fluorobiphenyl | 56 | | 47-119 |
| 367-12-4 | 2-Fluorophenol (Surr) | 44 | | 17-71 |
| 4165-60-0 | Nitrobenzene-d5 (Surr) | 59 | | 45-113 |
| 4165-62-2 | Phenol-d5 (Surr) | 30 | | 10-52 |
| 1718-51-0 | Terphenyl-d14 (Surr) | 81 | | 50-123 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-444835/1-A

Matrix: Water | Lab File ID: D31289.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 1000(mL) | Date Analyzed: 01/22/2019 17:40

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31289.D
Lims ID: MB 280-444835/1-A
Client ID:
Sample Type: MB
Inject. Date: 22-Jan-2019 17:40:30 ALS Bottle#: 10 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-444835_1-A
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:40 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 23-Jan-2019 09:22:55

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.505 | 4.503 | 0.002 | 96 | 133680 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.739 | 5.737 | 0.002 | 99 | 516611 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.481 | 7.484 | -0.003 | 90 | 327764 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 8.966 | 8.964 | 0.002 | 97 | 618832 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 12.898 | 12.901 | -0.003 | 98 | 643464 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 16.750 | 16.752 | -0.002 | 97 | 618251 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.314 | 3.309 | 0.005 | 92 | 221231 | 100.0 | 44.0 | |
| $ 8 Phenol-d5 | 99 | 4.153 | 4.153 | 0.000 | 98 | 201066 | 100.0 | 30.1 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.024 | 5.023 | 0.001 | 87 | 330891 | 100.0 | 59.4 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.797 | 6.797 | 0.000 | 99 | 642073 | 100.0 | 56.3 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.272 | 8.271 | 0.001 | 94 | 115121 | 100.0 | 72.7 | |
| $ 12 Terphenyl-d14 | 244 | 10.857 | 10.857 | 0.000 | 100 | 1198001 | 100.0 | 81.0 | |
| 13 1,4-Dioxane | 88 | | 1.856 | | | | | ND | |
| 14 N-Nitrosodimethylamine | 74 | | 2.096 | | | | | ND | |
| 15 Pyridine | 79 | | 2.149 | | | | | ND | |
| 16 2-Picoline | 93 | | 2.847 | | | | | ND | |
| 17 N-Nitrosomethylethylamine | 88 | | 2.922 | | | | | ND | |
| 18 Methyl methanesulfonate | 80 | | 3.189 | | | | | ND | |
| 19 N-Nitrosodiethylamine | 102 | | 3.558 | | | | | ND | |
| 20 Pentachlorophenol_T | 266 | | 3.643 | | | | | ND | |
| 21 Ethyl methanesulfonate | 79 | | 3.814 | | | | | ND | |
| 22 Benzaldehyde | 106 | | 4.091 | | | | | ND | |
| 23 n-Decane | 57 | | 4.345 | | | | | ND | |
| 24 Phenol | 94 | | 4.169 | | | | | ND | |
| 25 Aniline | 93 | | 4.190 | | | | | ND | |
| 26 Pentachloroethane | 117 | | 4.306 | | | | | ND | |
| 27 Bis(2-chloroethyl)ether | 93 | | 4.233 | | | | | ND | |
| 28 2-Chlorophenol | 128 | | 4.313 | | | | | ND | |
| 29 1,3-Dichlorobenzene | 146 | | 4.457 | | | | | ND | |
| 30 1,4-Dichlorobenzene | 146 | | 4.521 | | | | | ND | |
| 31 Benzyl alcohol | 108 | | 4.623 | | | | | ND | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 32 1,2-Dichlorobenzene | 146 | | 4.671 | | | | | ND | |
| 33 Benzidine_T | 184 | | 4.720 | | | | | ND | |
| 34 2,2'-oxybis[1-chloropropan | 45 | | 4.746 | | | | | ND | |
| 35 2-Methylphenol | 108 | | 4.735 | | | | | ND | |
| 36 N-Nitrosopyrrolidine | 100 | | 4.899 | | | | | ND | |
| 37 N-Nitrosomorpholine | 116 | | 4.936 | | | | | ND | |
| 38 N-Nitrosodi-n-propylamine | 70 | | 4.874 | | | | | ND | |
| 39 Acetophenone | 105 | | 4.879 | | | | | ND | |
| 40 4-Methylphenol | 108 | | 4.879 | | | | | ND | |
| 41 3-Methylphenol | 108 | | 4.879 | | | | | ND | |
| 42 3 & 4 Methylphenol | 108 | | 4.879 | | | | | ND | |
| 43 2-Toluidine | 106 | | 4.974 | | | | | ND | |
| 44 Hexachloroethane | 117 | | 4.997 | | | | | ND | |
| 45 Nitrobenzene | 77 | | 5.045 | | | | | ND | |
| 46 N-Nitrosopiperidine | 114 | | 5.241 | | | | | ND | |
| 47 Isophorone | 82 | | 5.275 | | | | | ND | |
| 48 2-Nitrophenol | 139 | | 5.355 | | | | | ND | |
| 49 2,4-Dimethylphenol | 107 | | 5.392 | | | | | ND | |
| 50 o,o',o''-Triethylphosphoro | 198 | | 5.502 | | | | | ND | |
| 51 Bis(2-chloroethoxy)methane | 93 | | 5.472 | | | | | ND | |
| 52 Benzoic acid | 105 | | 5.536 | | | | | ND | |
| 53 2,4-Dichlorophenol | 162 | | 5.600 | | | | | ND | |
| 54 alpha,alpha-Dimethyl phene | 58 | | 5.684 | | | | | ND | |
| 55 1,2,4-Trichlorobenzene | 180 | | 5.681 | | | | | ND | |
| 56 Naphthalene | 128 | | 5.761 | | | | | ND | |
| 57 4-Chloroaniline | 127 | | 5.798 | | | | | ND | |
| 58 2,6-Dichlorophenol | 162 | | 5.819 | | | | | ND | |
| 59 Hexachloropropene | 213 | | 5.914 | | | | | ND | |
| 60 Hexachlorobutadiene | 225 | | 5.884 | | | | | ND | |
| 61 N-Nitrosodi-n-butylamine | 84 | | 6.186 | | | | | ND | |
| 62 p-Phenylene diamine | 108 | | 6.197 | | | | | ND | |
| 63 Caprolactam | 55 | | 6.145 | | | | | ND | |
| 64 4-Chloro-3-methylphenol | 107 | | 6.290 | | | | | ND | |
| 65 Safrole, Total | 162 | | 6.405 | | | | | ND | |
| 66 2-Methylnaphthalene | 142 | | 6.439 | | | | | ND | |
| 67 1-Methylnaphthalene | 142 | | 6.541 | | | | | ND | |
| 68 Hexachlorocyclopentadiene | 237 | | 6.610 | | | | | ND | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | | 6.615 | | | | | ND | |
| 70 Isosafrole Peak 1 | 162 | | 6.694 | | | | | ND | |
| 71 2,4,6-Trichlorophenol | 196 | | 6.722 | | | | | ND | |
| 72 2,4,5-Trichlorophenol | 196 | | 6.765 | | | | | ND | |
| 73 Isosafrole Peak 2 | 104 | | 6.918 | | | | | ND | |
| 74 1,1'-Biphenyl | 154 | | 6.899 | | | | | ND | |
| 75 2-Chloronaphthalene | 162 | | 6.925 | | | | | ND | |
| 76 1-Chloronaphthalene | 162 | | 7.014 | | | | | ND | |
| 77 2-Nitroaniline | 65 | | 7.016 | | | | | ND | |
| 78 1,4-Naphthoquinone | 158 | | 7.148 | | | | | ND | |
| 79 1,4-Dinitrobenzene | 168 | | 7.196 | | | | | ND | |
| 80 Dimethyl phthalate | 163 | | 7.192 | | | | | ND | |
| 81 1,3-Dinitrobenzene | 168 | | 7.219 | | | | | ND | |
| 82 2,6-Dinitrotoluene | 165 | | 7.251 | | | | | ND | |
| 83 Acenaphthylene | 152 | | 7.342 | | | | | ND | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 84 3-Nitroaniline | 138 | | 7.427 | | | | | ND | |
| 85 Acenaphthene | 153 | | 7.513 | | | | | ND | |
| 86 2,4-Dinitrophenol | 184 | | 7.529 | | | | | ND | |
| 87 Pentachlorobenzene | 250 | | 7.719 | | | | | ND | |
| 88 4-Nitrophenol | 109 | | 7.609 | | | | | ND | |
| 89 2,4-Dinitrotoluene | 165 | | 7.657 | | | | | ND | |
| 90 Dibenzofuran | 168 | | 7.684 | | | | | ND | |
| 91 1-Naphthylamine | 143 | | 7.821 | | | | | ND | |
| 92 Hexadecane | 57 | | 7.914 | | | | | ND | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | | 7.812 | | | | | ND | |
| 94 2-Naphthylamine | 143 | | 7.896 | | | | | ND | |
| 95 Diethyl phthalate | 149 | | 7.892 | | | | | ND | |
| 96 Thionazin | 97 | | 8.035 | | | | | ND | |
| 97 4-Chlorophenyl phenyl ethe | 204 | | 8.015 | | | | | ND | |
| 98 N-Nitro-o-toluidine | 152 | | 8.088 | | | | | ND | |
| 99 Fluorene | 166 | | 8.026 | | | | | ND | |
| 100 4-Nitroaniline | 138 | | 8.042 | | | | | ND | |
| 101 4,6-Dinitro-2-methylphenol | 198 | | 8.074 | | | | | ND | |
| 102 N-Nitrosodiphenylamine | 169 | | 8.133 | | | | | ND | |
| 103 Diphenylamine | 169 | | 8.133 | | | | | ND | |
| 104 Tributyl phosphate | 99 | | 8.250 | | | | | ND | |
| 105 1,2-Diphenylhydrazine | 77 | | 8.175 | | | | | ND | |
| 106 Azobenzene | 77 | | 8.175 | | | | | ND | |
| 107 Sulfotepp | 97 | | 8.339 | | | | | ND | |
| 108 1,3,5-Trinitrobenzene | 213 | | 8.435 | | | | | ND | |
| 109 Diallate Peak 1 | 86 | | 8.483 | | | | | ND | |
| 110 Phorate | 121 | | 8.489 | | | | | ND | |
| 111 Phenacetin | 108 | | 8.494 | | | | | ND | |
| 112 Atrazine | 200 | | 8.656 | | | | | ND | |
| 113 Diallate Peak 2 | 86 | | 8.574 | | | | | ND | |
| 114 4-Bromophenyl phenyl ether | 248 | | 8.507 | | | | | ND | |
| 115 Dimethoate | 87 | | 8.654 | | | | | ND | |
| 116 Hexachlorobenzene | 284 | | 8.592 | | | | | ND | |
| 117 4-Aminobiphenyl | 169 | | 8.825 | | | | | ND | |
| 118 Pentachloronitrobenzene | 237 | | 8.863 | | | | | ND | |
| 119 Pentachlorophenol | 266 | | 8.784 | | | | | ND | |
| 120 Pronamide | 173 | | 8.884 | | | | | ND | |
| 121 Disulfoton | 88 | | 9.012 | | | | | ND | |
| 122 Dinoseb | 211 | | 9.018 | | | | | ND | |
| 123 Phenanthrene | 178 | | 8.993 | | | | | ND | |
| 124 Anthracene | 178 | | 9.041 | | | | | ND | |
| 125 Carbazole | 167 | | 9.196 | | | | | ND | |
| 126 Methyl parathion | 109 | | 9.386 | | | | | ND | |
| 127 Di-n-butyl phthalate | 149 | | 9.527 | | | | | ND | |
| 128 Ethyl Parathion | 109 | | 9.808 | | | | | ND | |
| 129 4-Nitroquinoline-1-oxide | 190 | | 9.851 | | | | | ND | |
| 130 Methapyrilene | 97 | | 9.942 | | | | | ND | |
| 131 Isodrin | 193 | | 10.209 | | | | | ND | |
| 132 Fluoranthene | 202 | | 10.312 | | | | | ND | |
| 133 Benzidine | 184 | | 10.477 | | | | | ND | |
| 134 Pyrene | 202 | | 10.638 | | | | | ND | |
| 135 Aramite Peak 1 | 185 | | 10.909 | | | | | ND | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 136 Aramite Peak 2 | 185 | | 11.032 | | | | | ND | |
| 137 p-Dimethylamino azobenzene | 120 | | 11.187 | | | | | ND | |
| 138 Chlorobenzilate | 251 | | 11.272 | | | | | ND | |
| 139 Famphur | 218 | | 11.600 | | | | | ND | |
| 140 3,3'-Dimethylbenzidine | 212 | | 11.801 | | | | | ND | |
| 141 Butyl benzyl phthalate | 149 | | 11.717 | | | | | ND | |
| 142 2-Acetylaminofluorene | 181 | | 12.324 | | | | | ND | |
| 143 4,4'-Methylene bis(2-chlor | 231 | | 12.987 | | | | | ND | |
| 144 3,3'-Dichlorobenzidine | 252 | | 12.850 | | | | | ND | |
| 145 Benzo[a]anthracene | 228 | | 12.887 | | | | | ND | |
| 146 Chrysene | 228 | | 12.973 | | | | | ND | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | | 13.053 | | | | | ND | |
| 148 Di-n-octyl phthalate | 149 | | 14.821 | | | | | ND | |
| 149 7,12-Dimethylbenz(a)anthra | 256 | | 15.861 | | | | | ND | |
| 150 Benzo[b]fluoranthene | 252 | | 15.686 | | | | | ND | |
| 151 Benzo[k]fluoranthene | 252 | | 15.766 | | | | | ND | |
| 152 Hexachlorophene | 196 | | 16.930 | | | | | ND | |
| 153 Benzo[a]pyrene | 252 | | 16.600 | | | | | ND | |
| 154 3-Methylcholanthrene | 268 | | 17.859 | | | | | ND | |
| 155 Dibenz[a,j]acridine | 279 | | 19.584 | | | | | ND | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | | 19.837 | | | | | ND | |
| 157 Dibenz(a,h)anthracene | 278 | | 19.939 | | | | | ND | |
| 158 Benzo[g,h,i]perylene | 276 | | 20.574 | | | | | ND | |
| S 166 Diallate | 86 | | 15.047 | | | | | ND | |
| S 167 Isosafrole | 162 | | 15.047 | | | | | ND | |
| S 168 Aramite, Total | 185 | | 15.047 | | | | | ND | |
| S 169 Methyl Phenols,Total | 108 | | 15.500 | | | | | ND | |
| S 170 Total Cresols | 108 | | 15.500 | | | | | ND | |
| 159 Tetraethyl Pyrophosphate ( | 1 | | 0.000 | | | | | ND | |
| 160 Kepone TIC | 1 | | 0.000 | | | | | ND | |
| 161 Kepone | 272 | | 0.000 | | | | | ND | |
| 163 4,4'-DDE | 246 | | 4.912 | | | | | ND | |
| 164 4,4'-DDD | 235 | | 5.132 | | | | | ND | |
| 165 4,4'-DDT | 235 | | 5.337 | | | | | ND | |

## Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

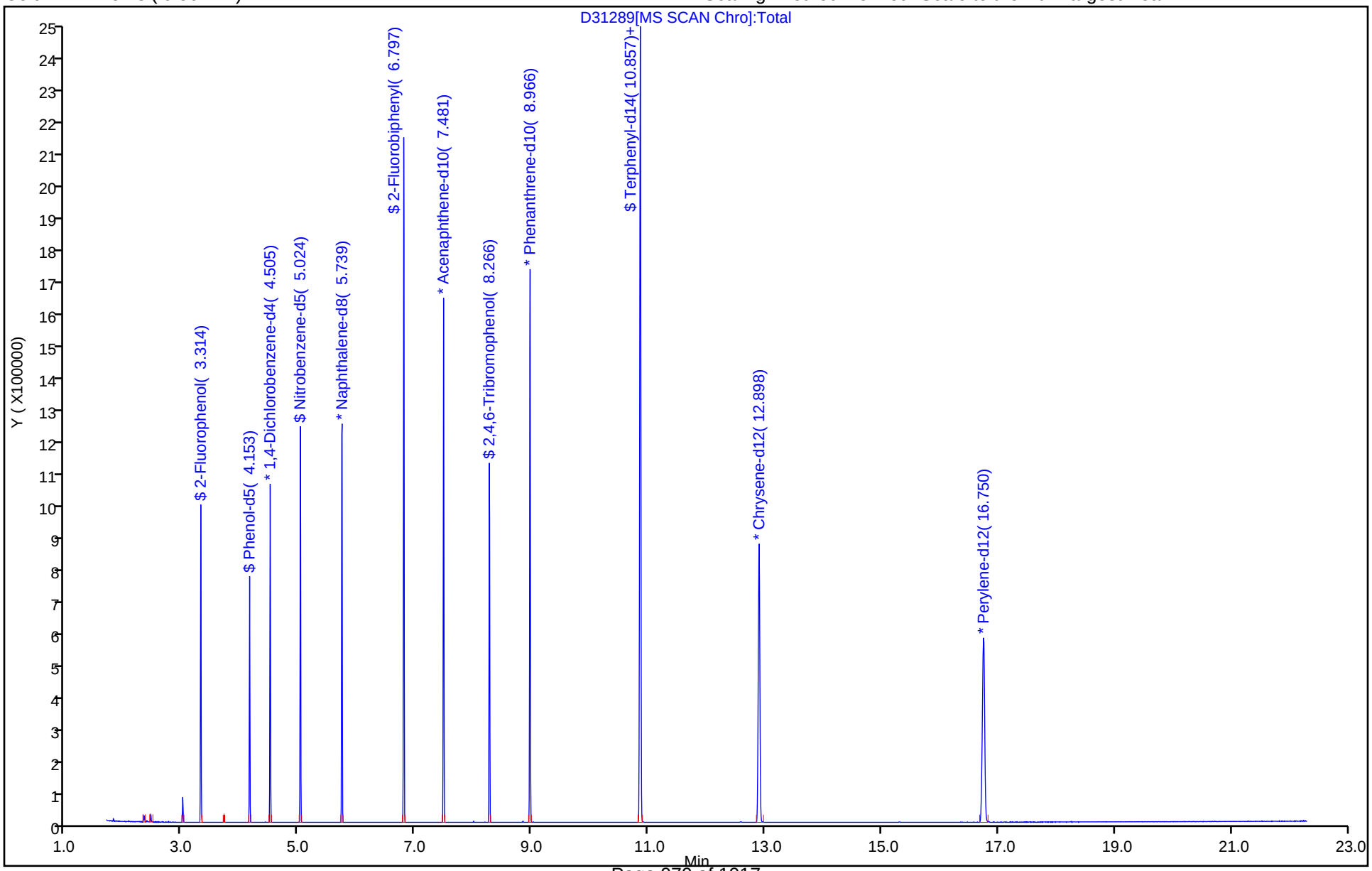
Report Date: 23-Jan-2019 10:44:42 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31289.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 17:40:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | MB 280-444835/1-A | | | Worklist Smp#: | 19 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 10 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31289.D
Lims ID: MB 280-444835/1-A
Client ID:
Sample Type: MB
Inject. Date: 22-Jan-2019 17:40:30 ALS Bottle#: 10 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-444835_1-A
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:40 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 23-Jan-2019 09:22:55

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 7 2-Fluorophenol | 100.0 | 44.0 | 44.04 |
| $ 8 Phenol-d5 | 100.0 | 30.1 | 30.05 |
| $ 9 Nitrobenzene-d5 | 100.0 | 59.4 | 59.44 |
| $ 10 2-Fluorobiphenyl | 100.0 | 56.3 | 56.34 |
| $ 11 2,4,6-Tribromophenol | 100.0 | 72.7 | 72.71 |
| $ 12 Terphenyl-d14 | 100.0 | 81.0 | 81.00 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-444835/2-A

Matrix: Water | Lab File ID: D31290.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 1000(mL) | Date Analyzed: 01/22/2019 18:10

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 92-52-4 | 1,1'-Biphenyl | 65.2 | | 10 | 0.41 |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 67.4 | | 10 | 2.0 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 62.7 | | 5.0 | 2.0 |
| 95-50-1 | 1,2-Dichlorobenzene | 56.8 | | 5.0 | 2.0 |
| 122-66-7 | 1,2-Diphenylhydrazine(as Azobenzene) | 67.5 | | 10 | 0.54 |
| 541-73-1 | 1,3-Dichlorobenzene | 56.1 | | 10 | 2.0 |
| 99-65-0 | 1,3-Dinitrobenzene | 69.6 | | 10 | 0.97 |
| 106-46-7 | 1,4-Dichlorobenzene | 56.9 | | 5.0 | 2.0 |
| 123-91-1 | 1,4-Dioxane | 31.8 | | 20 | 0.71 |
| 90-12-0 | 1-Methylnaphthalene | 70.4 | | 4.0 | 0.35 |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 69.3 | | 50 | 0.96 |
| 95-95-4 | 2,4,5-Trichlorophenol | 67.2 | | 10 | 0.52 |
| 88-06-2 | 2,4,6-Trichlorophenol | 70.1 | | 10 | 0.74 |
| 120-83-2 | 2,4-Dichlorophenol | 68.8 | | 10 | 0.68 |
| 105-67-9 | 2,4-Dimethylphenol | 66.7 | | 10 | 0.67 |
| 51-28-5 | 2,4-Dinitrophenol | 126 | | 30 | 7.5 |
| 121-14-2 | 2,4-Dinitrotoluene | 68.9 | | 10 | 0.93 |
| 87-65-0 | 2,6-Dichlorophenol | 69.6 | | 10 | 0.75 |
| 606-20-2 | 2,6-Dinitrotoluene | 68.8 | | 10 | 0.72 |
| 91-58-7 | 2-Chloronaphthalene | 63.9 | | 4.0 | 0.46 |
| 95-57-8 | 2-Chlorophenol | 58.5 | | 10 | 0.43 |
| 91-57-6 | 2-Methylnaphthalene | 68.6 | | 4.0 | 0.41 |
| 95-48-7 | 2-Methylphenol | 54.1 | | 10 | 0.56 |
| 88-74-4 | 2-Nitroaniline | 65.3 | | 10 | 0.90 |
| 88-75-5 | 2-Nitrophenol | 66.7 | | 10 | 0.62 |
| 15831-10-4 | 3 & 4 Methylphenol | 49.8 | | 10 | 0.40 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 148 | | 50 | 0.83 |
| 108-39-4 | 3-Methylphenol | 49.8 | | 10 | 0.40 |
| 99-09-2 | 3-Nitroaniline | 55.7 | | 10 | 0.78 |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 167 | | 50 | 5.9 |
| 101-55-3 | 4-Bromophenyl phenyl ether | 72.8 | | 10 | 0.41 |
| 59-50-7 | 4-Chloro-3-methylphenol | 69.5 | | 10 | 0.45 |
| 106-47-8 | 4-Chloroaniline | 60.6 | | 10 | 0.56 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 66.5 | | 10 | 0.63 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-444835/2-A

Matrix: Water | Lab File ID: D31290.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 1000(mL) | Date Analyzed: 01/22/2019 18:10

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 106-44-5 | 4-Methylphenol | 49.8 | | 10 | 0.40 |
| 100-01-6 | 4-Nitroaniline | 65.6 | | 10 | 0.84 |
| 100-02-7 | 4-Nitrophenol | 52.3 | | 10 | 1.0 |
| 83-32-9 | Acenaphthene | 66.1 | | 4.0 | 0.45 |
| 208-96-8 | Acenaphthylene | 65.3 | | 4.0 | 0.50 |
| 98-86-2 | Acetophenone | 64.3 | | 10 | 0.52 |
| 62-53-3 | Aniline | 51.2 | | 10 | 0.88 |
| 120-12-7 | Anthracene | 75.1 | | 4.0 | 0.45 |
| 103-33-3 | Azobenzene | 66.7 | | 4.0 | 0.54 |
| 100-52-7 | Benzaldehyde | 38.2 | | 10 | 0.53 |
| 92-87-5 | Benzidine | 64.7 | J | 100 | 4.4 |
| 56-55-3 | Benzo[a]anthracene | 68.1 | | 4.0 | 0.58 |
| 50-32-8 | Benzo[a]pyrene | 74.7 | | 4.0 | 0.64 |
| 205-99-2 | Benzo[b]fluoranthene | 75.4 | | 4.0 | 0.53 |
| 191-24-2 | Benzo[g,h,i]perylene | 75.4 | | 4.0 | 0.79 |
| 207-08-9 | Benzo[k]fluoranthene | 75.7 | | 4.0 | 0.56 |
| 65-85-0 | Benzoic acid | 20.9 | J | 25 | 5.7 |
| 100-51-6 | Benzyl alcohol | 52.5 | | 10 | 0.35 |
| 108-60-1 | bis (2-chloroisopropyl) ether | 60.7 | | 10 | 0.42 |
| 111-91-1 | Bis(2-chloroethoxy)methane | 67.8 | | 10 | 0.61 |
| 111-44-4 | Bis(2-chloroethyl)ether | 64.9 | | 10 | 0.49 |
| 117-81-7 | Bis(2-ethylhexyl) phthalate | 72.7 | | 10 | 1.1 |
| 85-68-7 | Butyl benzyl phthalate | 70.3 | | 5.0 | 2.0 |
| 105-60-2 | Caprolactam | 14.6 | | 10 | 1.2 |
| 86-74-8 | Carbazole | 74.4 | | 4.0 | 0.45 |
| 218-01-9 | Chrysene | 72.4 | | 4.0 | 0.52 |
| 53-70-3 | Dibenz(a,h)anthracene | 76.4 | | 4.0 | 0.65 |
| 132-64-9 | Dibenzofuran | 67.0 | | 4.0 | 0.36 |
| 84-66-2 | Diethyl phthalate | 68.1 | | 4.0 | 0.75 |
| 131-11-3 | Dimethyl phthalate | 67.4 | | 4.0 | 0.53 |
| 84-74-2 | Di-n-butyl phthalate | 74.6 | | 4.0 | 0.88 |
| 117-84-0 | Di-n-octyl phthalate | 73.0 | | 5.0 | 1.6 |
| 122-39-4 | Diphenylamine | 57.9 | | 10 | 0.49 |
| 206-44-0 | Fluoranthene | 74.3 | | 4.0 | 0.64 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-444835/2-A

Matrix: Water | Lab File ID: D31290.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 1000(mL) | Date Analyzed: 01/22/2019 18:10

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 86-73-7 | Fluorene | 67.8 | | 4.0 | 0.49 |
| 118-74-1 | Hexachlorobenzene | 75.7 | | 10 | 0.96 |
| 87-68-3 | Hexachlorobutadiene | 62.6 | | 30 | 7.5 |
| 77-47-4 | Hexachlorocyclopentadiene | 114 | | 50 | 6.6 |
| 67-72-1 | Hexachloroethane | 53.2 | | 30 | 7.6 |
| 544-76-3 | Hexadecane | 64.8 | | 10 | 0.35 |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 72.2 | | 4.0 | 1.6 |
| 78-59-1 | Isophorone | 66.8 | | 10 | 0.67 |
| 91-20-3 | Naphthalene | 64.9 | | 4.0 | 0.40 |
| 98-95-3 | Nitrobenzene | 65.2 | | 10 | 0.43 |
| 62-75-9 | N-Nitrosodimethylamine | 33.3 | | 10 | 0.62 |
| 621-64-7 | N-Nitrosodi-n-propylamine | 65.6 | | 10 | 0.56 |
| 86-30-6 | N-Nitrosodiphenylamine | 75.9 | | 10 | 0.61 |
| 87-86-5 | Pentachlorophenol | 147 | | 50 | 5.5 |
| 85-01-8 | Phenanthrene | 74.8 | | 4.0 | 0.28 |
| 108-95-2 | Phenol | 22.9 | | 10 | 0.56 |
| 129-00-0 | Pyrene | 72.4 | | 10 | 0.43 |
| 110-86-1 | Pyridine | 59.1 | | 20 | 1.8 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 118-79-6 | 2,4,6-Tribromophenol (Surr) | 86 | | 52-123 |
| 321-60-8 | 2-Fluorobiphenyl | 80 | | 47-119 |
| 367-12-4 | 2-Fluorophenol (Surr) | 42 | | 17-71 |
| 4165-60-0 | Nitrobenzene-d5 (Surr) | 82 | | 45-113 |
| 4165-62-2 | Phenol-d5 (Surr) | 26 | | 10-52 |
| 1718-51-0 | Terphenyl-d14 (Surr) | 82 | | 50-123 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31290.D
Lims ID: LCS 280-444835/2-A
Client ID:
Sample Type: LCS
Inject. Date: 22-Jan-2019 18:10:30 ALS Bottle#: 11 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-444835_2-A
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:40 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 23-Jan-2019 09:22:29

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.509 | 4.503 | 0.006 | 95 | 132748 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.738 | 5.737 | 0.001 | 99 | 529049 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.484 | 7.484 | 0.000 | 91 | 332199 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 8.964 | 8.964 | 0.000 | 97 | 608169 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 12.907 | 12.901 | 0.006 | 98 | 625943 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 16.753 | 16.752 | 0.001 | 97 | 611322 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.318 | 3.309 | 0.009 | 92 | 208772 | 100.0 | 41.9 | |
| $ 8 Phenol-d5 | 99 | 4.156 | 4.153 | 0.003 | 98 | 174331 | 100.0 | 26.2 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.027 | 5.023 | 0.004 | 86 | 465194 | 100.0 | 81.6 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.801 | 6.797 | 0.004 | 99 | 925777 | 100.0 | 80.1 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.270 | 8.271 | -0.001 | 94 | 137841 | 100.0 | 85.9 | |
| $ 12 Terphenyl-d14 | 244 | 10.855 | 10.857 | -0.002 | 100 | 1183717 | 100.0 | 82.3 | |
| 13 1,4-Dioxane | 88 | 1.859 | 1.856 | 0.003 | 91 | 76725 | 80.0 | 31.8 | |
| 14 N-Nitrosodimethylamine | 74 | 2.100 | 2.096 | 0.004 | 92 | 127365 | 80.0 | 33.3 | |
| 15 Pyridine | 79 | 2.153 | 2.149 | 0.004 | 97 | 362770 | 160.0 | 59.1 | |
| 22 Benzaldehyde | 106 | 4.092 | 4.091 | 0.001 | 98 | 154992 | 80.0 | 38.2 | |
| 23 n-Decane | 57 | 4.349 | 4.345 | 0.004 | 97 | 257038 | 80.0 | 49.3 | |
| 24 Phenol | 94 | 4.167 | 4.169 | -0.002 | 96 | 159357 | 80.0 | 22.9 | |
| 25 Aniline | 93 | 4.188 | 4.190 | -0.002 | 98 | 446115 | 80.0 | 51.2 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.236 | 4.233 | 0.003 | 96 | 321335 | 80.0 | 64.9 | |
| 28 2-Chlorophenol | 128 | 4.317 | 4.313 | 0.004 | 97 | 289942 | 80.0 | 58.5 | |
| 29 1,3-Dichlorobenzene | 146 | 4.455 | 4.457 | -0.002 | 97 | 290411 | 80.0 | 56.1 | |
| 30 1,4-Dichlorobenzene | 146 | 4.525 | 4.521 | 0.004 | 93 | 296077 | 80.0 | 56.9 | |
| 31 Benzyl alcohol | 108 | 4.626 | 4.623 | 0.003 | 95 | 193446 | 80.0 | 52.5 | |
| 32 1,2-Dichlorobenzene | 146 | 4.674 | 4.671 | 0.003 | 96 | 284900 | 80.0 | 56.8 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.749 | 4.746 | 0.003 | 94 | 402965 | 80.0 | 60.7 | |
| 35 2-Methylphenol | 108 | 4.739 | 4.735 | 0.004 | 93 | 275439 | 80.0 | 54.1 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.872 | 4.874 | -0.002 | 88 | 252726 | 80.0 | 65.6 | |
| 39 Acetophenone | 105 | 4.877 | 4.879 | -0.002 | 93 | 451148 | 80.0 | 64.3 | |
| 40 4-Methylphenol | 108 | 4.883 | 4.879 | 0.004 | 93 | 250515 | 80.0 | 49.8 | |
| 41 3-Methylphenol | 108 | 4.883 | 4.879 | 0.004 | 93 | 250515 | 80.0 | 49.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.883 | 4.879 | 0.004 | 72 | 250515 | 80.0 | 49.8 | |
| 44 Hexachloroethane | 117 | 5.000 | 4.997 | 0.003 | 93 | 104511 | 80.0 | 53.2 | |
| 45 Nitrobenzene | 77 | 5.048 | 5.045 | 0.003 | 85 | 377643 | 80.0 | 65.2 | |
| 47 Isophorone | 82 | 5.273 | 5.275 | -0.002 | 99 | 717499 | 80.0 | 66.8 | |
| 48 2-Nitrophenol | 139 | 5.358 | 5.355 | 0.003 | 96 | 171826 | 80.0 | 66.7 | |
| 49 2,4-Dimethylphenol | 107 | 5.396 | 5.392 | 0.004 | 96 | 341495 | 80.0 | 66.7 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.476 | 5.472 | 0.004 | 99 | 415402 | 80.0 | 67.8 | |
| 52 Benzoic acid | 105 | 5.460 | 5.536 | -0.076 | 87 | 71546 | 80.0 | 20.9 | |
| 53 2,4-Dichlorophenol | 162 | 5.599 | 5.600 | -0.001 | 95 | 277661 | 80.0 | 68.8 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.684 | 5.681 | 0.003 | 93 | 276756 | 80.0 | 62.7 | |
| 56 Naphthalene | 128 | 5.759 | 5.761 | -0.002 | 97 | 901379 | 80.0 | 64.9 | |
| 57 4-Chloroaniline | 127 | 5.802 | 5.798 | 0.004 | 96 | 377895 | 80.0 | 60.6 | |
| 58 2,6-Dichlorophenol | 162 | 5.818 | 5.819 | -0.001 | 97 | 278619 | 80.0 | 69.6 | |
| 60 Hexachlorobutadiene | 225 | 5.887 | 5.884 | 0.003 | 95 | 145443 | 80.0 | 62.6 | |
| 63 Caprolactam | 55 | 6.122 | 6.145 | -0.023 | 83 | 36233 | 80.0 | 14.6 | |
| 64 4-Chloro-3-methylphenol | 107 | 6.282 | 6.290 | -0.008 | 97 | 313088 | 80.0 | 69.5 | |
| 66 2-Methylnaphthalene | 142 | 6.443 | 6.439 | 0.004 | 93 | 643217 | 80.0 | 68.6 | |
| 67 1-Methylnaphthalene | 142 | 6.544 | 6.541 | 0.003 | 94 | 616734 | 80.0 | 70.4 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.614 | 6.610 | 0.004 | 95 | 335321 | 160.0 | 114.2 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.614 | 6.615 | -0.001 | 96 | 291539 | 80.0 | 67.4 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.726 | 6.722 | 0.004 | 93 | 223050 | 80.0 | 70.1 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.769 | 6.765 | 0.004 | 95 | 240233 | 80.0 | 67.2 | |
| 74 1,1'-Biphenyl | 154 | 6.902 | 6.899 | 0.003 | 95 | 785174 | 80.0 | 65.2 | |
| 75 2-Chloronaphthalene | 162 | 6.929 | 6.925 | 0.004 | 96 | 613601 | 80.0 | 63.9 | |
| 77 2-Nitroaniline | 65 | 7.020 | 7.016 | 0.004 | 84 | 226188 | 80.0 | 65.3 | |
| 80 Dimethyl phthalate | 163 | 7.191 | 7.192 | -0.001 | 99 | 739629 | 80.0 | 67.4 | |
| 81 1,3-Dinitrobenzene | 168 | 7.223 | 7.219 | 0.004 | 88 | 135484 | 80.0 | 69.6 | |
| 82 2,6-Dinitrotoluene | 165 | 7.249 | 7.251 | -0.002 | 96 | 187150 | 80.0 | 68.8 | |
| 83 Acenaphthylene | 152 | 7.340 | 7.342 | -0.002 | 99 | 1023814 | 80.0 | 65.3 | |
| 84 3-Nitroaniline | 138 | 7.426 | 7.427 | -0.001 | 94 | 177931 | 80.0 | 55.7 | |
| 85 Acenaphthene | 153 | 7.516 | 7.513 | 0.003 | 95 | 623564 | 80.0 | 66.1 | |
| 86 2,4-Dinitrophenol | 184 | 7.527 | 7.529 | -0.002 | 85 | 219153 | 160.0 | 126.1 | |
| 88 4-Nitrophenol | 109 | 7.602 | 7.609 | -0.007 | 93 | 85021 | 160.0 | 52.3 | |
| 89 2,4-Dinitrotoluene | 165 | 7.655 | 7.657 | -0.002 | 94 | 256381 | 80.0 | 68.9 | |
| 90 Dibenzofuran | 168 | 7.687 | 7.684 | 0.003 | 98 | 965627 | 80.0 | 67.0 | |
| 92 Hexadecane | 57 | 7.912 | 7.914 | -0.002 | 97 | 438159 | 80.0 | 64.8 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.810 | 7.812 | -0.002 | 71 | 208240 | 80.0 | 69.3 | |
| 95 Diethyl phthalate | 149 | 7.896 | 7.892 | 0.004 | 98 | 738399 | 80.0 | 68.1 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.019 | 8.015 | 0.004 | 90 | 371786 | 80.0 | 66.5 | |
| 99 Fluorene | 166 | 8.029 | 8.026 | 0.003 | 94 | 776358 | 80.0 | 67.8 | |
| 100 4-Nitroaniline | 138 | 8.040 | 8.042 | -0.002 | 86 | 223222 | 80.0 | 65.6 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.072 | 8.074 | -0.002 | 89 | 328344 | 160.0 | 166.7 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.136 | 8.133 | 0.003 | 61 | 592903 | 80.0 | 75.9 | |
| 103 Diphenylamine | 169 | 8.136 | 8.133 | 0.003 | 95 | 592903 | 68.0 | 57.9 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.179 | 8.175 | 0.004 | 98 | 883911 | 80.9 | 67.5 | |
| 106 Azobenzene | 77 | 8.179 | 8.175 | 0.004 | 97 | 883911 | 80.0 | 66.7 | |
| 112 Atrazine | 200 | 8.660 | 8.656 | 0.004 | 94 | 229631 | 80.0 | 77.0 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.505 | 8.507 | -0.002 | 65 | 225300 | 80.0 | 72.8 | |
| 116 Hexachlorobenzene | 284 | 8.596 | 8.592 | 0.004 | 95 | 226361 | 80.0 | 75.7 | |
| 119 Pentachlorophenol | 266 | 8.783 | 8.784 | -0.001 | 93 | 274550 | 160.0 | 147.2 | |
| 123 Phenanthrene | 178 | 8.991 | 8.993 | -0.002 | 98 | 1162183 | 80.0 | 74.8 | |
| 124 Anthracene | 178 | 9.044 | 9.041 | 0.003 | 98 | 1208458 | 80.0 | 75.1 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.194 | 9.196 | -0.002 | 95 | 1156089 | 80.0 | 74.4 | |
| 127 Di-n-butyl phthalate | 149 | 9.525 | 9.527 | -0.002 | 100 | 1279352 | 80.0 | 74.6 | |
| 132 Fluoranthene | 202 | 10.316 | 10.312 | 0.004 | 98 | 1355332 | 80.0 | 74.3 | |
| 133 Benzidine | 184 | 10.476 | 10.477 | -0.001 | 100 | 801736 | 160.0 | 64.7 | |
| 134 Pyrene | 202 | 10.636 | 10.638 | -0.002 | 97 | 1436397 | 80.0 | 72.4 | |
| 141 Butyl benzyl phthalate | 149 | 11.721 | 11.717 | 0.004 | 98 | 593192 | 80.0 | 70.3 | |
| 144 3,3'-Dichlorobenzidine | 252 | 12.853 | 12.850 | 0.003 | 73 | 973387 | 160.0 | 148.3 | |
| 145 Benzo[a]anthracene | 228 | 12.885 | 12.887 | -0.002 | 98 | 1351325 | 80.0 | 68.1 | |
| 146 Chrysene | 228 | 12.971 | 12.973 | -0.002 | 98 | 1370973 | 80.0 | 72.4 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.051 | 13.053 | -0.002 | 97 | 834531 | 80.0 | 72.7 | |
| 148 Di-n-octyl phthalate | 149 | 14.819 | 14.821 | -0.002 | 99 | 1447411 | 80.0 | 73.0 | |
| 150 Benzo[b]fluoranthene | 252 | 15.685 | 15.686 | -0.001 | 98 | 1365922 | 80.0 | 75.4 | |
| 151 Benzo[k]fluoranthene | 252 | 15.765 | 15.766 | -0.001 | 99 | 1399677 | 80.0 | 75.7 | |
| 153 Benzo[a]pyrene | 252 | 16.593 | 16.600 | -0.007 | 78 | 1346816 | 80.0 | 74.7 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 19.841 | 19.837 | 0.004 | 99 | 1199821 | 80.0 | 72.2 | |
| 157 Dibenz(a,h)anthracene | 278 | 19.932 | 19.939 | -0.007 | 94 | 1217373 | 80.0 | 76.4 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.567 | 20.574 | -0.007 | 97 | 1272878 | 80.0 | 75.4 | |

## Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

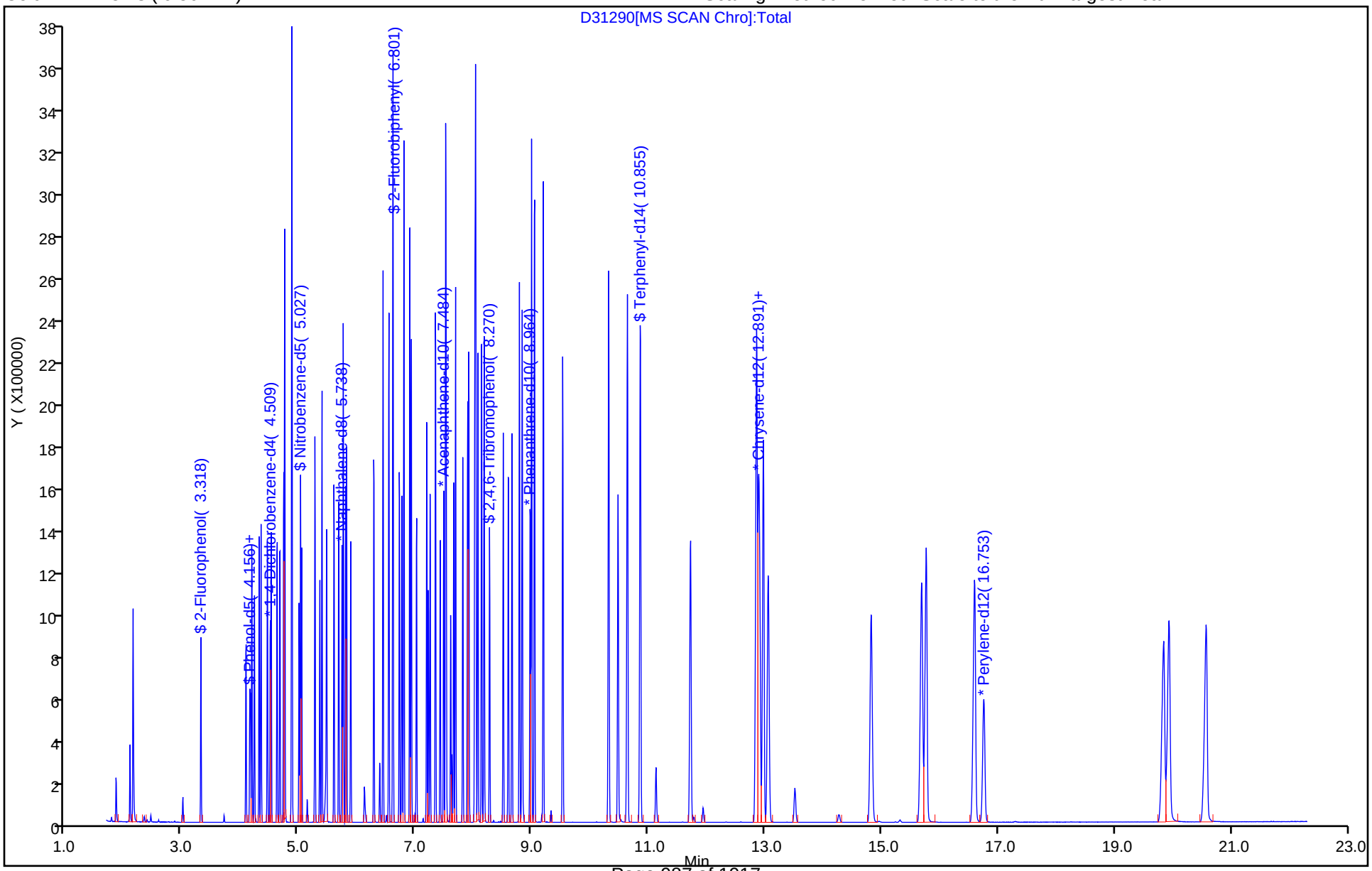
Report Date: 23-Jan-2019 10:44:44 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31290.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 18:10:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | LCS 280-444835/2-A | | | Worklist Smp#: | 20 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 11 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31290.D
Lims ID: LCS 280-444835/2-A
Client ID:
Sample Type: LCS
Inject. Date: 22-Jan-2019 18:10:30 ALS Bottle#: 11 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-444835_2-A
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:40 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 23-Jan-2019 09:22:29

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 7 2-Fluorophenol | 100.0 | 41.9 | 41.86 |
| $ 8 Phenol-d5 | 100.0 | 26.2 | 26.24 |
| $ 9 Nitrobenzene-d5 | 100.0 | 81.6 | 81.60 |
| $ 10 2-Fluorobiphenyl | 100.0 | 80.1 | 80.15 |
| $ 11 2,4,6-Tribromophenol | 100.0 | 85.9 | 85.89 |
| $ 12 Terphenyl-d14 | 100.0 | 82.3 | 82.27 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-444835/3-A

Matrix: Water | Lab File ID: D31291.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 1000(mL) | Date Analyzed: 01/22/2019 18:40

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 92-52-4 | 1,1'-Biphenyl | 60.9 | | 10 | 0.41 |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | 60.7 | | 10 | 2.0 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 56.6 | | 5.0 | 2.0 |
| 95-50-1 | 1,2-Dichlorobenzene | 51.7 | | 5.0 | 2.0 |
| 122-66-7 | 1,2-Diphenylhydrazine(as Azobenzene) | 66.1 | | 10 | 0.54 |
| 541-73-1 | 1,3-Dichlorobenzene | 49.8 | | 10 | 2.0 |
| 99-65-0 | 1,3-Dinitrobenzene | 66.9 | | 10 | 0.97 |
| 106-46-7 | 1,4-Dichlorobenzene | 51.0 | | 5.0 | 2.0 |
| 123-91-1 | 1,4-Dioxane | 25.1 | | 20 | 0.71 |
| 90-12-0 | 1-Methylnaphthalene | 64.2 | | 4.0 | 0.35 |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | 66.2 | | 50 | 0.96 |
| 95-95-4 | 2,4,5-Trichlorophenol | 64.6 | | 10 | 0.52 |
| 88-06-2 | 2,4,6-Trichlorophenol | 65.6 | | 10 | 0.74 |
| 120-83-2 | 2,4-Dichlorophenol | 61.0 | | 10 | 0.68 |
| 105-67-9 | 2,4-Dimethylphenol | 59.3 | | 10 | 0.67 |
| 51-28-5 | 2,4-Dinitrophenol | 124 | | 30 | 7.5 |
| 121-14-2 | 2,4-Dinitrotoluene | 66.5 | | 10 | 0.93 |
| 87-65-0 | 2,6-Dichlorophenol | 62.9 | | 10 | 0.75 |
| 606-20-2 | 2,6-Dinitrotoluene | 65.9 | | 10 | 0.72 |
| 91-58-7 | 2-Chloronaphthalene | 59.4 | | 4.0 | 0.46 |
| 95-57-8 | 2-Chlorophenol | 55.2 | | 10 | 0.43 |
| 91-57-6 | 2-Methylnaphthalene | 63.0 | | 4.0 | 0.41 |
| 95-48-7 | 2-Methylphenol | 55.2 | | 10 | 0.56 |
| 88-74-4 | 2-Nitroaniline | 63.3 | | 10 | 0.90 |
| 88-75-5 | 2-Nitrophenol | 61.5 | | 10 | 0.62 |
| 15831-10-4 | 3 & 4 Methylphenol | 55.5 | | 10 | 0.40 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 147 | | 50 | 0.83 |
| 108-39-4 | 3-Methylphenol | 55.5 | | 10 | 0.40 |
| 99-09-2 | 3-Nitroaniline | 57.9 | | 10 | 0.78 |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 160 | | 50 | 5.9 |
| 101-55-3 | 4-Bromophenyl phenyl ether | 70.8 | | 10 | 0.41 |
| 59-50-7 | 4-Chloro-3-methylphenol | 65.9 | | 10 | 0.45 |
| 106-47-8 | 4-Chloroaniline | 32.4 | | 10 | 0.56 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 64.1 | | 10 | 0.63 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-444835/3-A

Matrix: Water | Lab File ID: D31291.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 1000(mL) | Date Analyzed: 01/22/2019 18:40

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 106-44-5 | 4-Methylphenol | 55.5 | | 10 | 0.40 |
| 100-01-6 | 4-Nitroaniline | 63.8 | | 10 | 0.84 |
| 100-02-7 | 4-Nitrophenol | 79.5 | | 10 | 1.0 |
| 83-32-9 | Acenaphthene | 61.9 | | 4.0 | 0.45 |
| 208-96-8 | Acenaphthylene | 61.7 | | 4.0 | 0.50 |
| 98-86-2 | Acetophenone | 59.3 | | 10 | 0.52 |
| 62-53-3 | Aniline | 2.37 | J | 10 | 0.88 |
| 120-12-7 | Anthracene | 73.4 | | 4.0 | 0.45 |
| 103-33-3 | Azobenzene | 65.4 | | 4.0 | 0.54 |
| 100-52-7 | Benzaldehyde | 48.5 | | 10 | 0.53 |
| 92-87-5 | Benzidine | 13.9 | J | 100 | 4.4 |
| 56-55-3 | Benzo[a]anthracene | 65.5 | | 4.0 | 0.58 |
| 50-32-8 | Benzo[a]pyrene | 72.3 | | 4.0 | 0.64 |
| 205-99-2 | Benzo[b]fluoranthene | 72.6 | | 4.0 | 0.53 |
| 191-24-2 | Benzo[g,h,i]perylene | 74.2 | | 4.0 | 0.79 |
| 207-08-9 | Benzo[k]fluoranthene | 73.7 | | 4.0 | 0.56 |
| 65-85-0 | Benzoic acid | 30.3 | | 25 | 5.7 |
| 100-51-6 | Benzyl alcohol | 46.1 | | 10 | 0.35 |
| 108-60-1 | bis (2-chloroisopropyl) ether | 55.3 | | 10 | 0.42 |
| 111-91-1 | Bis(2-chloroethoxy)methane | 61.2 | | 10 | 0.61 |
| 111-44-4 | Bis(2-chloroethyl)ether | 58.5 | | 10 | 0.49 |
| 117-81-7 | Bis(2-ethylhexyl) phthalate | 72.0 | | 10 | 1.1 |
| 85-68-7 | Butyl benzyl phthalate | 68.9 | | 5.0 | 2.0 |
| 105-60-2 | Caprolactam | 13.1 | | 10 | 1.2 |
| 86-74-8 | Carbazole | 71.9 | | 4.0 | 0.45 |
| 218-01-9 | Chrysene | 70.2 | | 4.0 | 0.52 |
| 53-70-3 | Dibenz(a,h)anthracene | 74.5 | | 4.0 | 0.65 |
| 132-64-9 | Dibenzofuran | 63.5 | | 4.0 | 0.36 |
| 84-66-2 | Diethyl phthalate | 66.8 | | 4.0 | 0.75 |
| 131-11-3 | Dimethyl phthalate | 65.7 | | 4.0 | 0.53 |
| 84-74-2 | Di-n-butyl phthalate | 72.6 | | 4.0 | 0.88 |
| 117-84-0 | Di-n-octyl phthalate | 71.2 | | 5.0 | 1.6 |
| 122-39-4 | Diphenylamine | 55.6 | | 10 | 0.49 |
| 206-44-0 | Fluoranthene | 70.6 | | 4.0 | 0.64 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-444835/3-A

Matrix: Water | Lab File ID: D31291.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 01/21/2019 06:56

Sample wt/vol: 1000(mL) | Date Analyzed: 01/22/2019 18:40

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 445019 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 86-73-7 | Fluorene | 65.0 | | 4.0 | 0.49 |
| 118-74-1 | Hexachlorobenzene | 72.6 | | 10 | 0.96 |
| 87-68-3 | Hexachlorobutadiene | 56.1 | | 30 | 7.5 |
| 77-47-4 | Hexachlorocyclopentadiene | 105 | | 50 | 6.6 |
| 67-72-1 | Hexachloroethane | 46.9 | | 30 | 7.6 |
| 544-76-3 | Hexadecane | 61.4 | | 10 | 0.35 |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 71.0 | | 4.0 | 1.6 |
| 78-59-1 | Isophorone | 60.8 | | 10 | 0.67 |
| 91-20-3 | Naphthalene | 60.0 | | 4.0 | 0.40 |
| 98-95-3 | Nitrobenzene | 59.8 | | 10 | 0.43 |
| 62-75-9 | N-Nitrosodimethylamine | 28.1 | | 10 | 0.62 |
| 621-64-7 | N-Nitrosodi-n-propylamine | 59.6 | | 10 | 0.56 |
| 86-30-6 | N-Nitrosodiphenylamine | 73.0 | | 10 | 0.61 |
| 87-86-5 | Pentachlorophenol | 147 | | 50 | 5.5 |
| 85-01-8 | Phenanthrene | 72.7 | | 4.0 | 0.28 |
| 108-95-2 | Phenol | 31.7 | | 10 | 0.56 |
| 129-00-0 | Pyrene | 70.4 | | 10 | 0.43 |
| 110-86-1 | Pyridine | 1.8 | U | 20 | 1.8 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 118-79-6 | 2,4,6-Tribromophenol (Surr) | 84 | | 52-123 |
| 321-60-8 | 2-Fluorobiphenyl | 74 | | 47-119 |
| 367-12-4 | 2-Fluorophenol (Surr) | 54 | | 17-71 |
| 4165-60-0 | Nitrobenzene-d5 (Surr) | 75 | | 45-113 |
| 4165-62-2 | Phenol-d5 (Surr) | 38 | | 10-52 |
| 1718-51-0 | Terphenyl-d14 (Surr) | 82 | | 50-123 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31291.D
Lims ID: LCSD 280-444835/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 22-Jan-2019 18:40:30 ALS Bottle#: 12 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-444835_3-A
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:40 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 23-Jan-2019 09:19:23

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 1 1,4-Dichlorobenzene-d4 | 152 | 4.509 | 4.503 | 0.006 | 95 | 137307 | 40.0 | 40.0 | |
| * 2 Naphthalene-d8 | 136 | 5.738 | 5.737 | 0.001 | 99 | 549546 | 40.0 | 40.0 | |
| * 3 Acenaphthene-d10 | 164 | 7.485 | 7.484 | 0.001 | 91 | 341796 | 40.0 | 40.0 | |
| * 4 Phenanthrene-d10 | 188 | 8.970 | 8.964 | 0.006 | 97 | 625676 | 40.0 | 40.0 | |
| * 5 Chrysene-d12 | 240 | 12.907 | 12.901 | 0.006 | 98 | 626631 | 40.0 | 40.0 | |
| * 6 Perylene-d12 | 264 | 16.753 | 16.752 | 0.001 | 97 | 612773 | 40.0 | 40.0 | |
| $ 7 2-Fluorophenol | 112 | 3.318 | 3.309 | 0.009 | 92 | 278396 | 100.0 | 54.0 | |
| $ 8 Phenol-d5 | 99 | 4.157 | 4.153 | 0.004 | 98 | 263076 | 100.0 | 38.3 | |
| $ 9 Nitrobenzene-d5 | 82 | 5.027 | 5.023 | 0.004 | 86 | 442951 | 100.0 | 74.8 | |
| $ 10 2-Fluorobiphenyl | 172 | 6.801 | 6.797 | 0.004 | 99 | 875039 | 100.0 | 73.6 | |
| $ 11 2,4,6-Tribromophenol | 330 | 8.270 | 8.271 | -0.001 | 94 | 138663 | 100.0 | 84.0 | |
| $ 12 Terphenyl-d14 | 244 | 10.856 | 10.857 | -0.001 | 100 | 1175625 | 100.0 | 81.6 | |
| 13 1,4-Dioxane | 88 | 1.865 | 1.856 | 0.009 | 91 | 62686 | 80.0 | 25.1 | |
| 14 N-Nitrosodimethylamine | 74 | 2.100 | 2.096 | 0.004 | 92 | 111377 | 80.0 | 28.1 | |
| 15 Pyridine | 79 | | 2.149 | | | | ND | ND | |
| 22 Benzaldehyde | 106 | 4.093 | 4.091 | 0.002 | 98 | 203704 | 80.0 | 48.5 | |
| 23 n-Decane | 57 | 4.349 | 4.345 | 0.004 | 97 | 236110 | 80.0 | 43.7 | |
| 24 Phenol | 94 | 4.167 | 4.169 | -0.002 | 98 | 228540 | 80.0 | 31.7 | |
| 25 Aniline | 93 | 4.189 | 4.190 | -0.001 | 98 | 21316 | 80.0 | 2.37 | |
| 27 Bis(2-chloroethyl)ether | 93 | 4.237 | 4.233 | 0.004 | 96 | 299763 | 80.0 | 58.5 | |
| 28 2-Chlorophenol | 128 | 4.317 | 4.313 | 0.004 | 97 | 282717 | 80.0 | 55.2 | |
| 29 1,3-Dichlorobenzene | 146 | 4.461 | 4.457 | 0.004 | 97 | 266656 | 80.0 | 49.8 | |
| 30 1,4-Dichlorobenzene | 146 | 4.525 | 4.521 | 0.004 | 93 | 274484 | 80.0 | 51.0 | |
| 31 Benzyl alcohol | 108 | 4.621 | 4.623 | -0.002 | 94 | 175618 | 80.0 | 46.1 | |
| 32 1,2-Dichlorobenzene | 146 | 4.675 | 4.671 | 0.004 | 97 | 268502 | 80.0 | 51.7 | |
| 34 2,2'-oxybis[1-chloropropan | 45 | 4.750 | 4.746 | 0.004 | 94 | 379255 | 80.0 | 55.3 | |
| 35 2-Methylphenol | 108 | 4.739 | 4.735 | 0.004 | 94 | 290690 | 80.0 | 55.2 | |
| 38 N-Nitrosodi-n-propylamine | 70 | 4.872 | 4.874 | -0.002 | 86 | 237263 | 80.0 | 59.6 | |
| 39 Acetophenone | 105 | 4.878 | 4.879 | -0.001 | 92 | 429878 | 80.0 | 59.3 | |
| 40 4-Methylphenol | 108 | 4.883 | 4.879 | 0.004 | 90 | 288633 | 80.0 | 55.5 | |
| 41 3-Methylphenol | 108 | 4.883 | 4.879 | 0.004 | 95 | 288633 | 80.0 | 55.5 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 42 3 & 4 Methylphenol | 108 | 4.883 | 4.879 | 0.004 | 70 | 288633 | 80.0 | 55.5 | |
| 44 Hexachloroethane | 117 | 5.001 | 4.997 | 0.004 | 92 | 95428 | 80.0 | 46.9 | |
| 45 Nitrobenzene | 77 | 5.049 | 5.045 | 0.004 | 85 | 359530 | 80.0 | 59.8 | |
| 47 Isophorone | 82 | 5.273 | 5.275 | -0.002 | 99 | 677810 | 80.0 | 60.8 | |
| 48 2-Nitrophenol | 139 | 5.359 | 5.355 | 0.004 | 94 | 164734 | 80.0 | 61.5 | |
| 49 2,4-Dimethylphenol | 107 | 5.396 | 5.392 | 0.004 | 96 | 315278 | 80.0 | 59.3 | |
| 51 Bis(2-chloroethoxy)methane | 93 | 5.476 | 5.472 | 0.004 | 99 | 389289 | 80.0 | 61.2 | |
| 52 Benzoic acid | 105 | 5.471 | 5.536 | -0.065 | 88 | 117751 | 80.0 | 30.3 | |
| 53 2,4-Dichlorophenol | 162 | 5.599 | 5.600 | -0.001 | 95 | 255478 | 80.0 | 61.0 | |
| 55 1,2,4-Trichlorobenzene | 180 | 5.684 | 5.681 | 0.003 | 93 | 259489 | 80.0 | 56.6 | |
| 56 Naphthalene | 128 | 5.759 | 5.761 | -0.002 | 97 | 864801 | 80.0 | 60.0 | |
| 57 4-Chloroaniline | 127 | 5.802 | 5.798 | 0.004 | 96 | 209671 | 80.0 | 32.4 | |
| 58 2,6-Dichlorophenol | 162 | 5.818 | 5.819 | -0.001 | 97 | 261244 | 80.0 | 62.9 | |
| 60 Hexachlorobutadiene | 225 | 5.887 | 5.884 | 0.003 | 95 | 135324 | 80.0 | 56.1 | |
| 63 Caprolactam | 55 | 6.123 | 6.145 | -0.023 | 84 | 33702 | 80.0 | 13.1 | M |
| 64 4-Chloro-3-methylphenol | 107 | 6.283 | 6.290 | -0.007 | 97 | 308071 | 80.0 | 65.9 | |
| 66 2-Methylnaphthalene | 142 | 6.443 | 6.439 | 0.004 | 93 | 613542 | 80.0 | 63.0 | |
| 67 1-Methylnaphthalene | 142 | 6.545 | 6.541 | 0.004 | 94 | 584708 | 80.0 | 64.2 | |
| 68 Hexachlorocyclopentadiene | 237 | 6.614 | 6.610 | 0.004 | 95 | 317881 | 160.0 | 105.2 | |
| 69 1,2,4,5-Tetrachlorobenzene | 216 | 6.614 | 6.615 | -0.001 | 97 | 272617 | 80.0 | 60.7 | |
| 71 2,4,6-Trichlorophenol | 196 | 6.721 | 6.722 | -0.001 | 93 | 214753 | 80.0 | 65.6 | |
| 72 2,4,5-Trichlorophenol | 196 | 6.769 | 6.765 | 0.004 | 96 | 237498 | 80.0 | 64.6 | |
| 74 1,1'-Biphenyl | 154 | 6.902 | 6.899 | 0.003 | 95 | 754620 | 80.0 | 60.9 | |
| 75 2-Chloronaphthalene | 162 | 6.929 | 6.925 | 0.004 | 96 | 586674 | 80.0 | 59.4 | |
| 77 2-Nitroaniline | 65 | 7.020 | 7.016 | 0.004 | 84 | 225601 | 80.0 | 63.3 | |
| 80 Dimethyl phthalate | 163 | 7.196 | 7.192 | 0.004 | 99 | 741954 | 80.0 | 65.7 | |
| 81 1,3-Dinitrobenzene | 168 | 7.223 | 7.219 | 0.004 | 88 | 134034 | 80.0 | 66.9 | |
| 82 2,6-Dinitrotoluene | 165 | 7.250 | 7.251 | -0.001 | 97 | 184511 | 80.0 | 65.9 | |
| 83 Acenaphthylene | 152 | 7.346 | 7.342 | 0.004 | 99 | 995569 | 80.0 | 61.7 | |
| 84 3-Nitroaniline | 138 | 7.426 | 7.427 | -0.001 | 95 | 190450 | 80.0 | 57.9 | |
| 85 Acenaphthene | 153 | 7.517 | 7.513 | 0.004 | 95 | 600914 | 80.0 | 61.9 | |
| 86 2,4-Dinitrophenol | 184 | 7.527 | 7.529 | -0.002 | 86 | 221069 | 160.0 | 123.7 | |
| 88 4-Nitrophenol | 109 | 7.608 | 7.609 | -0.001 | 91 | 133023 | 160.0 | 79.5 | |
| 89 2,4-Dinitrotoluene | 165 | 7.656 | 7.657 | -0.001 | 93 | 254342 | 80.0 | 66.5 | |
| 90 Dibenzofuran | 168 | 7.688 | 7.684 | 0.004 | 98 | 941903 | 80.0 | 63.5 | |
| 92 Hexadecane | 57 | 7.912 | 7.914 | -0.002 | 97 | 426995 | 80.0 | 61.4 | |
| 93 2,3,4,6-Tetrachlorophenol | 232 | 7.811 | 7.812 | -0.001 | 71 | 204479 | 80.0 | 66.2 | |
| 95 Diethyl phthalate | 149 | 7.896 | 7.892 | 0.004 | 98 | 745408 | 80.0 | 66.8 | |
| 97 4-Chlorophenyl phenyl ethe | 204 | 8.019 | 8.015 | 0.004 | 90 | 368619 | 80.0 | 64.1 | |
| 99 Fluorene | 166 | 8.030 | 8.026 | 0.004 | 95 | 765878 | 80.0 | 65.0 | |
| 100 4-Nitroaniline | 138 | 8.040 | 8.042 | -0.002 | 86 | 223411 | 80.0 | 63.8 | |
| 101 4,6-Dinitro-2-methylphenol | 198 | 8.072 | 8.074 | -0.002 | 88 | 323931 | 160.0 | 160.0 | |
| 102 N-Nitrosodiphenylamine | 169 | 8.136 | 8.133 | 0.003 | 61 | 586478 | 80.0 | 73.0 | |
| 103 Diphenylamine | 169 | 8.136 | 8.133 | 0.003 | 95 | 586478 | 68.0 | 55.6 | |
| 105 1,2-Diphenylhydrazine | 77 | 8.179 | 8.175 | 0.004 | 98 | 890591 | 80.9 | 66.1 | |
| 106 Azobenzene | 77 | 8.179 | 8.175 | 0.004 | 97 | 890591 | 80.0 | 65.4 | |
| 112 Atrazine | 200 | 8.660 | 8.656 | 0.004 | 94 | 227890 | 80.0 | 74.3 | |
| 114 4-Bromophenyl phenyl ether | 248 | 8.505 | 8.507 | -0.002 | 65 | 225361 | 80.0 | 70.8 | |
| 116 Hexachlorobenzene | 284 | 8.596 | 8.592 | 0.004 | 95 | 223377 | 80.0 | 72.6 | |
| 119 Pentachlorophenol | 266 | 8.783 | 8.784 | -0.001 | 93 | 282481 | 160.0 | 147.2 | |
| 123 Phenanthrene | 178 | 8.991 | 8.993 | -0.002 | 98 | 1162719 | 80.0 | 72.7 | |
| 124 Anthracene | 178 | 9.045 | 9.041 | 0.004 | 98 | 1215159 | 80.0 | 73.4 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/ml | OnCol Amt ug/ml | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 125 Carbazole | 167 | 9.194 | 9.196 | -0.002 | 95 | 1148643 | 80.0 | 71.9 | |
| 127 Di-n-butyl phthalate | 149 | 9.525 | 9.527 | -0.002 | 100 | 1280878 | 80.0 | 72.6 | |
| 132 Fluoranthene | 202 | 10.316 | 10.312 | 0.004 | 98 | 1326252 | 80.0 | 70.6 | |
| 133 Benzidine | 184 | 10.471 | 10.477 | -0.006 | 100 | 172688 | 160.0 | 13.9 | 7 |
| 134 Pyrene | 202 | 10.637 | 10.638 | -0.001 | 97 | 1397735 | 80.0 | 70.4 | |
| 141 Butyl benzyl phthalate | 149 | 11.721 | 11.717 | 0.004 | 98 | 582321 | 80.0 | 68.9 | |
| 144 3,3'-Dichlorobenzidine | 252 | 12.854 | 12.850 | 0.004 | 74 | 968627 | 160.0 | 147.5 | |
| 145 Benzo[a]anthracene | 228 | 12.886 | 12.887 | -0.001 | 99 | 1302131 | 80.0 | 65.5 | |
| 146 Chrysene | 228 | 12.971 | 12.973 | -0.002 | 98 | 1331521 | 80.0 | 70.2 | |
| 147 Bis(2-ethylhexyl) phthalat | 149 | 13.051 | 13.053 | -0.002 | 97 | 827323 | 80.0 | 72.0 | |
| 148 Di-n-octyl phthalate | 149 | 14.820 | 14.821 | -0.001 | 99 | 1413163 | 80.0 | 71.2 | |
| 150 Benzo[b]fluoranthene | 252 | 15.685 | 15.686 | -0.001 | 98 | 1319050 | 80.0 | 72.6 | |
| 151 Benzo[k]fluoranthene | 252 | 15.765 | 15.766 | -0.001 | 99 | 1365722 | 80.0 | 73.7 | |
| 153 Benzo[a]pyrene | 252 | 16.588 | 16.600 | -0.012 | 78 | 1307276 | 80.0 | 72.3 | |
| 156 Indeno[1,2,3-cd]pyrene | 276 | 19.836 | 19.837 | -0.001 | 99 | 1182249 | 80.0 | 71.0 | |
| 157 Dibenz(a,h)anthracene | 278 | 19.932 | 19.939 | -0.007 | 94 | 1189423 | 80.0 | 74.5 | |
| 158 Benzo[g,h,i]perylene | 276 | 20.568 | 20.574 | -0.006 | 98 | 1255710 | 80.0 | 74.2 | |

## QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

## Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

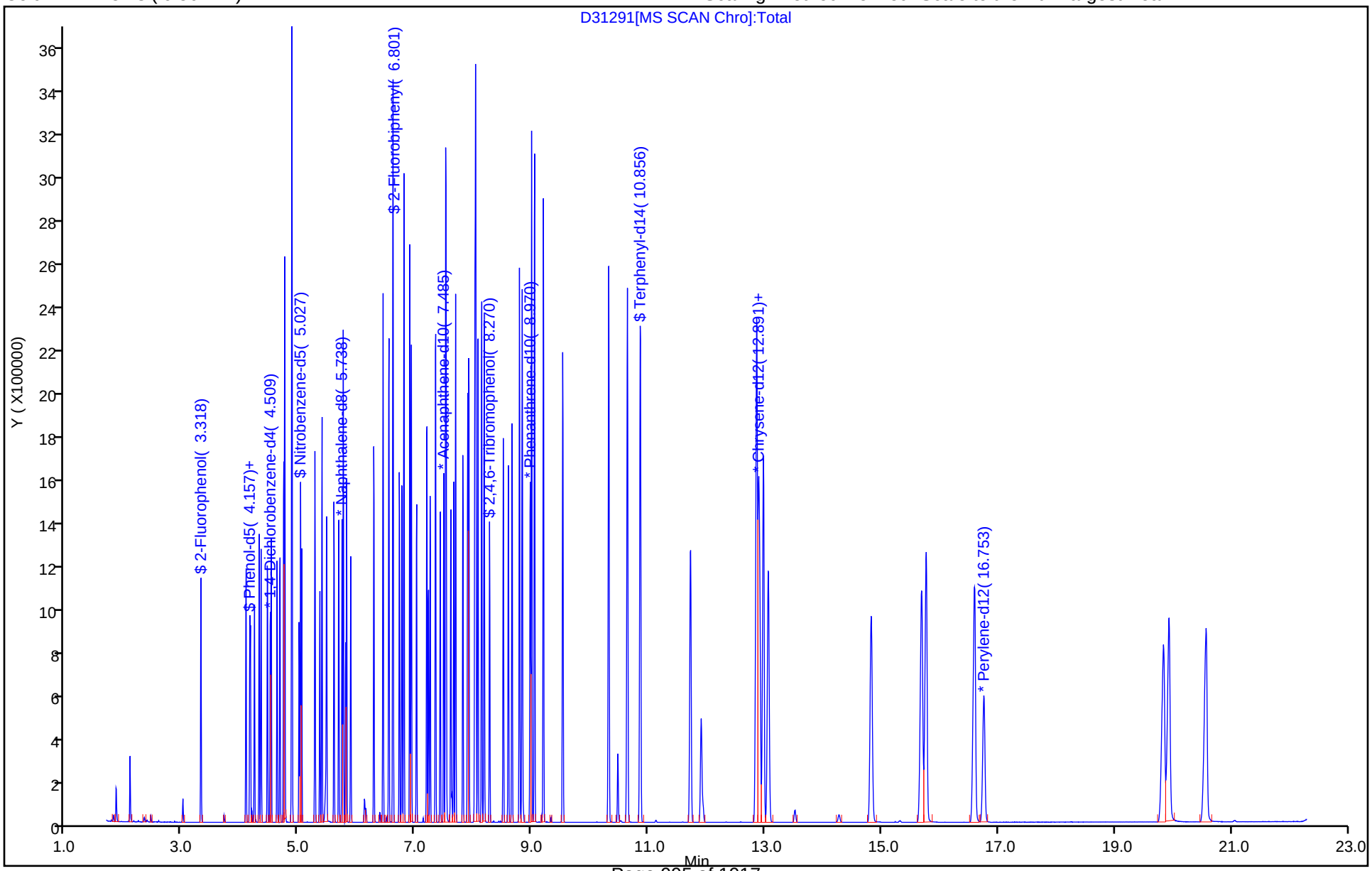
Report Date: 23-Jan-2019 10:44:47 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31291.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 18:40:30 | Instrument ID: | SMS_D | Operator ID: | KIEKELD |
| Lims ID: | LCSD 280-444835/3-A | | | Worklist Smp#: | 21 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 12 |
| Method: | SMS_D_8270D | Limit Group: | MSSV - 8270D | | |

Column: VF-5ms ( 0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31291.D
Lims ID: LCSD 280-444835/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 22-Jan-2019 18:40:30 ALS Bottle#: 12 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-444835_3-A
Operator ID: KIEKELD Instrument ID: SMS_D

Method: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\SMS_D_8270D.m
Limit Group: MSSV - 8270D
Method Label: 8270D
Last Update: 23-Jan-2019 10:44:40 Calib Date: 08-Jan-2019 18:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SMS_D\20190108-77879.b\D31083.D

Column 1 : VF-5ms ( 0.50 mm) Det: MS SCAN
Process Host: CTX0325

First Level Reviewer: kiekeld Date: 23-Jan-2019 09:19:23

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 7 2-Fluorophenol | 100.0 | 54.0 | 53.96 |
| $ 8 Phenol-d5 | 100.0 | 38.3 | 38.28 |
| $ 9 Nitrobenzene-d5 | 100.0 | 74.8 | 74.80 |
| $ 10 2-Fluorobiphenyl | 100.0 | 73.6 | 73.63 |
| $ 11 2,4,6-Tribromophenol | 100.0 | 84.0 | 83.98 |
| $ 12 Terphenyl-d14 | 100.0 | 81.6 | 81.62 |

Manual Integration/User Assign Peak Report

TestAmerica Denver

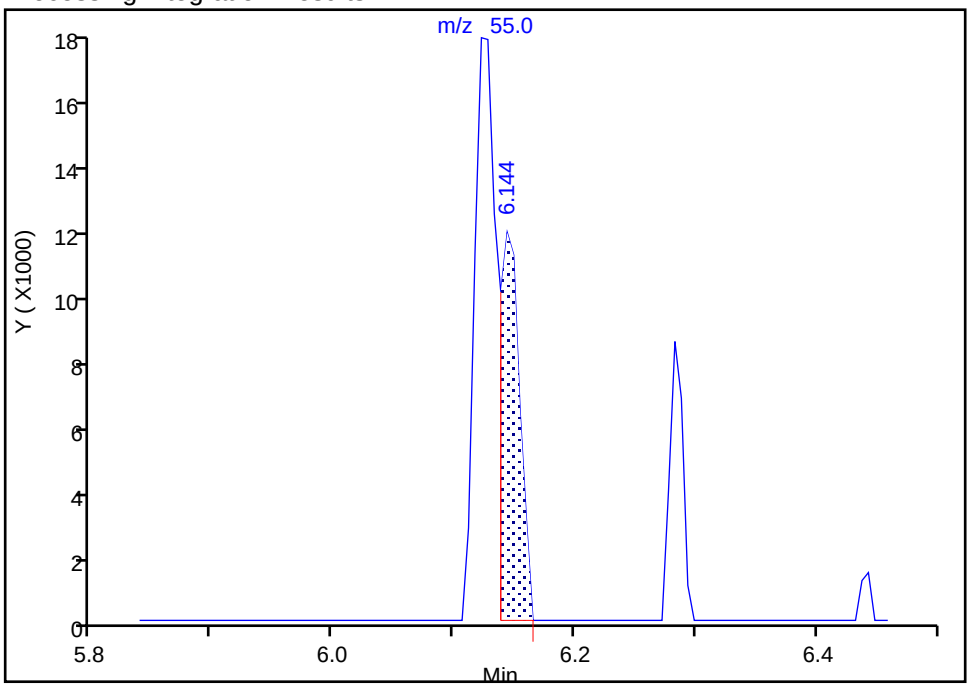
Data File: \\chromna\Denver\ChromData\SMS_D\20190122-78264.b\D31291.D
Injection Date: 22-Jan-2019 18:40:30 Instrument ID: SMS_D
Lims ID: LCSD 280-444835/3-A
Client ID:
Operator ID: KIEKELD ALS Bottle#: 12 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMS_D_8270D Limit Group: MSSV - 8270D
Column: VF-5ms ( 0.50 mm) Detector MS SCAN

## 63 Caprolactam, CAS: 105-60-2

Signal: 1

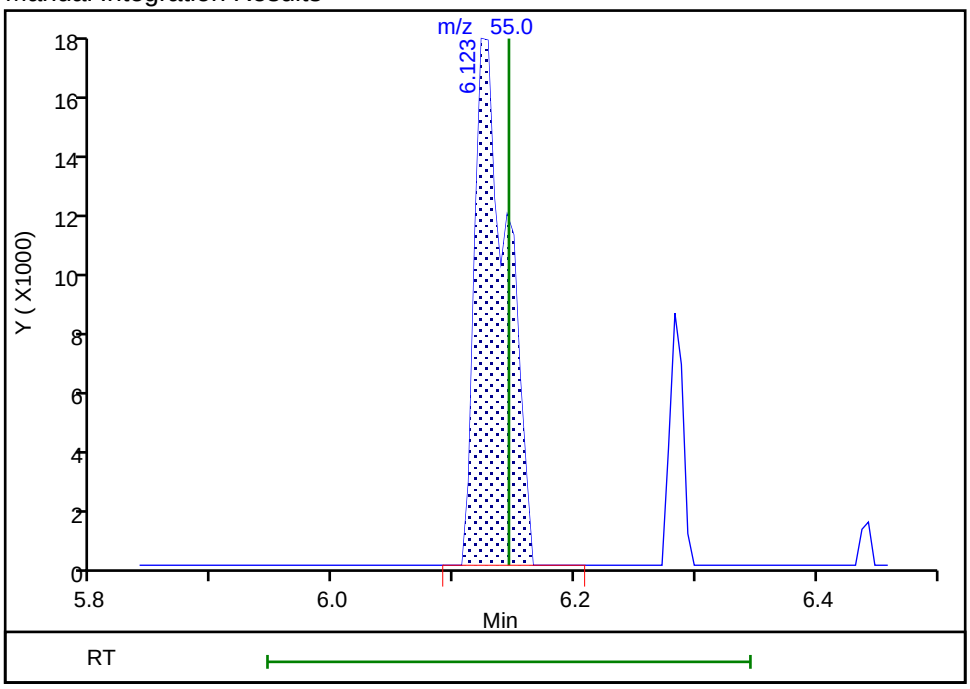
Processing Integration Results

RT: 6.14
Area: 13695
Amount: 5.315174
Amount Units: ug/ml




Manual Integration Results

RT: 6.12
Area: 33702
Amount: 13.080102
Amount Units: ug/ml




Reviewer: kiekeld, 23-Jan-2019 09:18:34
Audit Action: Manually Integrated Audit Reason: Split Peak

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SMS_D Start Date: 12/05/2018 12:48

Analysis Batch Number: 440161 End Date: 12/05/2018 21:22

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| DFTPP 280-440161/2 | | 12/05/2018 12:48 | 1 | D30601.D | Rxi-5Sil MS 0.25(mm) |
| STD080 280-440161/13 IC | | 12/05/2018 18:02 | 1 | D30612.D | Rxi-5Sil MS 0.25(mm) |
| STD004 280-440161/14 IC | | 12/05/2018 18:27 | 1 | D30613.D | Rxi-5Sil MS 0.25(mm) |
| STD010 280-440161/15 IC | | 12/05/2018 18:52 | 1 | D30614.D | Rxi-5Sil MS 0.25(mm) |
| STD020 280-440161/16 IC | | 12/05/2018 19:17 | 1 | D30615.D | Rxi-5Sil MS 0.25(mm) |
| STD050 280-440161/17 IC | | 12/05/2018 19:42 | 1 | D30616.D | Rxi-5Sil MS 0.25(mm) |
| STD120 280-440161/18 IC | | 12/05/2018 20:07 | 1 | D30617.D | Rxi-5Sil MS 0.25(mm) |
| STD160 280-440161/19 IC | | 12/05/2018 20:32 | 1 | D30618.D | Rxi-5Sil MS 0.25(mm) |
| STD200 280-440161/20 IC | | 12/05/2018 20:57 | 1 | D30619.D | Rxi-5Sil MS 0.25(mm) |
| ICV 280-440161/21 | | 12/05/2018 21:22 | 1 | D30620.D | Rxi-5Sil MS 0.25(mm) |

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SMS_D Start Date: 12/05/2018 12:48

Analysis Batch Number: 440162 End Date: 12/06/2018 00:40

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| DFTPP 280-440162/2 | | 12/05/2018 12:48 | 1 | D30601.D | Rxi-5Sil MS 0.25(mm) |
| STD080 280-440162/22 IC | | 12/05/2018 21:46 | 1 | D30621.D | Rxi-5Sil MS 0.25(mm) |
| STD010 280-440162/23 IC | | 12/05/2018 22:11 | 1 | D30622.D | Rxi-5Sil MS 0.25(mm) |
| STD020 280-440162/24 IC | | 12/05/2018 22:36 | 1 | D30623.D | Rxi-5Sil MS 0.25(mm) |
| STD050 280-440162/25 IC | | 12/05/2018 23:01 | 1 | D30624.D | Rxi-5Sil MS 0.25(mm) |
| STD120 280-440162/26 IC | | 12/05/2018 23:26 | 1 | D30625.D | Rxi-5Sil MS 0.25(mm) |
| STD160 280-440162/27 IC | | 12/05/2018 23:51 | 1 | D30626.D | Rxi-5Sil MS 0.25(mm) |
| STD200 280-440162/28 IC | | 12/06/2018 00:16 | 1 | D30627.D | Rxi-5Sil MS 0.25(mm) |
| ICV 280-440162/29 | | 12/06/2018 00:40 | 1 | D30628.D | Rxi-5Sil MS 0.25(mm) |

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SMS_D Start Date: 12/06/2018 08:39

Analysis Batch Number: 440302 End Date: 12/06/2018 11:46

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| DFTPP 280-440302/2 | | 12/06/2018 08:39 | 1 | D30630.D | Rxi-5Sil MS 0.25(mm) |
| STD080 280-440302/3 IC | | 12/06/2018 08:53 | 1 | D30631.D | Rxi-5Sil MS 0.25(mm) |
| STD010 280-440302/4 IC | | 12/06/2018 09:17 | 1 | D30632.D | Rxi-5Sil MS 0.25(mm) |
| STD020 280-440302/5 IC | | 12/06/2018 09:42 | 1 | D30633.D | Rxi-5Sil MS 0.25(mm) |
| STD050 280-440302/6 IC | | 12/06/2018 10:07 | 1 | D30634.D | Rxi-5Sil MS 0.25(mm) |
| STD120 280-440302/7 IC | | 12/06/2018 10:32 | 1 | D30635.D | Rxi-5Sil MS 0.25(mm) |
| STD160 280-440302/8 IC | | 12/06/2018 10:56 | 1 | D30636.D | Rxi-5Sil MS 0.25(mm) |
| STD200 280-440302/9 IC | | 12/06/2018 11:21 | 1 | D30637.D | Rxi-5Sil MS 0.25(mm) |
| ICV 280-440302/10 | | 12/06/2018 11:46 | 1 | D30638.D | Rxi-5Sil MS 0.25(mm) |

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SMS_D Start Date: 01/08/2019 14:30

Analysis Batch Number: 443607 End Date: 01/08/2019 19:07

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| DFTPP 280-443607/2 | | 01/08/2019 14:30 | 1 | D31075.D | Rxi-5Sil MS 0.25(mm) |
| ICIS 280-443607/3 | | 01/08/2019 14:43 | 1 | D31076.D | Rxi-5Sil MS 0.25(mm) |
| STD004 280-443607/4 IC | | 01/08/2019 15:12 | 1 | D31077.D | Rxi-5Sil MS 0.25(mm) |
| STD010 280-443607/5 IC | | 01/08/2019 15:42 | 1 | D31078.D | Rxi-5Sil MS 0.25(mm) |
| STD020 280-443607/6 IC | | 01/08/2019 16:11 | 1 | D31079.D | Rxi-5Sil MS 0.25(mm) |
| STD050 280-443607/7 IC | | 01/08/2019 16:40 | 1 | D31080.D | Rxi-5Sil MS 0.25(mm) |
| STD120 280-443607/8 IC | | 01/08/2019 17:10 | 1 | D31081.D | Rxi-5Sil MS 0.25(mm) |
| STD160 280-443607/9 IC | | 01/08/2019 17:39 | 1 | D31082.D | Rxi-5Sil MS 0.25(mm) |
| STD200 280-443607/10 IC | | 01/08/2019 18:08 | 1 | D31083.D | Rxi-5Sil MS 0.25(mm) |
| ICV 280-443607/11 | | 01/08/2019 18:38 | 1 | D31084.D | Rxi-5Sil MS 0.25(mm) |
| ICV 280-443607/12 | | 01/08/2019 19:07 | 1 | D31085.D | Rxi-5Sil MS 0.25(mm) |

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SMS_D Start Date: 01/22/2019 13:47

Analysis Batch Number: 445019 End Date: 01/23/2019 00:04

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| DFTPP 280-445019/2 | | 01/22/2019 13:47 | 1 | D31280.D | Rxi-5Sil MS 0.25(mm) |
| CCV 280-445019/3 | | 01/22/2019 13:59 | 1 | D31281.D | Rxi-5Sil MS 0.25(mm) |
| CCV 280-445019/4 | | 01/22/2019 14:29 | 1 | D31282.D | Rxi-5Sil MS 0.25(mm) |
| CCV 280-445019/5 | | 01/22/2019 14:54 | 1 | D31283.D | Rxi-5Sil MS 0.25(mm) |
| CCV 280-445019/6 | | 01/22/2019 15:47 | 1 | D31285.D | Rxi-5Sil MS 0.25(mm) |
| MB 280-444835/1-A | | 01/22/2019 17:40 | 1 | D31289.D | Rxi-5Sil MS 0.25(mm) |
| LCS 280-444835/2-A | | 01/22/2019 18:10 | 1 | D31290.D | Rxi-5Sil MS 0.25(mm) |
| LCSD 280-444835/3-A | | 01/22/2019 18:40 | 1 | D31291.D | Rxi-5Sil MS 0.25(mm) |
| 160-32649-1 | | 01/22/2019 22:36 | 1 | D31299.D | Rxi-5Sil MS 0.25(mm) |
| ZZZZZ | | 01/22/2019 23:05 | 1 | | Rxi-5Sil MS 0.25(mm) |
| ZZZZZ | | 01/22/2019 23:34 | 1 | | Rxi-5Sil MS 0.25(mm) |
| ZZZZZ | | 01/23/2019 00:04 | 1 | | Rxi-5Sil MS 0.25(mm) |

# GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Batch Number: 444835  Batch Start Date: 01/21/19 06:56  Batch Analyst: Matsumoto, Jordan T

Batch Method: 3510C  Batch End Date: 01/21/19 19:45

| Lab Sample ID | Client Sample ID | Method Chain | Basis | GrossWeight | TareWeight | InitialAmount | FinalAmount | ReceivedpH | FirstAdjustpH |
|---|---|---|---|---|---|---|---|---|---|
| MB 280-444835/1 | | 3510C, 8270D | | | | 1000 mL | 1 mL | 7 SU | 1-2 SU |
| LCS 280-444835/2 | | 3510C, 8270D | | | | 1000 mL | 1 mL | 7 SU | 1-2 SU |
| LCSD 280-444835/3 | | 3510C, 8270D | | | | 1000 mL | 1 mL | 7 SU | 1-2 SU |
| 160-32649-F-1 | CRC-MW-1-011519 | 3510C, 8270D | T | 1364.7 g | 396.7 g | 968 mL | 1 mL | 7 SU | 1-2 SU |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | SecondAdjustpH | 8270_LCS_Main 00060 | 8270_LCS_Supp 00324 | 8270Surrogate 00130 | | |
|---|---|---|---|---|---|---|---|---|---|
| MB 280-444835/1 | | 3510C, 8270D | | 11-12 SU | | | 1 mL | | |
| LCS 280-444835/2 | | 3510C, 8270D | | 11-12 SU | 1 mL | 1 mL | 1 mL | | |
| LCSD 280-444835/3 | | 3510C, 8270D | | 11-12 SU | 1 mL | 1 mL | 1 mL | | |
| 160-32649-F-1 | CRC-MW-1-011519 | 3510C, 8270D | T | 11-12 SU | | | 1 mL | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Batch Number: 444835  Batch Start Date: 01/21/19 06:56  Batch Analyst: Matsumoto, Jordan T

Batch Method: 3510C  Batch End Date: 01/21/19 19:45

| Batch Notes | |
|---|---|
| Acid Used for pH Adjustment ID | 1:1 H2SO4_00075 |
| Balance ID | 24750399 |
| Base Used to Adjust pH ID | 10N_NaOH_00133 |
| Batch Comment | DV-OP-0006/0007 |
| Analyst ID - Concentration | CR |
| Concentration 1 Corrected Temperature | 84 Degrees C |
| Equipment ID - Concentration 1 | A |
| Analyst ID - Extraction | JM |
| Method/Fraction | 3510C/8270D |
| Na2SO4 ID | 0000213903_00002 |
| NaCl ID | 184223 |
| Pipette/Syringe/Dispenser ID | 1n2s |
| Prep Solvent ID | MeCl2_Cycl_00422 |
| Prep Solvent Volume Used | 180 mL |
| Analyst ID - Spike Analyst | JM |
| Analyst ID - Spike Witness Analyst | Reviewer: AAG |
| Sufficient Volume for Batch QC | NO |
| Concentration 1 Uncorrected Temperature | 85 Degrees C |
| Reagent Water ID | S. ELGA |

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Method 8081B

## Organochlorine Pesticides (GC) by Method 8081B

FORM II
PESTICIDES SURROGATE RECOVERY

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): Rxi-35Sil M  ID: 0.32(mm)

| Client Sample ID | Lab Sample ID | TCX1 # | DCBP1 # |
|---|---|---|---|
| CRC-MW-1-011519 | 160-32649-1 | 78 | 48 |
| | MB 280-444680/1-A | 54 | 70 |
| | LCS 280-444680/2-A | 74 | 86 |
| | LCSD 280-444680/3-A | 85 | 95 |

| | QC LIMITS |
|---|---|
| TCX = Tetrachloro-m-xylene | 28-115 |
| DCBP = DCB Decachlorobiphenyl | 34-122 |

# Column to be used to flag recovery values

FORM II 8081B

FORM III
PESTICIDES LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 053F5901.D

Lab ID: LCS 280-444680/2-A Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.457 | 91 | 73-115 | |
| 4,4'-DDE | 0.500 | 0.421 | 84 | 71-112 | |
| 4,4'-DDT | 0.500 | 0.407 | 81 | 71-121 | |
| Aldrin | 0.500 | 0.408 | 82 | 50-114 | |
| alpha-BHC | 0.500 | 0.433 | 87 | 68-113 | |
| alpha-Chlordane | 0.500 | 0.417 | 83 | 70-113 | |
| beta-BHC | 0.500 | 0.442 | 88 | 54-113 | |
| delta-BHC | 0.500 | 0.452 | 90 | 72-113 | |
| Dieldrin | 0.500 | 0.434 | 87 | 74-116 | |
| Endosulfan I | 0.500 | 0.398 | 80 | 69-111 | |
| Endosulfan II | 0.500 | 0.388 | 78 | 69-109 | |
| Endosulfan sulfate | 0.500 | 0.417 | 83 | 71-116 | |
| Endrin | 0.500 | 0.430 | 86 | 69-128 | |
| Endrin aldehyde | 0.500 | 0.376 | 75 | 47-119 | |
| Endrin ketone | 0.500 | 0.423 | 85 | 65-113 | |
| gamma-BHC (Lindane) | 0.500 | 0.459 | 92 | 70-112 | |
| gamma-Chlordane | 0.500 | 0.430 | 86 | 65-121 | |
| Heptachlor | 0.500 | 0.420 | 84 | 61-115 | |
| Heptachlor epoxide | 0.500 | 0.430 | 86 | 72-114 | |
| Methoxychlor | 0.500 | 0.432 | 86 | 66-131 | |

# Column to be used to flag recovery and RPD values

FORM III 8081B

FORM III
PESTICIDES LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 054F6001.D

Lab ID: LCSD 280-444680/3-A Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.504 | 101 | 10 | 50 | 73-115 | |
| 4,4'-DDE | 0.500 | 0.466 | 93 | 10 | 50 | 71-112 | |
| 4,4'-DDT | 0.500 | 0.444 | 89 | 9 | 25 | 71-121 | |
| Aldrin | 0.500 | 0.453 | 91 | 10 | 33 | 50-114 | |
| alpha-BHC | 0.500 | 0.474 | 95 | 9 | 50 | 68-113 | |
| alpha-Chlordane | 0.500 | 0.459 | 92 | 10 | 50 | 70-113 | |
| beta-BHC | 0.500 | 0.485 | 97 | 9 | 50 | 54-113 | |
| delta-BHC | 0.500 | 0.496 | 99 | 9 | 50 | 72-113 | |
| Dieldrin | 0.500 | 0.476 | 95 | 9 | 22 | 74-116 | |
| Endosulfan I | 0.500 | 0.438 | 88 | 10 | 50 | 69-111 | |
| Endosulfan II | 0.500 | 0.424 | 85 | 9 | 50 | 69-109 | |
| Endosulfan sulfate | 0.500 | 0.455 | 91 | 9 | 50 | 71-116 | |
| Endrin | 0.500 | 0.466 | 93 | 8 | 39 | 69-128 | |
| Endrin aldehyde | 0.500 | 0.406 | 81 | 8 | 50 | 47-119 | |
| Endrin ketone | 0.500 | 0.466 | 93 | 10 | 50 | 65-113 | |
| gamma-BHC (Lindane) | 0.500 | 0.507 | 101 | 10 | 26 | 70-112 | |
| gamma-Chlordane | 0.500 | 0.479 | 96 | 11 | 50 | 65-121 | |
| Heptachlor | 0.500 | 0.462 | 92 | 10 | 27 | 61-115 | |
| Heptachlor epoxide | 0.500 | 0.472 | 94 | 9 | 50 | 72-114 | |
| Methoxychlor | 0.500 | 0.468 | 94 | 8 | 50 | 66-131 | |

# Column to be used to flag recovery and RPD values

FORM III 8081B

FORM IV
PESTICIDES METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: MB 280-444680/1-A

Matrix: Water  Date Extracted: 01/18/2019 12:03

Lab File ID:(1) 052F5801.D  Lab File ID:(2) 052F5801.D

Date Analyzed:(1) 01/23/2019 01:19  Date Analyzed:(2) 01/23/2019 01:19

Instrument ID:(1) SGC_C  Instrument ID:(2) SGC_C

GC Column:(1) Rxi-35Sil MS ID: 0.32(mm)  GC Column:(2) Rxi-XLB ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | DATE ANALYZED 1 | DATE ANALYZED 2 |
|---|---|---|---|
| | LCS 280-444680/2-A | 01/23/2019 01:37 | 01/23/2019 01:37 |
| | LCSD 280-444680/3-A | 01/23/2019 01:55 | 01/23/2019 01:55 |
| CRC-MW-1-011519 | 160-32649-1 | 01/23/2019 03:22 | 01/23/2019 03:22 |

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Sample No.: CCVIS 280-444894/13 Date Analyzed: 01/21/2019 15:39

Instrument ID: SGC_C GC Column: Rxi-35Sil MS ID: 0.32(mm)

Lab File ID (Standard): 01210013.D Heated Purge: (Y/N) N

Calibration ID: 34877

| | | BNB | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 142135528 | 2.56 | | | | |
| UPPER LIMIT | | 284271056 | 3.06 | | | | |
| LOWER LIMIT | | 71067764 | 2.06 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| CCV 280-444894/45 | | 137014848 | 2.56 | | | | |
| CCV 280-444894/47 | | 132625285 | 2.56 | | | | |
| MB 280-444680/1-A | | 171836980 | 2.56 | | | | |
| LCS 280-444680/2-A | | 138063018 | 2.56 | | | | |
| LCSD 280-444680/3-A | | 127215702 | 2.56 | | | | |
| 160-32649-1 | CRC-MW-1-011519 | 134370922 | 2.56 | | | | |

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8081B

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Sample No.: CCVIS 280-444894/13 Date Analyzed: 01/21/2019 15:39

Instrument ID: SGC_C GC Column: Rxi-XLB ID: 0.32(mm)

Lab File ID (Standard): 01210013.D Heated Purge: (Y/N) N

Calibration ID: 34878

| | | BNB | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 115763826 | 2.81 | | | | |
| UPPER LIMIT | | 231527652 | 3.31 | | | | |
| LOWER LIMIT | | 57881913 | 2.31 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| CCV 280-444894/45 | | 117517794 | 2.81 | | | | |
| CCV 280-444894/47 | | 113355876 | 2.81 | | | | |
| MB 280-444680/1-A | | 146756474 | 2.81 | | | | |
| LCS 280-444680/2-A | | 117004484 | 2.82 | | | | |
| LCSD 280-444680/3-A | | 107758581 | 2.82 | | | | |
| 160-32649-1 | CRC-MW-1-011519 | 113308614 | 2.81 | | | | |

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8081B

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 280-444680/2-A

Instrument ID (1): SGC_C  Instrument ID (2): SGC_C

Date Analyzed (1): 01/23/2019 01:37  Date Analyzed (2): 01/23/2019 01:37

GC Column (1): Rxi-35Sil MS ID: 0.32(mm)  GC Column (2): Rxi-XLB ID: 0.32(mm)

| ANALYTE | COL | PEAK | RT | RT WINDOW | | CONCENTRATION | | RPD |
|---|---|---|---|---|---|---|---|---|
| | | | | FROM | TO | PEAK | MEAN | |
| alpha-BHC | 1 | | 4.06 | 4.05 | 4.08 | 0.433 | | 0.3 |
| | 2 | | 4.44 | 4.43 | 4.45 | 0.434 | | |
| gamma-BHC (Lindane) | 1 | | 4.35 | 4.34 | 4.37 | 0.459 | | 8.0 |
| | 2 | | 4.68 | 4.67 | 4.70 | 0.423 | | |
| beta-BHC | 1 | | 4.54 | 4.53 | 4.55 | 0.442 | | 2.0 |
| | 2 | | 4.89 | 4.88 | 4.90 | 0.451 | | |
| Heptachlor | 1 | | 4.60 | 4.59 | 4.62 | 0.420 | | 6.1 |
| | 2 | | 5.13 | 5.11 | 5.14 | 0.447 | | |
| delta-BHC | 1 | | 4.73 | 4.72 | 4.75 | 0.452 | | 2.1 |
| | 2 | | 5.08 | 5.06 | 5.09 | 0.442 | | |
| Aldrin | 1 | | 4.82 | 4.81 | 4.83 | 0.408 | | 4.4 |
| | 2 | | 5.39 | 5.38 | 5.41 | 0.427 | | |
| Heptachlor epoxide | 1 | | 5.22 | 5.21 | 5.24 | 0.430 | | 4.3 |
| | 2 | | 5.81 | 5.80 | 5.83 | 0.449 | | |
| gamma-Chlordane | 1 | | 5.42 | 5.41 | 5.43 | 0.430 | | 4.8 |
| | 2 | | 6.17 | 6.16 | 6.18 | 0.451 | | |
| alpha-Chlordane | 1 | | 5.51 | 5.49 | 5.52 | 0.417 | | 3.6 |
| | 2 | | 6.23 | 6.22 | 6.24 | 0.432 | | |
| Endosulfan I | 1 | | 5.55 | 5.54 | 5.56 | 0.398 | | 9.5 |
| | 2 | | 6.27 | 6.26 | 6.29 | 0.437 | | |
| 4,4'-DDE | 1 | | 5.72 | 5.71 | 5.73 | 0.421 | | 8.6 |
| | 2 | | 6.45 | 6.44 | 6.46 | 0.386 | | |
| Dieldrin | 1 | | 5.83 | 5.82 | 5.85 | 0.445 | | 2.4 |
| | 2 | | 6.60 | 6.59 | 6.62 | 0.434 | | |
| Endrin | 1 | | 6.18 | 6.17 | 6.20 | 0.430 | | 1.5 |
| | 2 | | 6.89 | 6.87 | 6.90 | 0.437 | | |
| 4,4'-DDD | 1 | | 6.39 | 6.38 | 6.40 | 0.431 | | 6.0 |
| | 2 | | 7.10 | 7.09 | 7.11 | 0.457 | | |
| Endosulfan II | 1 | | 6.53 | 6.52 | 6.55 | 0.388 | | 4.5 |
| | 2 | | 7.21 | 7.20 | 7.23 | 0.405 | | |
| 4,4'-DDT | 1 | | 6.75 | 6.74 | 6.76 | 0.407 | | 10.3 |
| | 2 | | 7.46 | 7.45 | 7.48 | 0.452 | | |
| Endrin aldehyde | 1 | | 6.83 | 6.82 | 6.85 | 0.376 | | 4.3 |
| | 2 | | 7.34 | 7.33 | 7.36 | 0.393 | | |
| Endosulfan sulfate | 1 | | 7.08 | 7.07 | 7.10 | 0.417 | | 10.4 |
| | 2 | | 7.67 | 7.66 | 7.69 | 0.462 | | |
| Methoxychlor | 1 | | 7.61 | 7.60 | 7.62 | 0.432 | | 2.9 |
| | 2 | | 7.98 | 7.97 | 7.99 | 0.445 | | |
| Endrin ketone | 1 | | 7.77 | 7.76 | 7.78 | 0.423 | | 5.5 |
| | 2 | | 8.12 | 8.11 | 8.13 | 0.447 | | |

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-444680/3-A

Instrument ID (1): SGC_C Instrument ID (2): SGC_C

Date Analyzed (1): 01/23/2019 01:55 Date Analyzed (2): 01/23/2019 01:55

GC Column (1): Rxi-35Sil MS ID: 0.32(mm) GC Column (2): Rxi-XLB ID: 0.32(mm)

| ANALYTE | COL | PEAK | RT | RT WINDOW | | CONCENTRATION | | RPD |
|---|---|---|---|---|---|---|---|---|
| | | | | FROM | TO | PEAK | MEAN | |
| alpha-BHC | 1 | | 4.06 | 4.05 | 4.08 | 0.474 | | 0.5 |
| | 2 | | 4.44 | 4.43 | 4.45 | 0.477 | | |
| gamma-BHC (Lindane) | 1 | | 4.35 | 4.34 | 4.37 | 0.507 | | 7.4 |
| | 2 | | 4.68 | 4.67 | 4.70 | 0.471 | | |
| beta-BHC | 1 | | 4.54 | 4.53 | 4.55 | 0.485 | | 2.6 |
| | 2 | | 4.89 | 4.88 | 4.90 | 0.497 | | |
| Heptachlor | 1 | | 4.60 | 4.59 | 4.62 | 0.462 | | 7.0 |
| | 2 | | 5.13 | 5.11 | 5.14 | 0.496 | | |
| delta-BHC | 1 | | 4.73 | 4.72 | 4.75 | 0.496 | | 2.0 |
| | 2 | | 5.07 | 5.06 | 5.09 | 0.486 | | |
| Aldrin | 1 | | 4.82 | 4.81 | 4.83 | 0.453 | | 5.0 |
| | 2 | | 5.39 | 5.38 | 5.41 | 0.476 | | |
| Heptachlor epoxide | 1 | | 5.22 | 5.21 | 5.24 | 0.472 | | 4.3 |
| | 2 | | 5.81 | 5.80 | 5.83 | 0.492 | | |
| gamma-Chlordane | 1 | | 5.42 | 5.41 | 5.43 | 0.479 | | 3.7 |
| | 2 | | 6.17 | 6.16 | 6.18 | 0.497 | | |
| alpha-Chlordane | 1 | | 5.50 | 5.49 | 5.52 | 0.459 | | 4.1 |
| | 2 | | 6.23 | 6.22 | 6.24 | 0.478 | | |
| Endosulfan I | 1 | | 5.54 | 5.54 | 5.56 | 0.438 | | 10.1 |
| | 2 | | 6.27 | 6.26 | 6.29 | 0.485 | | |
| 4,4'-DDE | 1 | | 5.72 | 5.71 | 5.73 | 0.466 | | 8.7 |
| | 2 | | 6.45 | 6.44 | 6.46 | 0.427 | | |
| Dieldrin | 1 | | 5.83 | 5.82 | 5.85 | 0.492 | | 3.2 |
| | 2 | | 6.60 | 6.59 | 6.62 | 0.476 | | |
| Endrin | 1 | | 6.18 | 6.17 | 6.20 | 0.466 | | 1.7 |
| | 2 | | 6.89 | 6.87 | 6.90 | 0.474 | | |
| 4,4'-DDD | 1 | | 6.39 | 6.38 | 6.40 | 0.473 | | 6.4 |
| | 2 | | 7.10 | 7.09 | 7.11 | 0.504 | | |
| Endosulfan II | 1 | | 6.53 | 6.52 | 6.55 | 0.424 | | 5.7 |
| | 2 | | 7.21 | 7.20 | 7.23 | 0.449 | | |
| 4,4'-DDT | 1 | | 6.75 | 6.74 | 6.76 | 0.444 | | 10.6 |
| | 2 | | 7.46 | 7.45 | 7.48 | 0.494 | | |
| Endrin aldehyde | 1 | | 6.83 | 6.82 | 6.85 | 0.406 | | 4.6 |
| | 2 | | 7.34 | 7.33 | 7.36 | 0.425 | | |
| Endosulfan sulfate | 1 | | 7.08 | 7.07 | 7.10 | 0.455 | | 10.3 |
| | 2 | | 7.67 | 7.66 | 7.69 | 0.505 | | |
| Methoxychlor | 1 | | 7.61 | 7.60 | 7.62 | 0.468 | | 2.3 |
| | 2 | | 7.98 | 7.97 | 7.99 | 0.479 | | |
| Endrin ketone | 1 | | 7.77 | 7.76 | 7.78 | 0.466 | | 6.2 |
| | 2 | | 8.12 | 8.11 | 8.13 | 0.496 | | |

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: CRC-MW-1-011519 | Lab Sample ID: 160-32649-1

Matrix: Water | Lab File ID: 059F6501.D

Analysis Method: 8081B | Date Collected: 01/15/2019 12:30

Extraction Method: 3510C | Date Extracted: 01/18/2019 12:03

Sample wt/vol: 967.7(mL) | Date Analyzed: 01/23/2019 03:22

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: Rxi-35Sil MS ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 444894 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | 0.0078 | U | 0.052 | 0.0078 |
| 50-29-3 | 4,4'-DDT | 0.015 | U | 0.052 | 0.015 |
| 309-00-2 | Aldrin | 0.0061 | U | 0.052 | 0.0061 |
| 319-84-6 | alpha-BHC | 0.0055 | U | 0.052 | 0.0055 |
| 5103-71-9 | alpha-Chlordane | 0.0055 | U | 0.052 | 0.0055 |
| 319-85-7 | beta-BHC | 0.0090 | U | 0.052 | 0.0090 |
| 319-86-8 | delta-BHC | 0.0060 | U | 0.052 | 0.0060 |
| 959-98-8 | Endosulfan I | 0.0060 | U | 0.052 | 0.0060 |
| 33213-65-9 | Endosulfan II | 0.0072 | U | 0.052 | 0.0072 |
| 72-20-8 | Endrin | 0.0082 | U | 0.052 | 0.0082 |
| 7421-93-4 | Endrin aldehyde | 0.0091 | U | 0.052 | 0.0091 |
| 53494-70-5 | Endrin ketone | 0.0072 | U | 0.052 | 0.0072 |
| 58-89-9 | gamma-BHC (Lindane) | 0.0071 | U | 0.052 | 0.0071 |
| 76-44-8 | Heptachlor | 0.0080 | U | 0.052 | 0.0080 |
| 1024-57-3 | Heptachlor epoxide | 0.0078 | U | 0.052 | 0.0078 |
| 72-43-5 | Methoxychlor | 0.013 | U | 0.10 | 0.013 |
| 8001-35-2 | Toxaphene | 0.38 | U | 2.1 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2051-24-3 | DCB Decachlorobiphenyl | 48 | | 34-122 |
| 877-09-8 | Tetrachloro-m-xylene | 78 | | 28-115 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\059F6501.D
Lims ID: 160-32649-E-1-A
Client ID: CRC-MW-1-011519
Sample Type: Client
Inject. Date: 23-Jan-2019 03:22:25 ALS Bottle#: 59 Worklist Smp#: 82
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 160-32649-E-1-A
Operator ID: TEB Instrument ID: SGC_C

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

First Level Reviewer: bacat Date: 23-Jan-2019 11:14:09

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | |
| 1 | 2.557 | 2.559 | -0.002 | 134370922 | 150.0 | |
| 2 | 2.814 | 2.816 | -0.002 | 113308614 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | |
| 1 | 3.535 | 3.537 | -0.002 | 18936392 | 15.6 | |
| 2 | 4.113 | 4.113 | 0.000 | 23133157 | 15.4 | |
| | | | | | RPD = 1.63 | |
| 7 alpha-BHC | | | | | | |
| 1 | 4.064 | 4.066 | -0.002 | 247166 | -0.6458 | |
| 2 | 4.434 | 4.438 | -0.004 | 207504 | 0.1459 | |
| | | | | | RPD = -316.77 | |
| 8 gamma-BHC (Lindane) | | | | | | |
| 1 | 4.349 | 4.353 | -0.004 | 299099 | 0.2221 | |
| 2 | 4.684 | 4.683 | 0.001 | 207347 | 0.1942 | |
| | | | | | RPD = 13.42 | |
| 11 beta-BHC | | | | | | |
| 1 | 4.537 | 4.540 | -0.003 | 173318 | -0.8502 | |
| 2 | 4.884 | 4.888 | -0.004 | 431884 | -0.3289 | |
| | | | | | RPD = -88.42 | |
| LOD = 0.002000 | | | | | | |
| 12 Heptachlor | | | | | | |
| 1 | | 4.605 | | | ND | |
| 2 | | 5.126 | | | | |
| 13 delta-BHC | | | | | | |
| 1 | | 4.734 | | | ND | |
| 2 | | 5.075 | | | | |
| 15 Aldrin | | | | | | |
| 1 | 4.819 | 4.821 | -0.002 | 190422 | -0.7559 | |
| 2 | 5.394 | 5.394 | 0.000 | 163048 | -0.5436 | |
| | | | | | RPD = -32.69 | |
| LOD = 0.002000 | | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|
| 22 Toxaphene | | | | | | |
| 1 | | 4.858 | | | ND | |
| 1 | | 6.241 | | | | |
| 1 | | 6.852 | | | | |
| 1 | | 7.407 | | | | |
| 1 | | 7.546 | | | | |
| 2 | | 6.061 | | | | |
| 2 | | 6.552 | | | | |
| 2 | | 6.876 | | | | |
| 2 | | 7.593 | | | | |
| 2 | | 8.163 | | | | |
| 19 Heptachlor epoxide | | | | | | |
| 1 | | 5.227 | | | ND | |
| 2 | | 5.814 | | | | |
| 20 trans-Chlordane | | | | | | |
| 1 | 5.414 | 5.418 | -0.004 | 170982 | 1.03 | |
| 2 | 6.167 | 6.170 | -0.003 | 160500 | -0.8299 | |
| | | | | | RPD = 1885.49 | |
| 23 cis-Chlordane | | | | | | |
| 1 | | 5.507 | | | ND | |
| 2 | | 6.231 | | | | |
| 24 Endosulfan I | | | | | | |
| 1 | | 5.548 | | | ND | |
| 2 | | 6.272 | | | | |
| 25 4,4'-DDE | | | | | | |
| 1 | 5.714 | 5.718 | -0.004 | 102002 | -1.90 | |
| 2 | 6.448 | 6.449 | -0.001 | 127273 | -0.7460 | |
| | | | | | RPD = -87.25 | |
| LOD = 0.002000 | | | | | | |
| 26 Dieldrin | | | | | | |
| 1 | | 5.832 | | | ND | |
| 2 | | 6.603 | | | | |
| 29 Endrin | | | | | | |
| 1 | 6.180 | 6.184 | -0.004 | 191211 | -0.8384 | |
| 2 | 6.888 | 6.886 | 0.002 | 151284 | -0.7648 | |
| | | | | | RPD = -9.18 | |
| LOD = 0.002000 | | | | | | |
| 32 4,4'-DDD | | | | | | |
| 1 | | 6.391 | | | ND | |
| 2 | | 7.100 | | | | |
| 33 Endosulfan II | | | | | | |
| 1 | 6.528 | 6.533 | -0.005 | 298773 | 0.2203 | |
| 2 | 7.216 | 7.213 | 0.003 | 405707 | -0.7907 | |
| | | | | | RPD = -354.55 | |
| 34 4,4'-DDT | | | | | | |
| 1 | 6.745 | 6.750 | -0.005 | 186559 | -0.4815 | |
| 2 | 7.462 | 7.464 | -0.002 | 127237 | -0.2317 | |
| | | | | | RPD = -70.04 | |
| LOD = 0.002000 | | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|
| 35 Endrin aldehyde | | | | | | |
| 1 | 6.830 | 6.836 | -0.006 | 335740 | -0.7731 | |
| 2 | 7.344 | 7.343 | 0.001 | 304778 | -0.8267 | |
| | | | | | RPD = -6.70 | |
| LOD = 0.002000 | | | | | | |
| 36 Endosulfan sulfate | | | | | | |
| 1 | 7.094 | 7.084 | 0.010 | 3083732 | 2.40 | |
| 2 | 7.672 | 7.673 | -0.001 | 382938 | -0.7088 | |
| | | | | | RPD = 367.84 | |
| 37 Methoxychlor | | | | | | |
| 1 | | 7.611 | | | ND | |
| 2 | | 7.981 | | | | |
| 38 Endrin ketone | | | | | | |
| 1 | 7.765 | 7.770 | -0.005 | 402824 | -0.9707 | |
| 2 | 8.120 | 8.121 | -0.001 | 204013 | -0.7803 | |
| | | | | | RPD = -21.74 | |
| LOD = 0.002000 | | | | | | |
| $ 40 DCB Decachlorobiphenyl | | | | | | |
| 1 | 8.999 | 9.004 | -0.005 | 11897548 | 9.55 | |
| 2 | 9.864 | 9.869 | -0.005 | 10497261 | 9.13 | |
| | | | | | RPD = 4.50 | |

## QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

## Reagents:

8081_IS_00010 Amount Added: 75.00 Units: uL Run Reagent

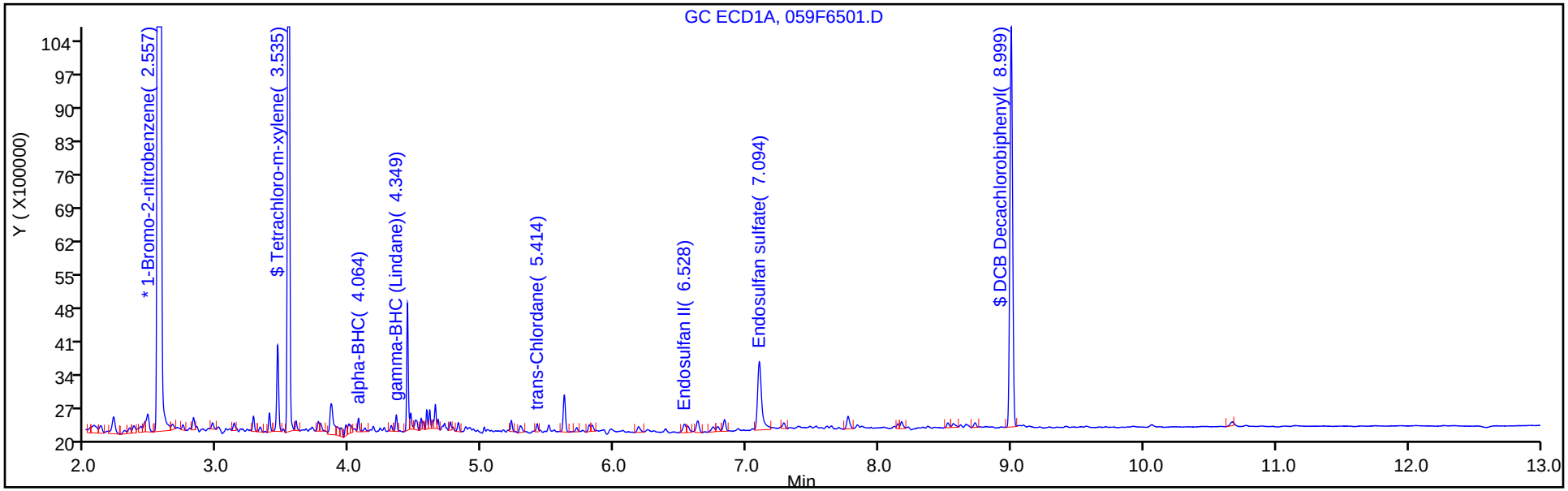
Report Date: 23-Jan-2019 11:17:21 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

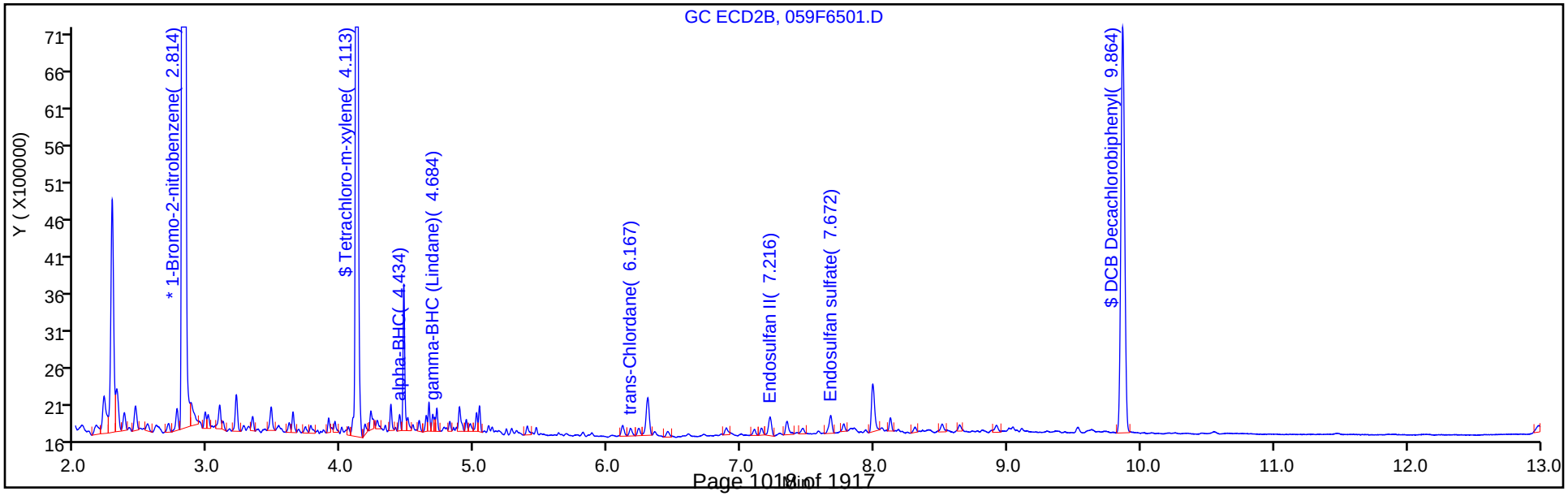
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\059F6501.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Jan-2019 03:22:25 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | 160-32649-E-1-A | Lab Sample ID: | 280-32649-1 | Worklist Smp#: | 82 |
| Client ID: | CRC-MW-1-011519 | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 59 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\059F6501.D | | | | |
| Lims ID: | 160-32649-E-1-A | | | | |
| Client ID: | CRC-MW-1-011519 | | | | |
| Sample Type: | Client | | | | |
| Inject. Date: | 23-Jan-2019 03:22:25 | ALS Bottle#: | 59 | Worklist Smp#: | 82 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | 160-32649-E-1-A | | | | |
| Operator ID: | TEB | Instrument ID: | SGC_C | | |
| Method: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m | | | | |
| Limit Group: | GCSV - 8081A - IS | | | | |
| Last Update: | 23-Jan-2019 11:16:36 | Calib Date: | 17-Jan-2019 18:56:49 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D | | | | |
| Column 1 : | Rxi-35Sil MS ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | Rxi-XLB ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0329 | | | | |
| First Level Reviewer: bacat | | Date: | 23-Jan-2019 11:14:09 | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 15.6 | 78.16 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 9.55 | 47.74 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 15.4 | 76.90 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 9.13 | 45.64 |

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: CRC-MW-1-011519 | Lab Sample ID: 160-32649-1

Matrix: Water | Lab File ID: 059F6501.D

Analysis Method: 8081B | Date Collected: 01/15/2019 12:30

Extraction Method: 3510C | Date Extracted: 01/18/2019 12:03

Sample wt/vol: 967.7(mL) | Date Analyzed: 01/23/2019 03:22

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: Rxi-XLB ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 444894 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 0.0080 | U | 0.052 | 0.0080 |
| 60-57-1 | Dieldrin | 0.0065 | U | 0.052 | 0.0065 |
| 1031-07-8 | Endosulfan sulfate | 0.0059 | U | 0.052 | 0.0059 |
| 5103-74-2 | gamma-Chlordane | 0.0094 | U | 0.052 | 0.0094 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\059F6501.D
Lims ID: 160-32649-E-1-A
Client ID: CRC-MW-1-011519
Sample Type: Client
Inject. Date: 23-Jan-2019 03:22:25 ALS Bottle#: 59 Worklist Smp#: 82
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 160-32649-E-1-A
Operator ID: TEB Instrument ID: SGC_C

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

First Level Reviewer: bacat Date: 23-Jan-2019 11:14:09

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | |
| 1 | 2.557 | 2.559 | -0.002 | 134370922 | 150.0 | |
| 2 | 2.814 | 2.816 | -0.002 | 113308614 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | |
| 1 | 3.535 | 3.537 | -0.002 | 18936392 | 15.6 | |
| 2 | 4.113 | 4.113 | 0.000 | 23133157 | 15.4 | |
| | | | | | RPD = 1.63 | |
| 7 alpha-BHC | | | | | | |
| 1 | 4.064 | 4.066 | -0.002 | 247166 | -0.6458 | |
| 2 | 4.434 | 4.438 | -0.004 | 207504 | 0.1459 | |
| | | | | | RPD = -316.77 | |
| 8 gamma-BHC (Lindane) | | | | | | |
| 1 | 4.349 | 4.353 | -0.004 | 299099 | 0.2221 | |
| 2 | 4.684 | 4.683 | 0.001 | 207347 | 0.1942 | |
| | | | | | RPD = 13.42 | |
| 11 beta-BHC | | | | | | |
| 1 | 4.537 | 4.540 | -0.003 | 173318 | -0.8502 | |
| 2 | 4.884 | 4.888 | -0.004 | 431884 | -0.3289 | |
| | | | | | RPD = -88.42 | |
| LOD = 0.002000 | | | | | | |
| 12 Heptachlor | | | | | | |
| 1 | | 4.605 | | | ND | |
| 2 | | 5.126 | | | | |
| 13 delta-BHC | | | | | | |
| 1 | | 4.734 | | | ND | |
| 2 | | 5.075 | | | | |
| 15 Aldrin | | | | | | |
| 1 | 4.819 | 4.821 | -0.002 | 190422 | -0.7559 | |
| 2 | 5.394 | 5.394 | 0.000 | 163048 | -0.5436 | |
| | | | | | RPD = -32.69 | |
| LOD = 0.002000 | | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|
| 22 Toxaphene | | | | | | |
| 1 | | 4.858 | | | ND | |
| 1 | | 6.241 | | | | |
| 1 | | 6.852 | | | | |
| 1 | | 7.407 | | | | |
| 1 | | 7.546 | | | | |
| 2 | | 6.061 | | | | |
| 2 | | 6.552 | | | | |
| 2 | | 6.876 | | | | |
| 2 | | 7.593 | | | | |
| 2 | | 8.163 | | | | |
| 19 Heptachlor epoxide | | | | | | |
| 1 | | 5.227 | | | ND | |
| 2 | | 5.814 | | | | |
| 20 trans-Chlordane | | | | | | |
| 1 | 5.414 | 5.418 | -0.004 | 170982 | 1.03 | |
| 2 | 6.167 | 6.170 | -0.003 | 160500 | -0.8299 | |
| | | | | | RPD = 1885.49 | |
| 23 cis-Chlordane | | | | | | |
| 1 | | 5.507 | | | ND | |
| 2 | | 6.231 | | | | |
| 24 Endosulfan I | | | | | | |
| 1 | | 5.548 | | | ND | |
| 2 | | 6.272 | | | | |
| 25 4,4'-DDE | | | | | | |
| 1 | 5.714 | 5.718 | -0.004 | 102002 | -1.90 | |
| 2 | 6.448 | 6.449 | -0.001 | 127273 | -0.7460 | |
| | | | | | RPD = -87.25 | |
| LOD = 0.002000 | | | | | | |
| 26 Dieldrin | | | | | | |
| 1 | | 5.832 | | | ND | |
| 2 | | 6.603 | | | | |
| 29 Endrin | | | | | | |
| 1 | 6.180 | 6.184 | -0.004 | 191211 | -0.8384 | |
| 2 | 6.888 | 6.886 | 0.002 | 151284 | -0.7648 | |
| | | | | | RPD = -9.18 | |
| LOD = 0.002000 | | | | | | |
| 32 4,4'-DDD | | | | | | |
| 1 | | 6.391 | | | ND | |
| 2 | | 7.100 | | | | |
| 33 Endosulfan II | | | | | | |
| 1 | 6.528 | 6.533 | -0.005 | 298773 | 0.2203 | |
| 2 | 7.216 | 7.213 | 0.003 | 405707 | -0.7907 | |
| | | | | | RPD = -354.55 | |
| 34 4,4'-DDT | | | | | | |
| 1 | 6.745 | 6.750 | -0.005 | 186559 | -0.4815 | |
| 2 | 7.462 | 7.464 | -0.002 | 127237 | -0.2317 | |
| | | | | | RPD = -70.04 | |
| LOD = 0.002000 | | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|
| 35 Endrin aldehyde | | | | | | |
| 1 | 6.830 | 6.836 | -0.006 | 335740 | -0.7731 | |
| 2 | 7.344 | 7.343 | 0.001 | 304778 | -0.8267 | |
| | | | | | RPD = -6.70 | |
| LOD = 0.002000 | | | | | | |
| 36 Endosulfan sulfate | | | | | | |
| 1 | 7.094 | 7.084 | 0.010 | 3083732 | 2.40 | |
| 2 | 7.672 | 7.673 | -0.001 | 382938 | -0.7088 | |
| | | | | | RPD = 367.84 | |
| 37 Methoxychlor | | | | | | |
| 1 | | 7.611 | | | ND | |
| 2 | | 7.981 | | | | |
| 38 Endrin ketone | | | | | | |
| 1 | 7.765 | 7.770 | -0.005 | 402824 | -0.9707 | |
| 2 | 8.120 | 8.121 | -0.001 | 204013 | -0.7803 | |
| | | | | | RPD = -21.74 | |
| LOD = 0.002000 | | | | | | |
| $ 40 DCB Decachlorobiphenyl | | | | | | |
| 1 | 8.999 | 9.004 | -0.005 | 11897548 | 9.55 | |
| 2 | 9.864 | 9.869 | -0.005 | 10497261 | 9.13 | |
| | | | | | RPD = 4.50 | |

## QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

## Reagents:

8081_IS_00010 Amount Added: 75.00 Units: uL Run Reagent

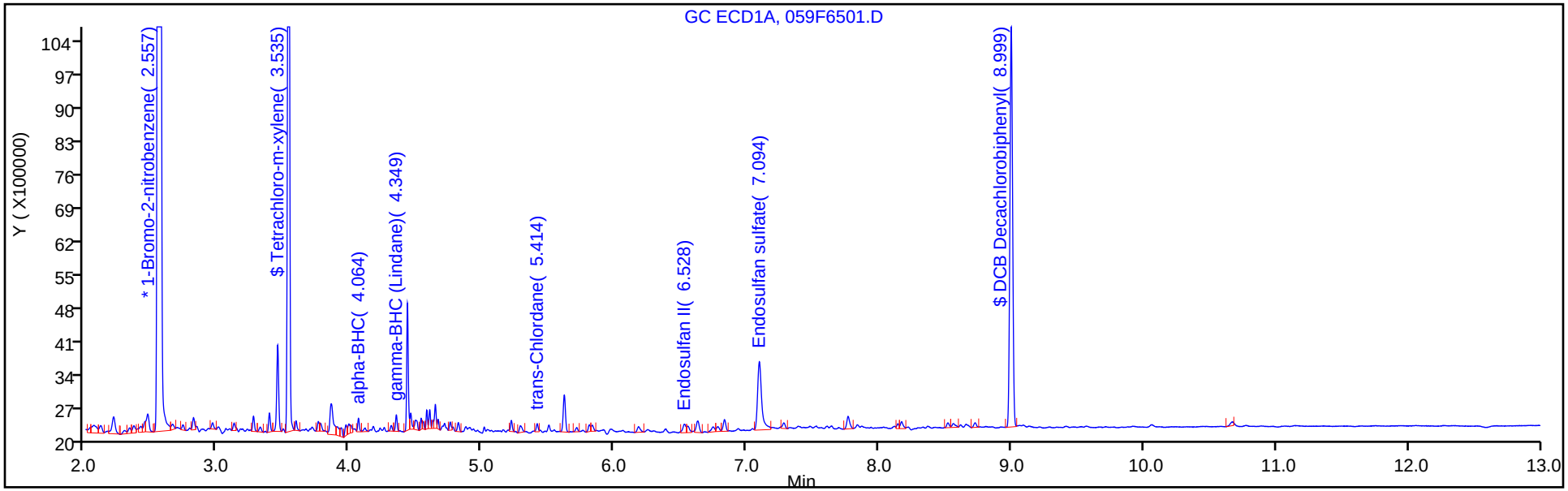
Report Date: 23-Jan-2019 11:17:22 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

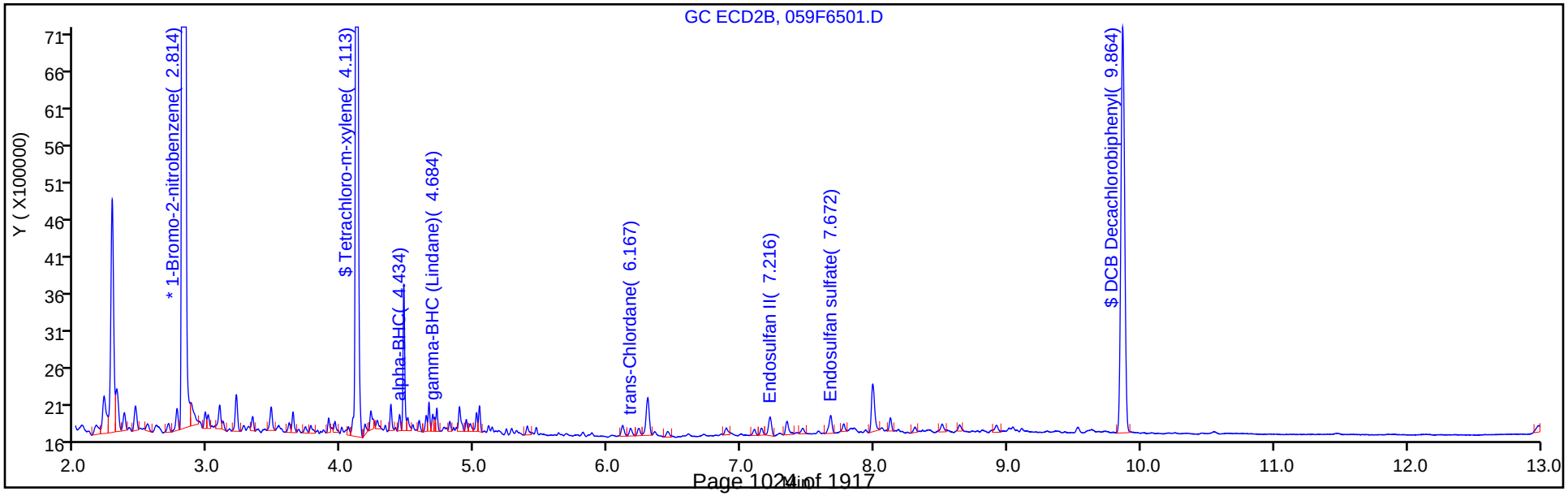
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\059F6501.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Jan-2019 03:22:25 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | 160-32649-E-1-A | Lab Sample ID: | 280-32649-1 | Worklist Smp#: | 82 |
| Client ID: | CRC-MW-1-011519 | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 59 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\059F6501.D | | | | |
| Lims ID: | 160-32649-E-1-A | | | | |
| Client ID: | CRC-MW-1-011519 | | | | |
| Sample Type: | Client | | | | |
| Inject. Date: | 23-Jan-2019 03:22:25 | ALS Bottle#: | 59 | Worklist Smp#: | 82 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | 160-32649-E-1-A | | | | |
| Operator ID: | TEB | Instrument ID: | SGC_C | | |
| Method: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m | | | | |
| Limit Group: | GCSV - 8081A - IS | | | | |
| Last Update: | 23-Jan-2019 11:16:36 | Calib Date: | 17-Jan-2019 18:56:49 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D | | | | |
| Column 1 : | Rxi-35Sil MS ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | Rxi-XLB ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0329 | | | | |
| First Level Reviewer: bacat | | Date: | 23-Jan-2019 11:14:09 | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 15.6 | 78.16 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 9.55 | 47.74 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 15.4 | 76.90 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 9.13 | 45.64 |

FORM VII
PESTICIDES PERFORMANCE EVALUATION MIXTURE (PEM)

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: PEM 280-444894/48 Calibration Date: 01/22/2019 22:25

Instrument ID: SGC_C Calib Start Date: 01/09/2019 00:04

GC Column: Rxi-35Sil MS ID: 0.32(mm) Calib End Date: 01/09/2019 01:30

Lab File ID: 042F4801.D Conc. Units: ng/mL

| ANALYTE | RT | RESPONSE | BREAKDOWN (%) | LIMIT | # |
|---|---|---|---|---|---|
| Endrin | 6.18 | 53790959 | 3.13 | 15 | |
| Endrin aldehyde | 6.83 | 394309 | | | |
| Endrin ketone | 7.77 | 1342968 | | | |

| ANALYTE | RT | RESPONSE | BREAKDOWN (%) | LIMIT | # |
|---|---|---|---|---|---|
| 4,4'-DDT | 6.75 | 44020010 | 1.68 | 15 | |
| 4,4'-DDD | 6.39 | 753847 | | | |
| 4,4'-DDE | | 0 | | | |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\042F4801.D
Lims ID: PEM
Client ID:
Sample Type: PEM
Inject. Date: 22-Jan-2019 22:25:22 ALS Bottle#: 42 Worklist Smp#: 48
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: PEM
Operator ID: TEB Instrument ID: SGC_C
Sublist:

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

First Level Reviewer: bacat Date: 23-Jan-2019 11:10:13

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.557 | 2.559 | -0.001 | 133696228 | 150.0 | 150.0 | |
| 2 | 2.814 | 2.816 | -0.002 | 114485112 | 150.0 | 150.0 | |
| 25 4,4'-DDE | | | | | | | |
| 1 | | 5.718 | | | | ND | |
| 2 | | 6.449 | | | | | |
| 29 Endrin | | | | | | | |
| 1 | 6.181 | 6.184 | -0.003 | 53790959 | 40.0 | 39.7 | |
| 2 | 6.885 | 6.886 | -0.001 | 44451072 | 40.0 | 39.9 | |
| | | | | | | RPD = 0.42 | |
| 32 4,4'-DDD | | | | | | | |
| 1 | 6.387 | 6.391 | -0.004 | 753847 | | 0.6166 | |
| 2 | 7.101 | 7.100 | 0.001 | 666851 | | -0.4062 | |
| | | | | | | RPD = 972.42 | |
| 34 4,4'-DDT | | | | | | | |
| 1 | 6.746 | 6.750 | -0.004 | 44020010 | 40.0 | 39.9 | |
| 2 | 7.461 | 7.464 | -0.003 | 36792040 | 40.0 | 43.5 | |
| | | | | | | RPD = 8.76 | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | 6.831 | 6.836 | -0.005 | 394309 | | -0.7161 | |
| 2 | 7.341 | 7.343 | -0.002 | 425790 | | -0.6827 | |
| | | | | | | RPD = -4.78 | |
| 38 Endrin ketone | | | | | | | |
| 1 | 7.765 | 7.770 | -0.005 | 1342968 | | -0.2421 | |
| 2 | 8.121 | 8.121 | 0.000 | 993610 | | 0.0345 | |
| | | | | | | RPD = -266.42 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8081_EvalBPEM_00013 | Amount Added: | 1.00 | Units: mL | |
| 8081_IS_00010 | Amount Added: | 75.00 | Units: uL | Run Reagent |

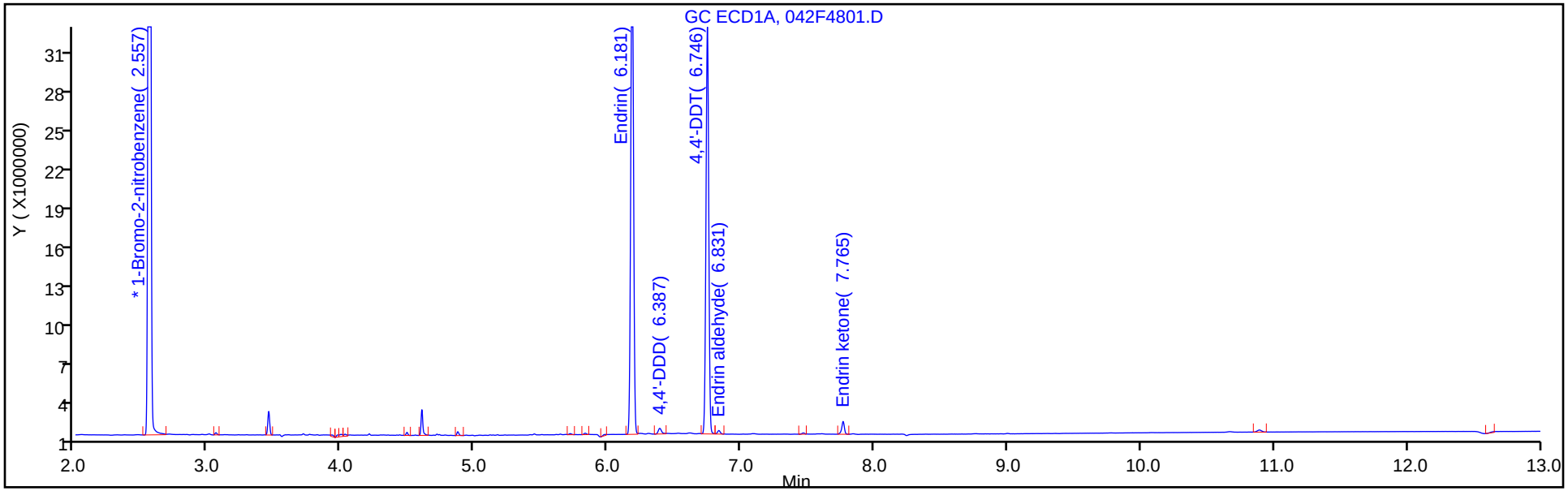
Report Date: 23-Jan-2019 11:16:39 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

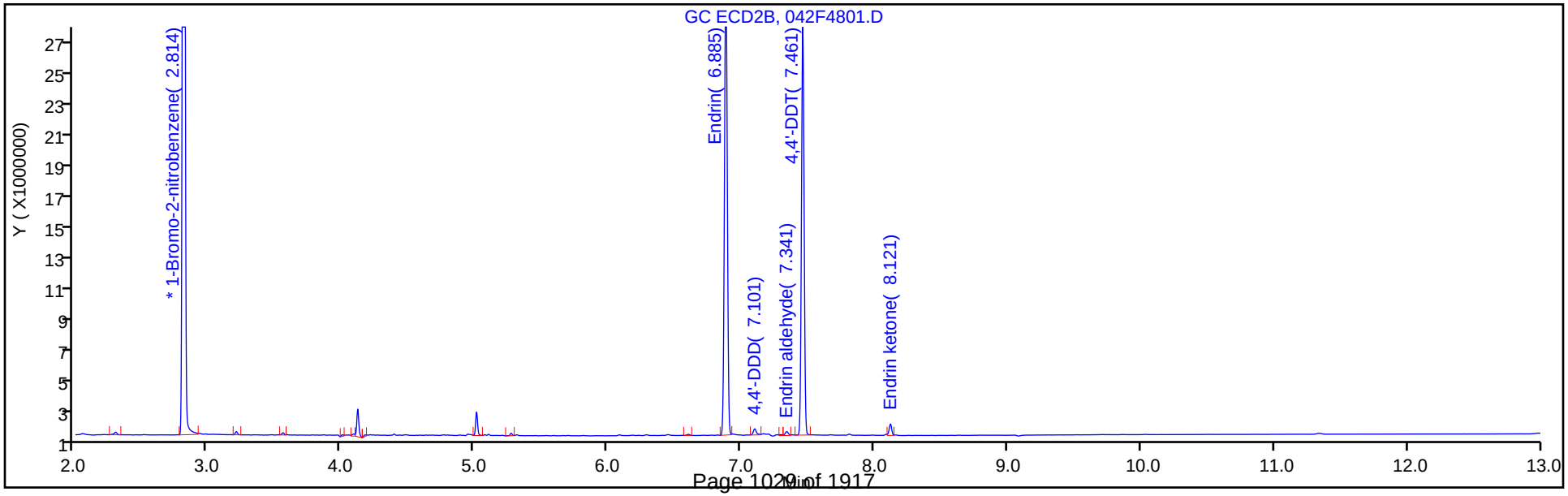
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\042F4801.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 22:25:22 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | PEM | | | Worklist Smp#: | 48 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 42 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES PERFORMANCE EVALUATION MIXTURE (PEM)

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: PEM 280-444894/48  Calibration Date: 01/22/2019 22:25

Instrument ID: SGC_C  Calib Start Date: 01/09/2019 00:04

GC Column: Rxi-XLB  ID: 0.32(mm)  Calib End Date: 01/09/2019 01:30

Lab File ID: 042F4801.D  Conc. Units: ng/mL

| ANALYTE | RT | RESPONSE | BREAKDOWN (%) | LIMIT | # |
|---|---|---|---|---|---|
| Endrin | 6.89 | 44451072 | 3.09 | 15 | |
| Endrin aldehyde | 7.34 | 425790 | | | |
| Endrin ketone | 8.12 | 993610 | | | |

| ANALYTE | RT | RESPONSE | BREAKDOWN (%) | LIMIT | # |
|---|---|---|---|---|---|
| 4,4'-DDT | 7.46 | 36792040 | 1.78 | 15 | |
| 4,4'-DDD | 7.10 | 666851 | | | |
| 4,4'-DDE | | 0 | | | |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\042F4801.D
Lims ID: PEM
Client ID:
Sample Type: PEM
Inject. Date: 22-Jan-2019 22:25:22 ALS Bottle#: 42 Worklist Smp#: 48
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: PEM
Operator ID: TEB Instrument ID: SGC_C
Sublist:

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

First Level Reviewer: bacat Date: 23-Jan-2019 11:10:13

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.557 | 2.559 | -0.001 | 133696228 | 150.0 | 150.0 | |
| 2 | 2.814 | 2.816 | -0.002 | 114485112 | 150.0 | 150.0 | |
| 25 4,4'-DDE | | | | | | | |
| 1 | | 5.718 | | | | ND | |
| 2 | | 6.449 | | | | | |
| 29 Endrin | | | | | | | |
| 1 | 6.181 | 6.184 | -0.003 | 53790959 | 40.0 | 39.7 | |
| 2 | 6.885 | 6.886 | -0.001 | 44451072 | 40.0 | 39.9 | |
| | | | | | | RPD = 0.42 | |
| 32 4,4'-DDD | | | | | | | |
| 1 | 6.387 | 6.391 | -0.004 | 753847 | | 0.6166 | |
| 2 | 7.101 | 7.100 | 0.001 | 666851 | | -0.4062 | |
| | | | | | | RPD = 972.42 | |
| 34 4,4'-DDT | | | | | | | |
| 1 | 6.746 | 6.750 | -0.004 | 44020010 | 40.0 | 39.9 | |
| 2 | 7.461 | 7.464 | -0.003 | 36792040 | 40.0 | 43.5 | |
| | | | | | | RPD = 8.76 | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | 6.831 | 6.836 | -0.005 | 394309 | | -0.7161 | |
| 2 | 7.341 | 7.343 | -0.002 | 425790 | | -0.6827 | |
| | | | | | | RPD = -4.78 | |
| 38 Endrin ketone | | | | | | | |
| 1 | 7.765 | 7.770 | -0.005 | 1342968 | | -0.2421 | |
| 2 | 8.121 | 8.121 | 0.000 | 993610 | | 0.0345 | |
| | | | | | | RPD = -266.42 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8081_EvalBPEM_00013 | Amount Added: | 1.00 | Units: mL | |
| 8081_IS_00010 | Amount Added: | 75.00 | Units: uL | Run Reagent |

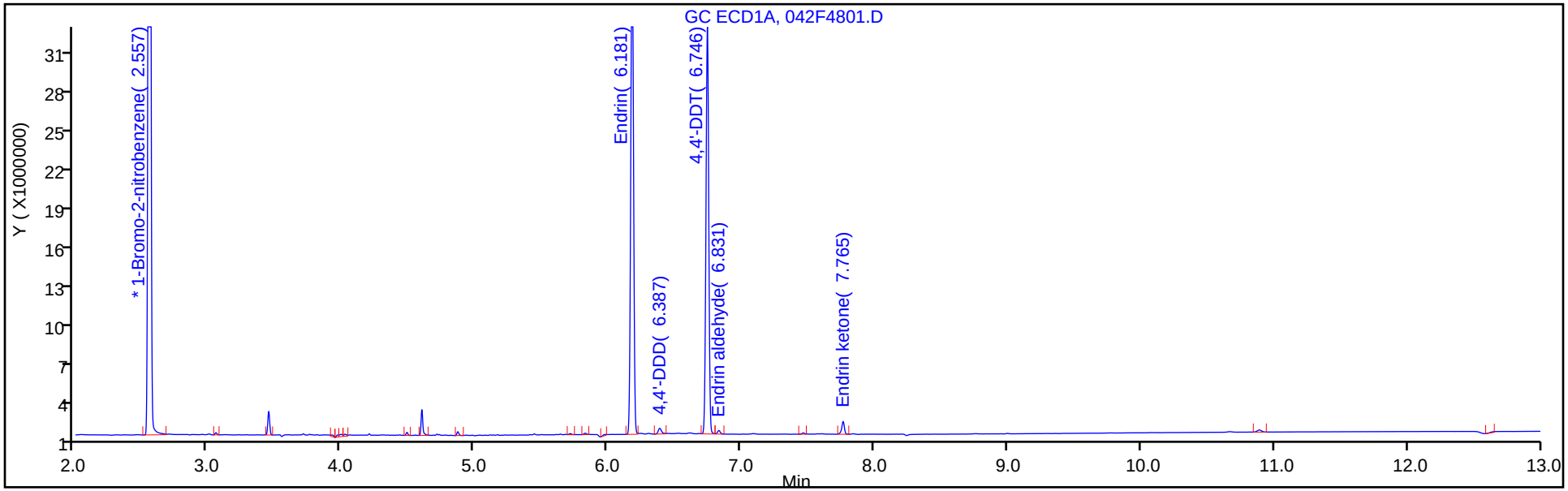
Report Date: 23-Jan-2019 11:16:39 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

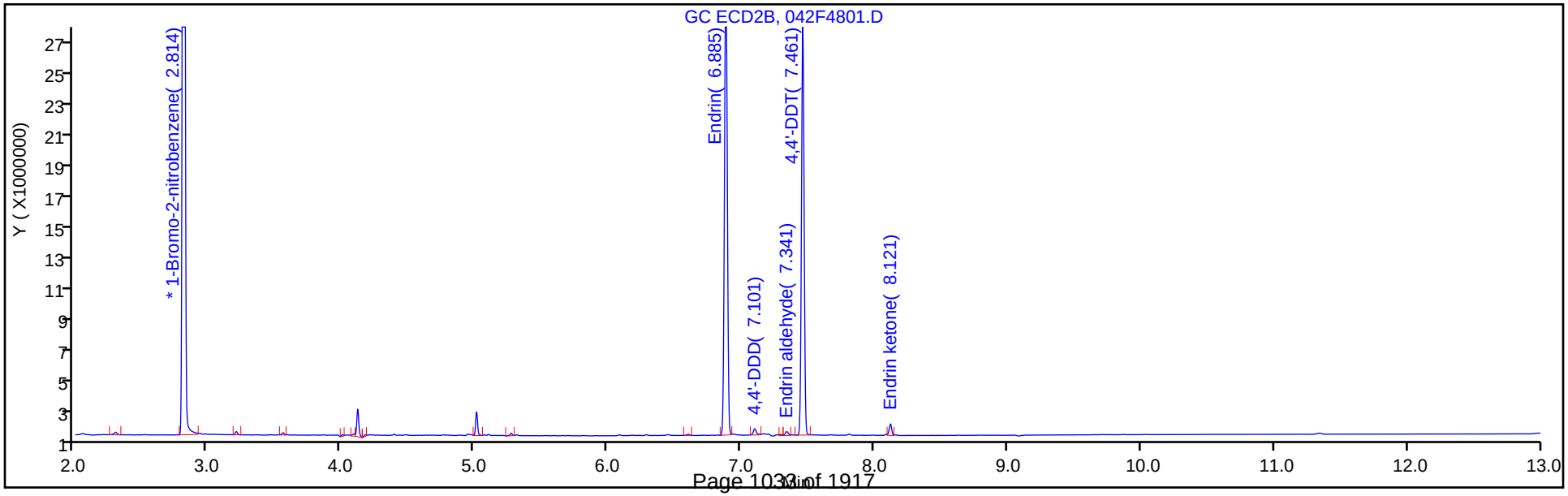
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\042F4801.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 22:25:22 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | PEM | | | Worklist Smp#: | 48 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 42 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCVIS 280-444894/13 | Calibration Date: 01/21/2019 15:39

Instrument ID: SGC_C | Calib Start Date: 01/09/2019 00:04

GC Column: Rxi-35Sil MS ID: 0.32(mm) | Calib End Date: 01/09/2019 01:30

Lab File ID: 01210013.D | Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Hexachlorobenzene | Lin2 | | 1.147 | | 41.9 | 50.0 | -16.2 | 20.0 |
| alpha-BHC | Lin2 | | 1.740 | | 43.3 | 50.0 | -13.4 | 20.0 |
| gamma-BHC (Lindane) | Ave | 1.503 | 1.292 | | 43.0 | 50.0 | -14.0 | 20.0 |
| beta-BHC | Lin2 | | 0.6665 | | 43.6 | 50.0 | -12.9 | 20.0 |
| Heptachlor | Lin2 | | 1.279 | | 43.9 | 50.0 | -12.3 | 20.0 |
| delta-BHC | Lin2 | | 1.534 | | 43.6 | 50.0 | -12.8 | 20.0 |
| Aldrin | Lin2 | | 1.482 | | 41.6 | 50.0 | -16.7 | 20.0 |
| Isodrin | Lin2 | | 1.243 | | 41.6 | 50.0 | -16.8 | 20.0 |
| Heptachlor epoxide | Ave | 1.512 | 1.253 | | 41.4 | 50.0 | -17.1 | 20.0 |
| gamma-Chlordane | Qua | | 1.308 | | 40.0 | 50.0 | -20.0 | 20.0 |
| alpha-Chlordane | Ave | 1.644 | 1.338 | | 40.7 | 50.0 | -18.6 | 20.0 |
| Endosulfan I | Ave | 1.574 | 1.276 | | 40.5 | 50.0 | -18.9 | 20.0 |
| 4,4'-DDE | Lin | | 1.417 | | 41.6 | 50.0 | -16.8 | 20.0 |
| Dieldrin | Ave | 1.411 | 1.030 | | 36.5 | 50.0 | -27.1* | 20.0 |
| Endrin | Lin2 | | 1.343 | | 44.3 | 50.0 | -11.4 | 20.0 |
| 4,4'-DDD | Ave | 1.372 | 1.084 | | 39.5 | 50.0 | -21.0* | 20.0 |
| Endosulfan II | Ave | 1.514 | 1.256 | | 41.5 | 50.0 | -17.0 | 20.0 |
| 4,4'-DDT | Lin2 | | 1.066 | | 43.1 | 50.0 | -13.9 | 20.0 |
| Endrin aldehyde | Lin2 | | 1.040 | | 42.7 | 50.0 | -14.5 | 20.0 |
| Endosulfan sulfate | Ave | 1.436 | 1.151 | | 40.1 | 50.0 | -19.8 | 20.0 |
| Methoxychlor | Lin2 | | 0.5176 | | 43.9 | 50.0 | -12.1 | 20.0 |
| Endrin ketone | Lin2 | | 1.302 | | 43.6 | 50.0 | -12.8 | 20.0 |
| Mirex | Lin2 | | 0.8850 | | 42.9 | 50.0 | -14.2 | 20.0 |
| Tetrachloro-m-xylene | Lin2 | | 1.067 | | 41.2 | 50.0 | -17.5 | 20.0 |
| DCB Decachlorobiphenyl | Lin2 | | 1.025 | | 40.6 | 50.0 | -18.9 | 20.0 |

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCVIS 280-444894/13 Calibration Date: 01/21/2019 15:39

Instrument ID: SGC_C Calib Start Date: 01/09/2019 00:04

GC Column: Rxi-35Sil MS ID: 0.32(mm) Calib End Date: 01/09/2019 01:30

Lab File ID: 01210013.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| Hexachlorobenzene | 3.97 | 3.96 | 3.98 |
| alpha-BHC | 4.07 | 4.05 | 4.08 |
| gamma-BHC (Lindane) | 4.35 | 4.34 | 4.37 |
| beta-BHC | 4.54 | 4.53 | 4.55 |
| Heptachlor | 4.61 | 4.59 | 4.62 |
| delta-BHC | 4.73 | 4.72 | 4.75 |
| Aldrin | 4.82 | 4.81 | 4.83 |
| Isodrin | 5.12 | 5.11 | 5.13 |
| Heptachlor epoxide | 5.23 | 5.21 | 5.24 |
| gamma-Chlordane | 5.42 | 5.41 | 5.43 |
| alpha-Chlordane | 5.51 | 5.49 | 5.52 |
| Endosulfan I | 5.55 | 5.54 | 5.56 |
| 4,4'-DDE | 5.72 | 5.71 | 5.73 |
| Dieldrin | 5.83 | 5.82 | 5.85 |
| Endrin | 6.18 | 6.17 | 6.20 |
| 4,4'-DDD | 6.39 | 6.38 | 6.40 |
| Endosulfan II | 6.53 | 6.52 | 6.55 |
| 4,4'-DDT | 6.75 | 6.74 | 6.76 |
| Endrin aldehyde | 6.84 | 6.82 | 6.85 |
| Endosulfan sulfate | 7.08 | 7.07 | 7.10 |
| Methoxychlor | 7.61 | 7.60 | 7.62 |
| Endrin ketone | 7.77 | 7.76 | 7.78 |
| Mirex | 7.88 | 7.87 | 7.89 |
| Tetrachloro-m-xylene | 3.54 | 3.52 | 3.55 |
| DCB Decachlorobiphenyl | 9.00 | 8.99 | 9.02 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\01210013.D
Lims ID: CCVIS AB
Client ID:
Sample Type: CCVIS
Inject. Date: 21-Jan-2019 15:39:57 ALS Bottle#: 7 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0078230-013
Operator ID: TEB Instrument ID: SGC_C
Sublist: chrom-C 8081 IS*sub5

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:14:44 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.558 | 2.558 | 0.000 | 142135528 | 150.0 | 150.0 | |
| 2 | 2.814 | 2.814 | 0.000 | 115763826 | 150.0 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | | |
| 1 | 3.537 | 3.537 | 0.000 | 50563040 | 50.0 | 41.2 | |
| 2 | 4.113 | 4.113 | 0.000 | 56687734 | 50.0 | 38.8 | |
| | | | | | | RPD = 5.99 | |
| 6 Hexachlorobenzene | | | | | | | |
| 1 | 3.971 | 3.971 | 0.000 | 54353686 | 50.0 | 41.9 | |
| 2 | 4.498 | 4.498 | 0.000 | 56026037 | 50.0 | 39.3 | |
| | | | | | | RPD = 6.35 | |
| 7 alpha-BHC | | | | | | | |
| 1 | 4.066 | 4.066 | 0.000 | 82453641 | 50.0 | 43.3 | |
| 2 | 4.438 | 4.438 | 0.000 | 63738823 | 50.0 | 43.9 | |
| | | | | | | RPD = 1.36 | |
| 8 gamma-BHC (Lindane) | | | | | | | |
| 1 | 4.353 | 4.353 | 0.000 | 61233780 | 50.0 | 43.0 | |
| 2 | 4.683 | 4.683 | 0.000 | 48523359 | 50.0 | 44.5 | |
| | | | | | | RPD = 3.40 | |
| 11 beta-BHC | | | | | | | |
| 1 | 4.540 | 4.540 | 0.000 | 31576056 | 50.0 | 43.6 | |
| 2 | 4.888 | 4.888 | 0.000 | 25236073 | 50.0 | 45.9 | |
| | | | | | | RPD = 5.32 | |
| 12 Heptachlor | | | | | | | |
| 1 | 4.605 | 4.605 | 0.000 | 60573662 | 50.0 | 43.9 | |
| 2 | 5.126 | 5.126 | 0.000 | 44277153 | 50.0 | 46.1 | |
| | | | | | | RPD = 5.04 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 13 delta-BHC | | | | | | | |
| 1 | 4.734 | 4.734 | 0.000 | 72688892 | 50.0 | 43.6 | |
| 2 | 5.075 | 5.075 | 0.000 | 59764116 | 50.0 | 45.0 | |
| | | | | | | RPD = 3.04 | |
| 15 Aldrin | | | | | | | |
| 1 | 4.821 | 4.821 | 0.000 | 70224840 | 50.0 | 41.6 | |
| 2 | 5.394 | 5.394 | 0.000 | 56222243 | 50.0 | 44.4 | |
| | | | | | | RPD = 6.37 | |
| 17 Isodrin | | | | | | | |
| 1 | 5.118 | 5.118 | 0.000 | 58910907 | 50.0 | 41.6 | |
| 2 | 5.699 | 5.699 | 0.000 | 49236552 | 50.0 | 44.9 | |
| | | | | | | RPD = 7.60 | |
| 19 Heptachlor epoxide | | | | | | | |
| 1 | 5.227 | 5.227 | 0.000 | 59375219 | 50.0 | 41.4 | |
| 2 | 5.814 | 5.814 | 0.000 | 50886165 | 50.0 | 44.9 | |
| | | | | | | RPD = 8.00 | |
| 20 trans-Chlordane | | | | | | | |
| 1 | 5.418 | 5.418 | 0.000 | 61977412 | 50.0 | 40.0 | |
| 2 | 6.170 | 6.170 | 0.000 | 53995674 | 50.0 | 45.5 | |
| | | | | | | RPD = 12.86 | |
| 23 cis-Chlordane | | | | | | | |
| 1 | 5.507 | 5.507 | 0.000 | 63371006 | 50.0 | 40.7 | |
| 2 | 6.231 | 6.231 | 0.000 | 47654405 | 50.0 | 40.6 | |
| | | | | | | RPD = 0.21 | |
| 24 Endosulfan I | | | | | | | |
| 1 | 5.548 | 5.548 | 0.000 | 60476154 | 50.0 | 40.5 | |
| 2 | 6.272 | 6.272 | 0.000 | 38804441 | 50.0 | 39.7 | |
| | | | | | | RPD = 2.21 | |
| 25 4,4'-DDE | | | | | | | |
| 1 | 5.718 | 5.718 | 0.000 | 67135311 | 50.0 | 41.6 | |
| 2 | 6.449 | 6.449 | 0.000 | 58407921 | 50.0 | 40.1 | |
| | | | | | | RPD = 3.64 | |
| 26 Dieldrin | | | | | | | |
| 1 | 5.832 | 5.832 | 0.000 | 48781446 | 50.0 | 36.5 | |
| 2 | 6.603 | 6.603 | 0.000 | 55234680 | 50.0 | 43.2 | |
| | | | | | | RPD = 16.89 | |
| 29 Endrin | | | | | | | |
| 1 | 6.184 | 6.184 | 0.000 | 63630706 | 50.0 | 44.3 | |
| 2 | 6.886 | 6.886 | 0.000 | 51456120 | 50.0 | 45.8 | |
| | | | | | | RPD = 3.31 | |
| 32 4,4'-DDD | | | | | | | |
| 1 | 6.391 | 6.391 | 0.000 | 51364148 | 50.0 | 39.5 | |
| 2 | 7.100 | 7.100 | 0.000 | 44177749 | 50.0 | 44.8 | |
| | | | | | | RPD = 12.52 | |
| 33 Endosulfan II | | | | | | | |
| 1 | 6.533 | 6.533 | 0.000 | 59520319 | 50.0 | 41.5 | |
| 2 | 7.213 | 7.213 | 0.000 | 46698513 | 50.0 | 45.4 | |
| | | | | | | RPD = 9.08 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 34 4,4'-DDT | | | | | | | |
| 1 | 6.750 | 6.750 | 0.000 | 50509221 | 50.0 | 43.1 | |
| 2 | 7.464 | 7.464 | 0.000 | 40422572 | 50.0 | 47.3 | |
| | | | | | | RPD = 9.38 | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | 6.836 | 6.836 | 0.000 | 49259160 | 50.0 | 42.7 | |
| 2 | 7.343 | 7.343 | 0.000 | 38460929 | 50.0 | 45.3 | |
| | | | | | | RPD = 5.80 | |
| 36 Endosulfan sulfate | | | | | | | |
| 1 | 7.084 | 7.084 | 0.000 | 54525448 | 50.0 | 40.1 | |
| 2 | 7.673 | 7.673 | 0.000 | 43411342 | 50.0 | 46.2 | |
| | | | | | | RPD = 14.20 | |
| 37 Methoxychlor | | | | | | | |
| 1 | 7.611 | 7.611 | 0.000 | 24524252 | 50.0 | 43.9 | |
| 2 | 7.981 | 7.981 | 0.000 | 21441414 | 50.0 | 47.8 | |
| | | | | | | RPD = 8.53 | |
| 38 Endrin ketone | | | | | | | |
| 1 | 7.770 | 7.770 | 0.000 | 61690469 | 50.0 | 43.6 | |
| 2 | 8.121 | 8.121 | 0.000 | 41676443 | 50.0 | 41.7 | |
| | | | | | | RPD = 4.56 | |
| 39 Mirex | | | | | | | |
| 1 | 7.878 | 7.878 | 0.000 | 41932037 | 50.0 | 42.9 | |
| 2 | 8.642 | 8.642 | 0.000 | 28911603 | 50.0 | 41.8 | |
| | | | | | | RPD = 2.67 | |
| $ 40 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.004 | 9.004 | 0.000 | 48558602 | 50.0 | 40.6 | |
| 2 | 9.869 | 9.869 | 0.000 | 42806601 | 50.0 | 41.3 | |
| | | | | | | RPD = 1.68 | |

## Reagents:

| | | | |
|---|---|---|---|
| 8081IcalL4_00033 | Amount Added: 1.00 | Units: mL | |
| 8081_IS_00010 | Amount Added: 75.00 | Units: uL | Run Reagent |

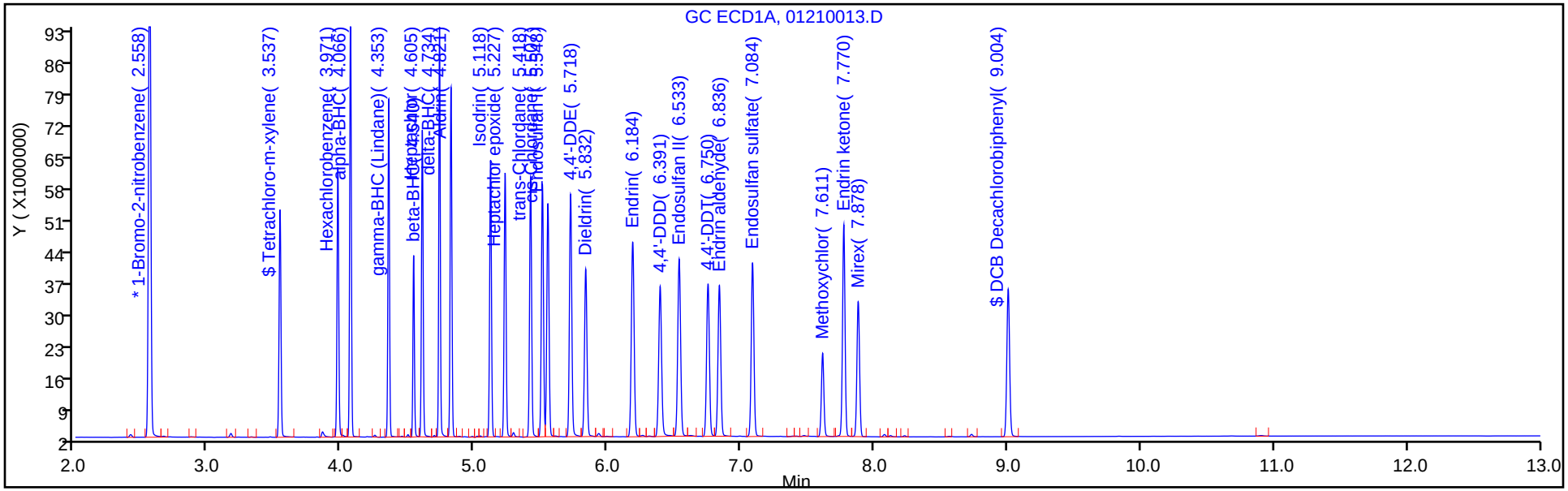
Report Date: 23-Jan-2019 11:14:45 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

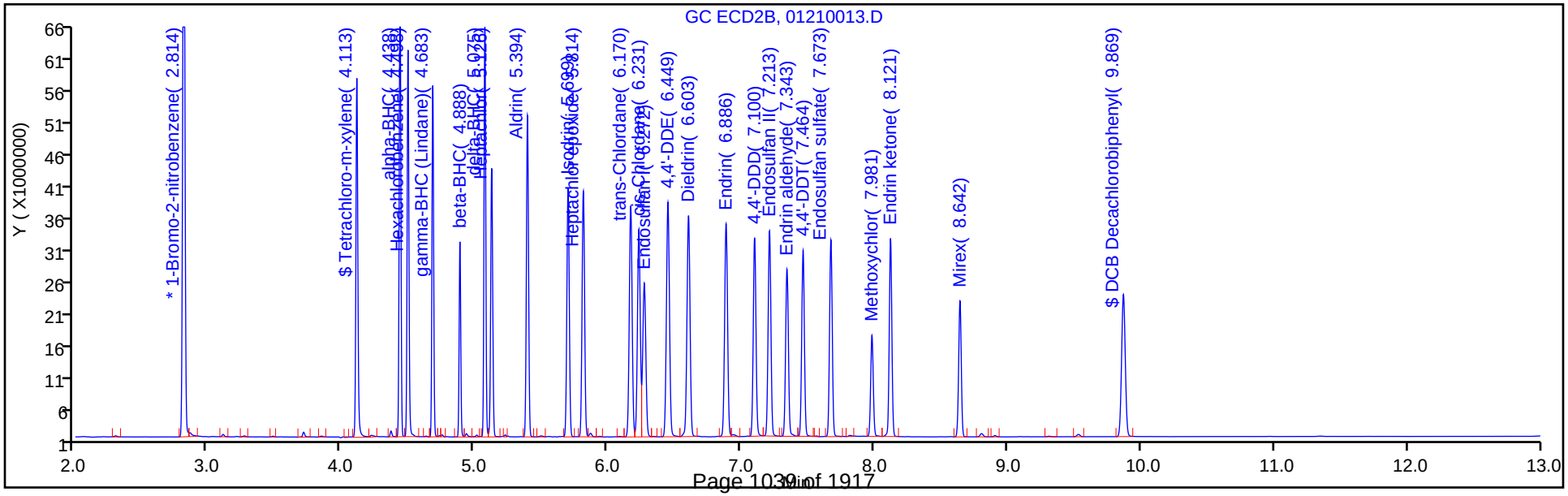
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\01210013.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 21-Jan-2019 15:39:57 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | CCVIS AB | | | Worklist Smp#: | 13 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 7 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCVIS 280-444894/13 | Calibration Date: 01/21/2019 15:39

Instrument ID: SGC_C | Calib Start Date: 01/09/2019 00:04

GC Column: Rxi-XLB ID: 0.32(mm) | Calib End Date: 01/09/2019 01:30

Lab File ID: 01210013.D | Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| alpha-BHC | Ave | 1.882 | 1.652 | | 43.9 | 50.0 | -12.3 | 20.0 |
| Hexachlorobenzene | Lin2 | | 1.452 | | 39.3 | 50.0 | -21.3* | 20.0 |
| gamma-BHC (Lindane) | Ave | 1.413 | 1.257 | | 44.5 | 50.0 | -11.0 | 20.0 |
| beta-BHC | Lin2 | | 0.6540 | | 45.9 | 50.0 | -8.1 | 20.0 |
| delta-BHC | Lin2 | | 1.549 | | 45.0 | 50.0 | -10.1 | 20.0 |
| Heptachlor | Lin2 | | 1.147 | | 46.1 | 50.0 | -7.8 | 20.0 |
| Aldrin | Lin2 | | 1.457 | | 44.4 | 50.0 | -11.2 | 20.0 |
| Isodrin | Lin2 | | 1.276 | | 44.9 | 50.0 | -10.2 | 20.0 |
| Heptachlor epoxide | Lin2 | | 1.319 | | 44.9 | 50.0 | -10.2 | 20.0 |
| gamma-Chlordane | Lin2 | | 1.399 | | 45.5 | 50.0 | -9.0 | 20.0 |
| alpha-Chlordane | Ave | 1.521 | 1.235 | | 40.6 | 50.0 | -18.8 | 20.0 |
| Endosulfan I | Ave | 1.268 | 1.006 | | 39.7 | 50.0 | -20.7* | 20.0 |
| 4,4'-DDE | Lin2 | | 1.514 | | 40.1 | 50.0 | -19.8 | 20.0 |
| Dieldrin | Ave | 1.657 | 1.431 | | 43.2 | 50.0 | -13.6 | 20.0 |
| Endrin | Lin2 | | 1.333 | | 45.8 | 50.0 | -8.5 | 20.0 |
| 4,4'-DDD | Lin2 | | 1.145 | | 44.8 | 50.0 | -10.4 | 20.0 |
| Endosulfan II | Lin2 | | 1.210 | | 45.4 | 50.0 | -9.1 | 20.0 |
| Endrin aldehyde | Lin2 | | 0.997 | | 45.3 | 50.0 | -9.4 | 20.0 |
| 4,4'-DDT | Lin2 | | 1.048 | | 47.3 | 50.0 | -5.4 | 20.0 |
| Endosulfan sulfate | Lin2 | | 1.125 | | 46.2 | 50.0 | -7.6 | 20.0 |
| Methoxychlor | Lin2 | | 0.5557 | | 47.8 | 50.0 | -4.3 | 20.0 |
| Endrin ketone | Lin2 | | 1.080 | | 41.7 | 50.0 | -16.7 | 20.0 |
| Mirex | Ave | 0.8964 | 0.7492 | | 41.8 | 50.0 | -16.4 | 20.0 |
| Tetrachloro-m-xylene | Lin2 | | 1.469 | | 38.8 | 50.0 | -22.3* | 20.0 |
| DCB Decachlorobiphenyl | Lin2 | | 1.109 | | 41.3 | 50.0 | -17.5 | 20.0 |

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCVIS 280-444894/13 Calibration Date: 01/21/2019 15:39

Instrument ID: SGC_C Calib Start Date: 01/09/2019 00:04

GC Column: Rxi-XLB ID: 0.32(mm) Calib End Date: 01/09/2019 01:30

Lab File ID: 01210013.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| alpha-BHC | 4.44 | 4.43 | 4.45 |
| Hexachlorobenzene | 4.50 | 4.49 | 4.51 |
| gamma-BHC (Lindane) | 4.68 | 4.67 | 4.70 |
| beta-BHC | 4.89 | 4.88 | 4.90 |
| delta-BHC | 5.08 | 5.06 | 5.09 |
| Heptachlor | 5.13 | 5.11 | 5.14 |
| Aldrin | 5.39 | 5.38 | 5.41 |
| Isodrin | 5.70 | 5.69 | 5.71 |
| Heptachlor epoxide | 5.81 | 5.80 | 5.83 |
| gamma-Chlordane | 6.17 | 6.16 | 6.18 |
| alpha-Chlordane | 6.23 | 6.22 | 6.24 |
| Endosulfan I | 6.27 | 6.26 | 6.29 |
| 4,4'-DDE | 6.45 | 6.44 | 6.46 |
| Dieldrin | 6.60 | 6.59 | 6.62 |
| Endrin | 6.89 | 6.87 | 6.90 |
| 4,4'-DDD | 7.10 | 7.09 | 7.11 |
| Endosulfan II | 7.21 | 7.20 | 7.23 |
| Endrin aldehyde | 7.34 | 7.33 | 7.36 |
| 4,4'-DDT | 7.46 | 7.45 | 7.48 |
| Endosulfan sulfate | 7.67 | 7.66 | 7.69 |
| Methoxychlor | 7.98 | 7.97 | 7.99 |
| Endrin ketone | 8.12 | 8.11 | 8.13 |
| Mirex | 8.64 | 8.63 | 8.66 |
| Tetrachloro-m-xylene | 4.11 | 4.10 | 4.13 |
| DCB Decachlorobiphenyl | 9.87 | 9.86 | 9.88 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\01210013.D
Lims ID: CCVIS AB
Client ID:
Sample Type: CCVIS
Inject. Date: 21-Jan-2019 15:39:57 ALS Bottle#: 7 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0078230-013
Operator ID: TEB Instrument ID: SGC_C
Sublist: chrom-C 8081 IS*sub5

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:14:44 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.558 | 2.558 | 0.000 | 142135528 | 150.0 | 150.0 | |
| 2 | 2.814 | 2.814 | 0.000 | 115763826 | 150.0 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | | |
| 1 | 3.537 | 3.537 | 0.000 | 50563040 | 50.0 | 41.2 | |
| 2 | 4.113 | 4.113 | 0.000 | 56687734 | 50.0 | 38.8 | |
| | | | | | | RPD = 5.99 | |
| 6 Hexachlorobenzene | | | | | | | |
| 1 | 3.971 | 3.971 | 0.000 | 54353686 | 50.0 | 41.9 | |
| 2 | 4.498 | 4.498 | 0.000 | 56026037 | 50.0 | 39.3 | |
| | | | | | | RPD = 6.35 | |
| 7 alpha-BHC | | | | | | | |
| 1 | 4.066 | 4.066 | 0.000 | 82453641 | 50.0 | 43.3 | |
| 2 | 4.438 | 4.438 | 0.000 | 63738823 | 50.0 | 43.9 | |
| | | | | | | RPD = 1.36 | |
| 8 gamma-BHC (Lindane) | | | | | | | |
| 1 | 4.353 | 4.353 | 0.000 | 61233780 | 50.0 | 43.0 | |
| 2 | 4.683 | 4.683 | 0.000 | 48523359 | 50.0 | 44.5 | |
| | | | | | | RPD = 3.40 | |
| 11 beta-BHC | | | | | | | |
| 1 | 4.540 | 4.540 | 0.000 | 31576056 | 50.0 | 43.6 | |
| 2 | 4.888 | 4.888 | 0.000 | 25236073 | 50.0 | 45.9 | |
| | | | | | | RPD = 5.32 | |
| 12 Heptachlor | | | | | | | |
| 1 | 4.605 | 4.605 | 0.000 | 60573662 | 50.0 | 43.9 | |
| 2 | 5.126 | 5.126 | 0.000 | 44277153 | 50.0 | 46.1 | |
| | | | | | | RPD = 5.04 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 13 delta-BHC | | | | | | | |
| 1 | 4.734 | 4.734 | 0.000 | 72688892 | 50.0 | 43.6 | |
| 2 | 5.075 | 5.075 | 0.000 | 59764116 | 50.0 | 45.0 | |
| | | | | | | RPD = 3.04 | |
| 15 Aldrin | | | | | | | |
| 1 | 4.821 | 4.821 | 0.000 | 70224840 | 50.0 | 41.6 | |
| 2 | 5.394 | 5.394 | 0.000 | 56222243 | 50.0 | 44.4 | |
| | | | | | | RPD = 6.37 | |
| 17 Isodrin | | | | | | | |
| 1 | 5.118 | 5.118 | 0.000 | 58910907 | 50.0 | 41.6 | |
| 2 | 5.699 | 5.699 | 0.000 | 49236552 | 50.0 | 44.9 | |
| | | | | | | RPD = 7.60 | |
| 19 Heptachlor epoxide | | | | | | | |
| 1 | 5.227 | 5.227 | 0.000 | 59375219 | 50.0 | 41.4 | |
| 2 | 5.814 | 5.814 | 0.000 | 50886165 | 50.0 | 44.9 | |
| | | | | | | RPD = 8.00 | |
| 20 trans-Chlordane | | | | | | | |
| 1 | 5.418 | 5.418 | 0.000 | 61977412 | 50.0 | 40.0 | |
| 2 | 6.170 | 6.170 | 0.000 | 53995674 | 50.0 | 45.5 | |
| | | | | | | RPD = 12.86 | |
| 23 cis-Chlordane | | | | | | | |
| 1 | 5.507 | 5.507 | 0.000 | 63371006 | 50.0 | 40.7 | |
| 2 | 6.231 | 6.231 | 0.000 | 47654405 | 50.0 | 40.6 | |
| | | | | | | RPD = 0.21 | |
| 24 Endosulfan I | | | | | | | |
| 1 | 5.548 | 5.548 | 0.000 | 60476154 | 50.0 | 40.5 | |
| 2 | 6.272 | 6.272 | 0.000 | 38804441 | 50.0 | 39.7 | |
| | | | | | | RPD = 2.21 | |
| 25 4,4'-DDE | | | | | | | |
| 1 | 5.718 | 5.718 | 0.000 | 67135311 | 50.0 | 41.6 | |
| 2 | 6.449 | 6.449 | 0.000 | 58407921 | 50.0 | 40.1 | |
| | | | | | | RPD = 3.64 | |
| 26 Dieldrin | | | | | | | |
| 1 | 5.832 | 5.832 | 0.000 | 48781446 | 50.0 | 36.5 | |
| 2 | 6.603 | 6.603 | 0.000 | 55234680 | 50.0 | 43.2 | |
| | | | | | | RPD = 16.89 | |
| 29 Endrin | | | | | | | |
| 1 | 6.184 | 6.184 | 0.000 | 63630706 | 50.0 | 44.3 | |
| 2 | 6.886 | 6.886 | 0.000 | 51456120 | 50.0 | 45.8 | |
| | | | | | | RPD = 3.31 | |
| 32 4,4'-DDD | | | | | | | |
| 1 | 6.391 | 6.391 | 0.000 | 51364148 | 50.0 | 39.5 | |
| 2 | 7.100 | 7.100 | 0.000 | 44177749 | 50.0 | 44.8 | |
| | | | | | | RPD = 12.52 | |
| 33 Endosulfan II | | | | | | | |
| 1 | 6.533 | 6.533 | 0.000 | 59520319 | 50.0 | 41.5 | |
| 2 | 7.213 | 7.213 | 0.000 | 46698513 | 50.0 | 45.4 | |
| | | | | | | RPD = 9.08 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 34 4,4'-DDT | | | | | | | |
| 1 | 6.750 | 6.750 | 0.000 | 50509221 | 50.0 | 43.1 | |
| 2 | 7.464 | 7.464 | 0.000 | 40422572 | 50.0 | 47.3 | |
| | | | | | | RPD = 9.38 | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | 6.836 | 6.836 | 0.000 | 49259160 | 50.0 | 42.7 | |
| 2 | 7.343 | 7.343 | 0.000 | 38460929 | 50.0 | 45.3 | |
| | | | | | | RPD = 5.80 | |
| 36 Endosulfan sulfate | | | | | | | |
| 1 | 7.084 | 7.084 | 0.000 | 54525448 | 50.0 | 40.1 | |
| 2 | 7.673 | 7.673 | 0.000 | 43411342 | 50.0 | 46.2 | |
| | | | | | | RPD = 14.20 | |
| 37 Methoxychlor | | | | | | | |
| 1 | 7.611 | 7.611 | 0.000 | 24524252 | 50.0 | 43.9 | |
| 2 | 7.981 | 7.981 | 0.000 | 21441414 | 50.0 | 47.8 | |
| | | | | | | RPD = 8.53 | |
| 38 Endrin ketone | | | | | | | |
| 1 | 7.770 | 7.770 | 0.000 | 61690469 | 50.0 | 43.6 | |
| 2 | 8.121 | 8.121 | 0.000 | 41676443 | 50.0 | 41.7 | |
| | | | | | | RPD = 4.56 | |
| 39 Mirex | | | | | | | |
| 1 | 7.878 | 7.878 | 0.000 | 41932037 | 50.0 | 42.9 | |
| 2 | 8.642 | 8.642 | 0.000 | 28911603 | 50.0 | 41.8 | |
| | | | | | | RPD = 2.67 | |
| $ 40 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.004 | 9.004 | 0.000 | 48558602 | 50.0 | 40.6 | |
| 2 | 9.869 | 9.869 | 0.000 | 42806601 | 50.0 | 41.3 | |
| | | | | | | RPD = 1.68 | |

## Reagents:

| | | | |
|---|---|---|---|
| 8081IcalL4_00033 | Amount Added: 1.00 | Units: mL | |
| 8081_IS_00010 | Amount Added: 75.00 | Units: uL | Run Reagent |

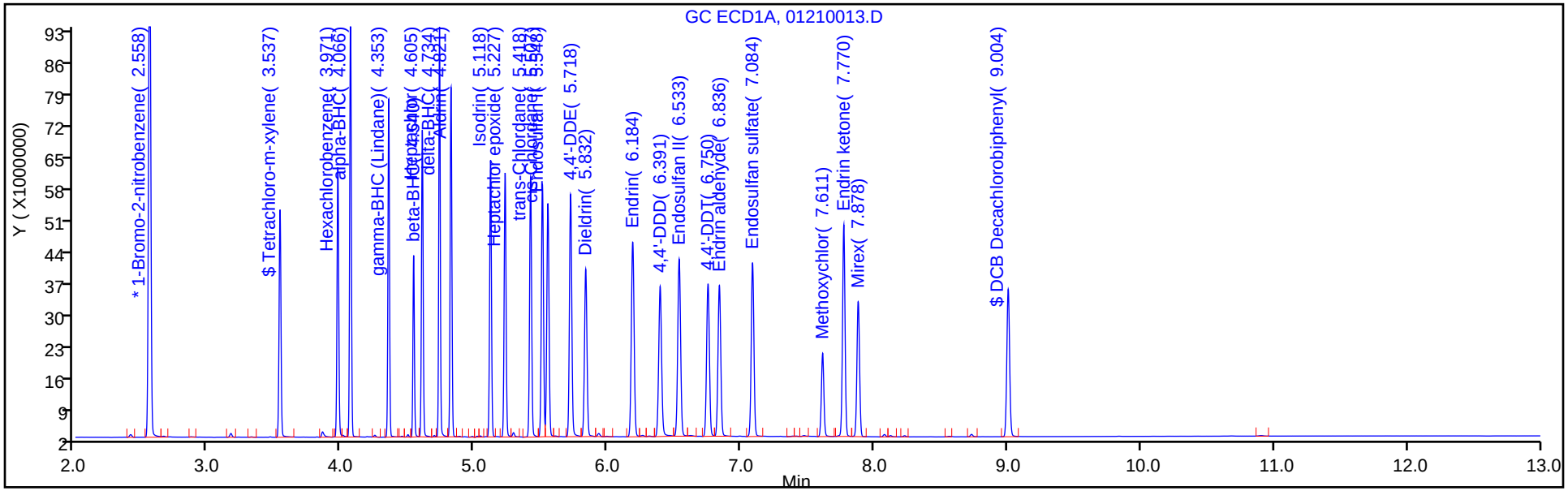
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TestAmerica Denver

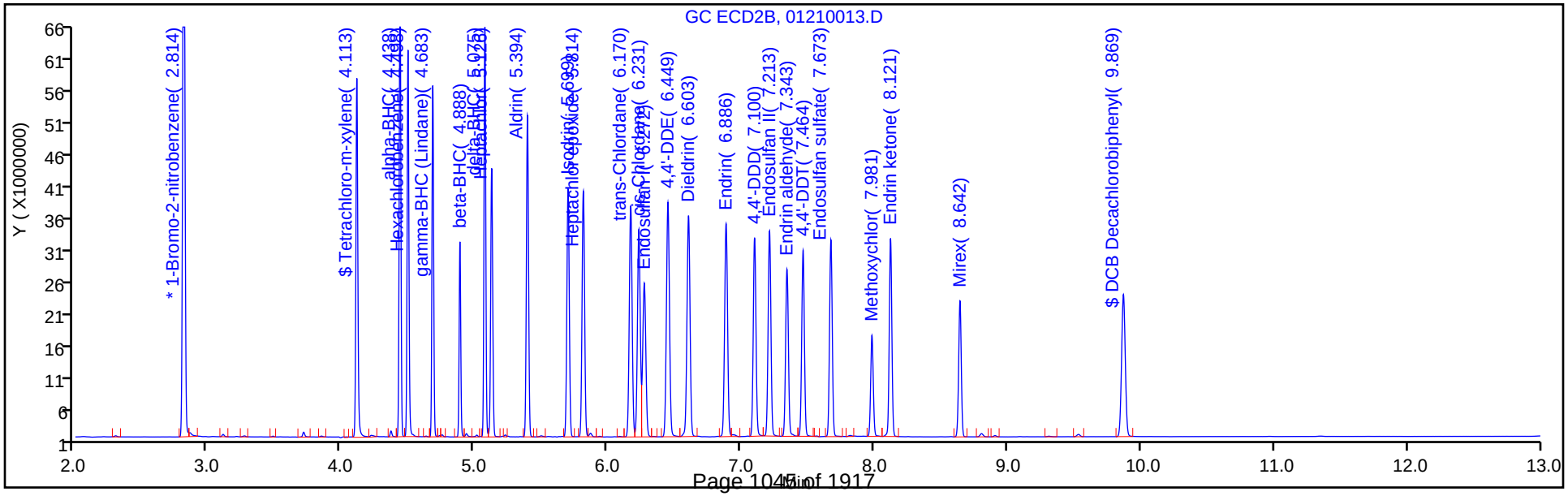
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\01210013.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 21-Jan-2019 15:39:57 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | CCVIS AB | | | Worklist Smp#: | 13 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 7 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-444894/45  Calibration Date: 01/22/2019 21:32

Instrument ID: SGC_C  Calib Start Date: 01/08/2019 20:54

GC Column: Rxi-35Sil MS  ID: 0.32(mm)  Calib End Date: 01/08/2019 22:20

Lab File ID: 039F4501.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Toxaphene Peak 1 | Ave | 0.0031 | 0.0038 | | 2420 | 2000 | 21.2* | 20.0 |
| Toxaphene Peak 2 | Lin2 | | 0.0214 | | 2130 | 2000 | 6.7 | 20.0 |
| Toxaphene Peak 3 | Lin2 | | 0.0249 | | 2140 | 2000 | 6.8 | 20.0 |
| Toxaphene Peak 4 | Lin2 | | 0.0391 | | 2010 | 2000 | 0.6 | 20.0 |
| Toxaphene Peak 5 | Lin2 | | 0.0289 | | 2020 | 2000 | 1.1 | 20.0 |

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-444894/45 Calibration Date: 01/22/2019 21:32

Instrument ID: SGC_C Calib Start Date: 01/08/2019 20:54

GC Column: Rxi-35Sil MS ID: 0.32(mm) Calib End Date: 01/08/2019 22:20

Lab File ID: 039F4501.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| Toxaphene Peak 1 | 4.86 | 4.85 | 4.87 |
| Toxaphene Peak 2 | 6.24 | 6.23 | 6.25 |
| Toxaphene Peak 3 | 6.85 | 6.84 | 6.87 |
| Toxaphene Peak 4 | 7.40 | 7.39 | 7.42 |
| Toxaphene Peak 5 | 7.54 | 7.53 | 7.56 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\039F4501.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 22-Jan-2019 21:32:44 ALS Bottle#: 39 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Operator ID: TEB Instrument ID: SGC_C
Sublist: chrom-C 8081 IS*sub3

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:30 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

First Level Reviewer: bacat Date: 23-Jan-2019 11:10:51

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.558 | 2.559 | -0.001 | 137014848 | 150.0 | 150.0 | |
| 2 | 2.814 | 2.816 | -0.002 | 117517794 | 150.0 | 150.0 | |
| 22 Toxaphene | | | | | | | M |
| 1 | 4.856 | 4.858 | -0.002 | 6930038 | 2000.0 | 2423.0 | M |
| 1 | 6.236 | 6.241 | -0.005 | 39070413 | 2000.0 | 2134.1 | M |
| 1 | 6.847 | 6.852 | -0.005 | 45491252 | 2000.0 | 2136.2 | M |
| 1 | 7.401 | 7.407 | -0.006 | 71368920 | 2000.0 | 2011.9 | M |
| 1 | 7.543 | 7.546 | -0.003 | 52766884 | 2000.0 | 2021.7 | M |
| | | Average of Peak Amounts = | | | | 2145.4 | |
| 2 | 6.059 | 6.061 | -0.002 | 15783593 | 2000.0 | 1986.8 | M |
| 2 | 6.548 | 6.552 | -0.004 | 22464432 | 2000.0 | 2153.6 | M |
| 2 | 6.872 | 6.876 | -0.004 | 23427251 | 2000.0 | 1551.7 | M |
| 2 | 7.590 | 7.593 | -0.003 | 49296540 | 2000.0 | 2002.3 | M |
| 2 | 8.161 | 8.163 | -0.002 | 65608798 | 2000.0 | 2145.4 | M |
| | | Average of Peak Amounts = | | | | 1968.0 | |
| | | | | | | RPD = 8.62 | |

## QC Flag Legend

Review Flags
M - Manually Integrated

## Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00010 Amount Added: 75.00 Units: uL Run Reagent

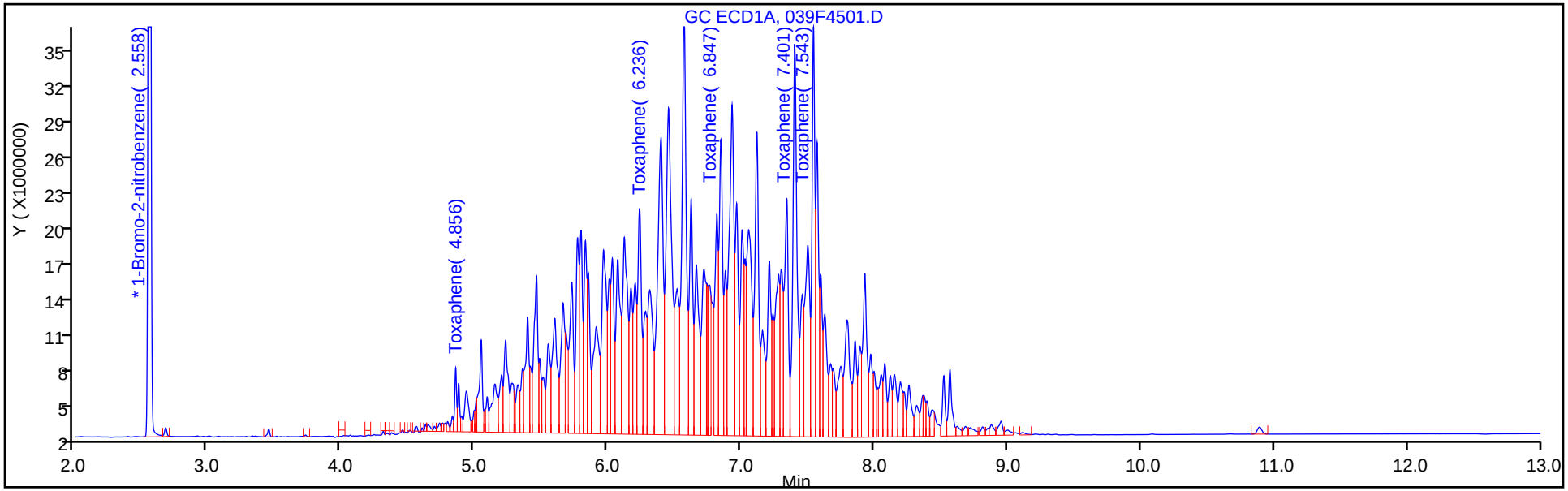
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TestAmerica Denver

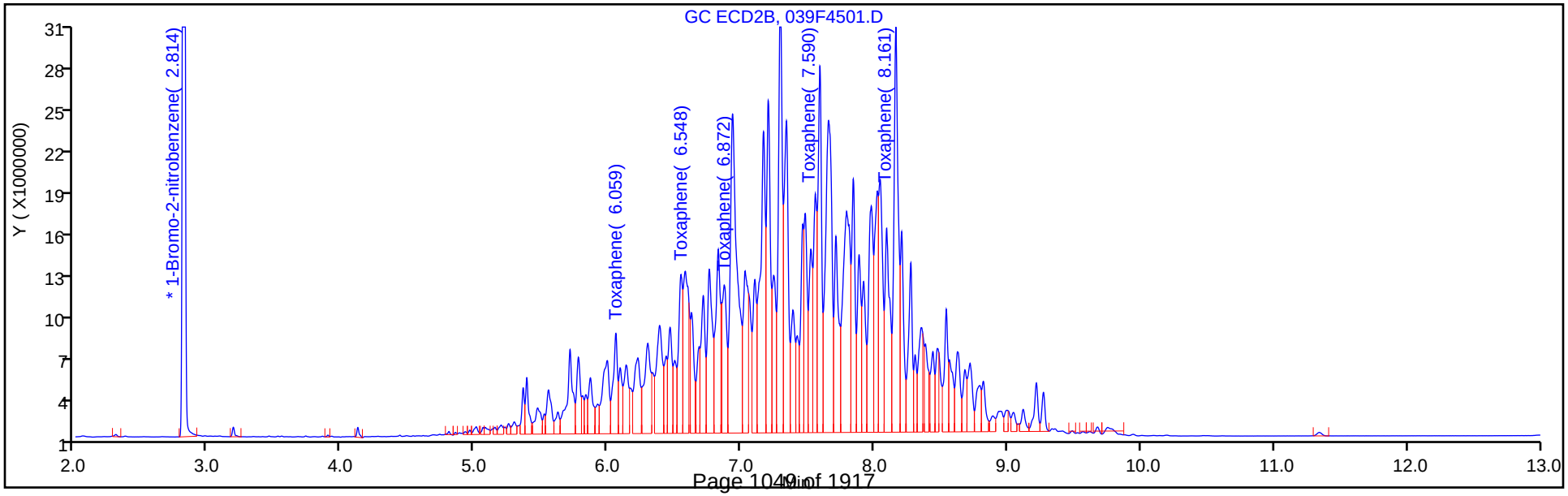
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| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 21:32:44 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | CCV TOX | | | Worklist Smp#: | 45 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 39 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



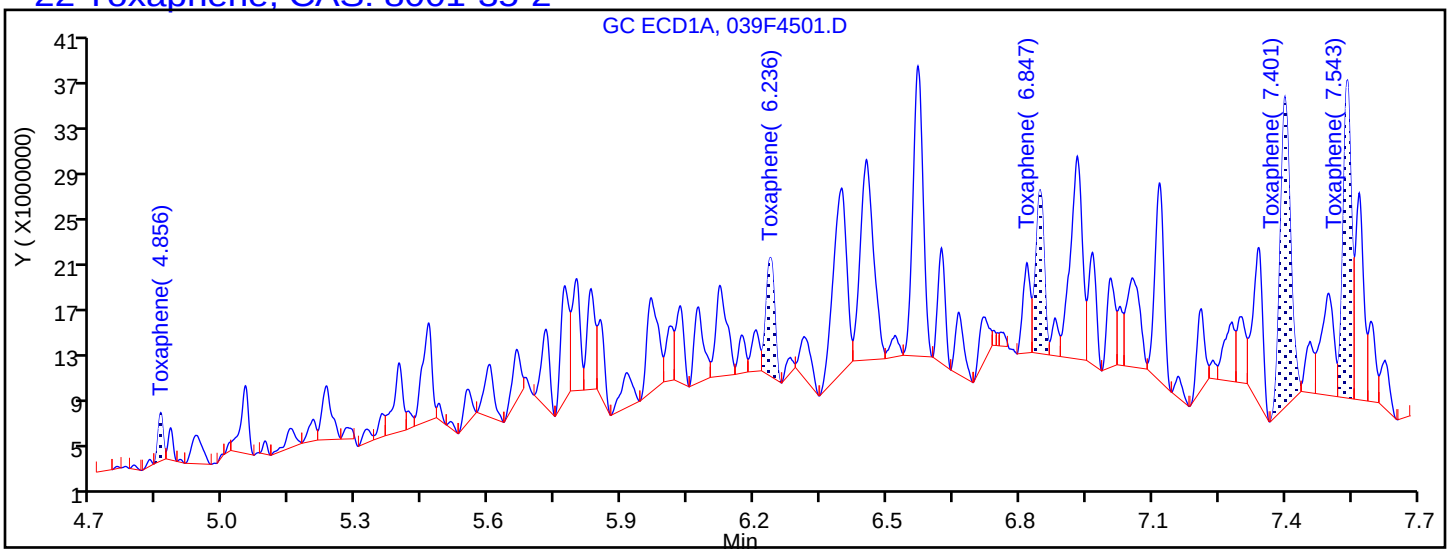
Report Date: 23-Jan-2019 11:16:31 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

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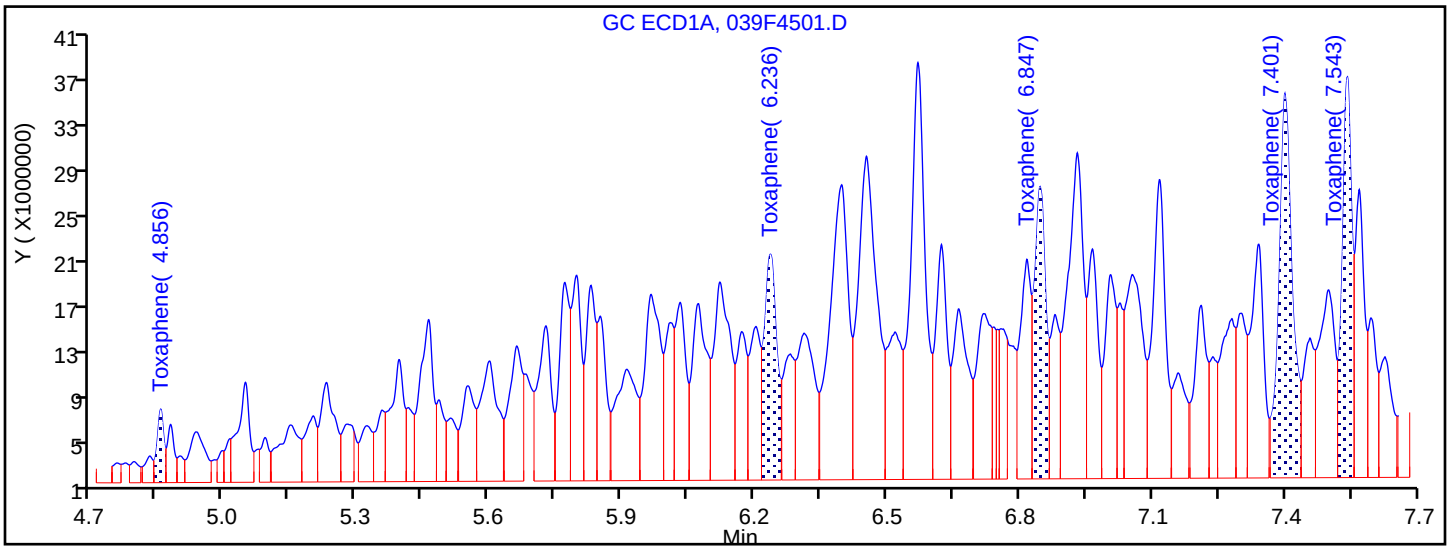
| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 21:32:44 | Instrument ID: | SGC_C | | |
| Lims ID: | CCV TOX | | | | |
| Client ID: | | | | | |
| Operator ID: | TEB | ALS Bottle#: | 39 | Worklist Smp#: | 45 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |
| Column: | Rxi-35Sil MS ( 0.32 mm) | Detector | GC ECD1A | | |

## 22 Toxaphene, CAS: 8001-35-2




Processing Integration Results

| | |
|---|---|
| 4.856 | Response = 3384251 |
| 6.236 | Response = 14070161 |
| 6.847 | Response = 19236566 |
| 7.401 | Response = 44154100 |
| 7.543 | Response = 36518705 |




Manual Integration Results

| | | |
|---|---|---|
| 4.856 | Response = 6930038 | M |
| 6.236 | Response = 39070413 | M |
| 6.847 | Response = 45491252 | M |
| 7.401 | Response = 71368920 | M |
| 7.543 | Response = 52766884 | M |

Reviewer: bacat, 23-Jan-2019 11:10:46

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-444894/45  Calibration Date: 01/22/2019 21:32

Instrument ID: SGC_C  Calib Start Date: 01/08/2019 20:54

GC Column: Rxi-XLB  ID: 0.32(mm)  Calib End Date: 01/08/2019 22:20

Lab File ID: 039F4501.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Toxaphene Peak 1 | Qua | | 0.0101 | | 1990 | 2000 | -0.7 | 20.0 |
| Toxaphene Peak 2 | Lin1 | | 0.0143 | | 2150 | 2000 | 7.7 | 20.0 |
| Toxaphene Peak 3 | Lin1 | | 0.0150 | | 1550 | 2000 | -22.4* | 20.0 |
| Toxaphene Peak 4 | Ave | 0.0314 | 0.0315 | | 2000 | 2000 | 0.1 | 20.0 |
| Toxaphene Peak 5 | Ave | 0.0390 | 0.0419 | | 2150 | 2000 | 7.3 | 20.0 |

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-444894/45 Calibration Date: 01/22/2019 21:32

Instrument ID: SGC_C Calib Start Date: 01/08/2019 20:54

GC Column: Rxi-XLB ID: 0.32(mm) Calib End Date: 01/08/2019 22:20

Lab File ID: 039F4501.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| Toxaphene Peak 1 | 6.06 | 6.05 | 6.07 |
| Toxaphene Peak 2 | 6.55 | 6.54 | 6.57 |
| Toxaphene Peak 3 | 6.87 | 6.86 | 6.89 |
| Toxaphene Peak 4 | 7.59 | 7.58 | 7.61 |
| Toxaphene Peak 5 | 8.16 | 8.15 | 8.18 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\039F4501.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 22-Jan-2019 21:32:44 ALS Bottle#: 39 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Operator ID: TEB Instrument ID: SGC_C
Sublist: chrom-C 8081 IS*sub3

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:30 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

First Level Reviewer: bacat Date: 23-Jan-2019 11:10:51

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.558 | 2.559 | -0.001 | 137014848 | 150.0 | 150.0 | |
| 2 | 2.814 | 2.816 | -0.002 | 117517794 | 150.0 | 150.0 | |
| 22 Toxaphene | | | | | | | M |
| 1 | 4.856 | 4.858 | -0.002 | 6930038 | 2000.0 | 2423.0 | M |
| 1 | 6.236 | 6.241 | -0.005 | 39070413 | 2000.0 | 2134.1 | M |
| 1 | 6.847 | 6.852 | -0.005 | 45491252 | 2000.0 | 2136.2 | M |
| 1 | 7.401 | 7.407 | -0.006 | 71368920 | 2000.0 | 2011.9 | M |
| 1 | 7.543 | 7.546 | -0.003 | 52766884 | 2000.0 | 2021.7 | M |
| | | Average of Peak Amounts = | | | | 2145.4 | |
| 2 | 6.059 | 6.061 | -0.002 | 15783593 | 2000.0 | 1986.8 | M |
| 2 | 6.548 | 6.552 | -0.004 | 22464432 | 2000.0 | 2153.6 | M |
| 2 | 6.872 | 6.876 | -0.004 | 23427251 | 2000.0 | 1551.7 | M |
| 2 | 7.590 | 7.593 | -0.003 | 49296540 | 2000.0 | 2002.3 | M |
| 2 | 8.161 | 8.163 | -0.002 | 65608798 | 2000.0 | 2145.4 | M |
| | | Average of Peak Amounts = | | | | 1968.0 | |
| | | | | | | RPD = 8.62 | |

## QC Flag Legend

Review Flags
M - Manually Integrated

## Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00010 Amount Added: 75.00 Units: uL Run Reagent

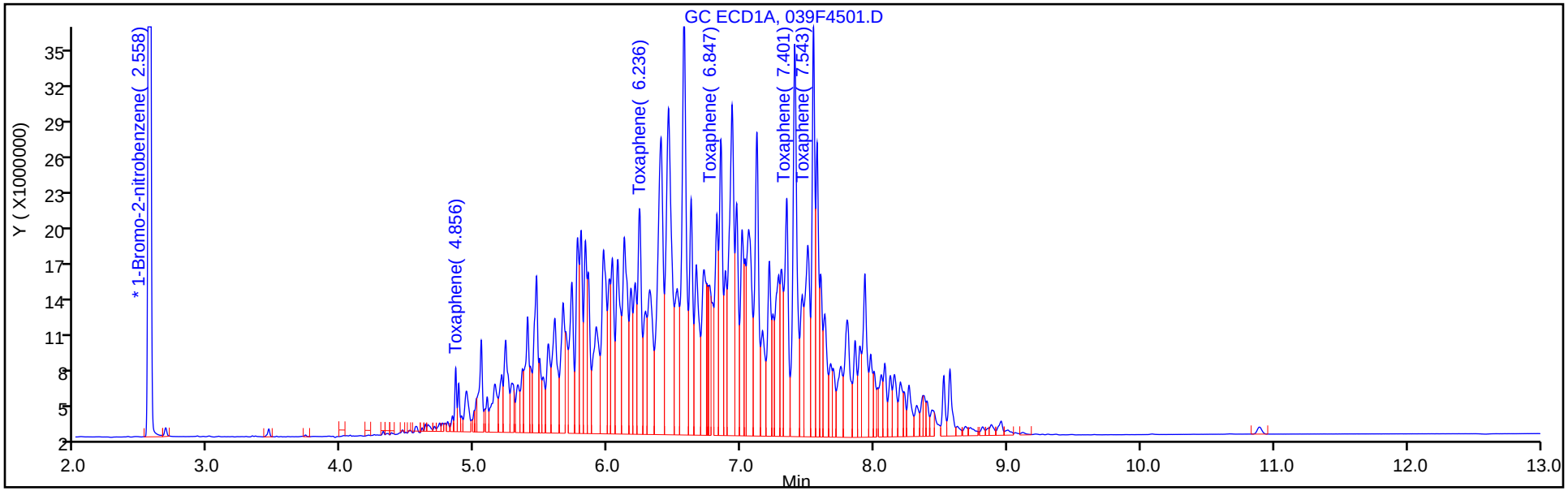
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TestAmerica Denver

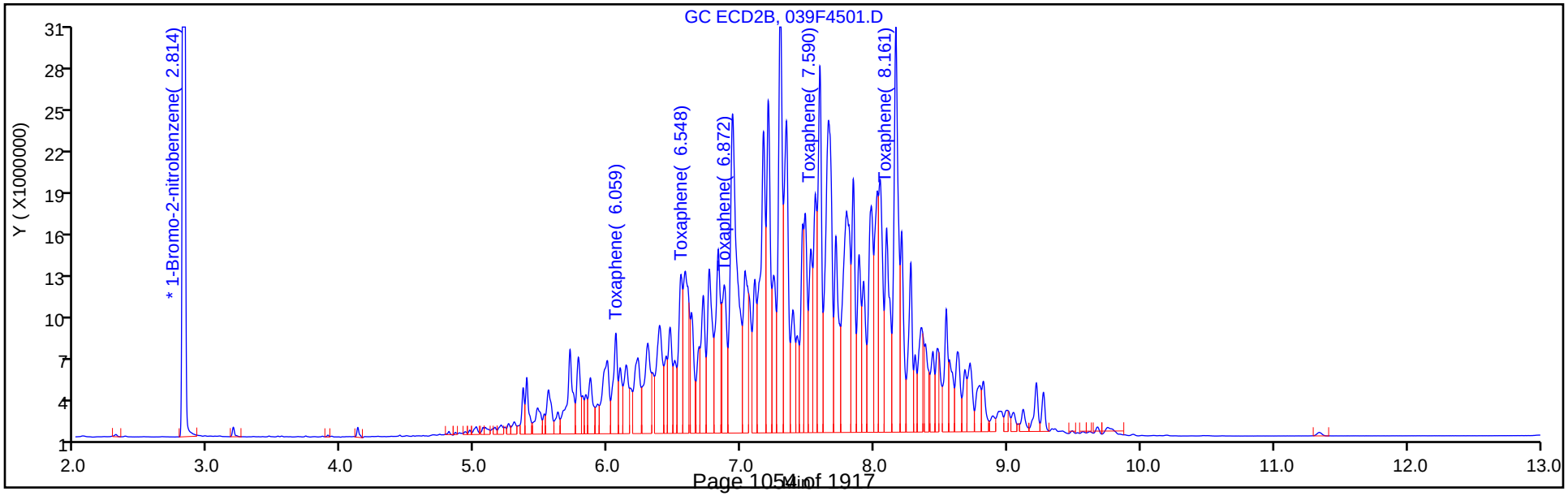
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\039F4501.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 21:32:44 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | CCV TOX | | | Worklist Smp#: | 45 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 39 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



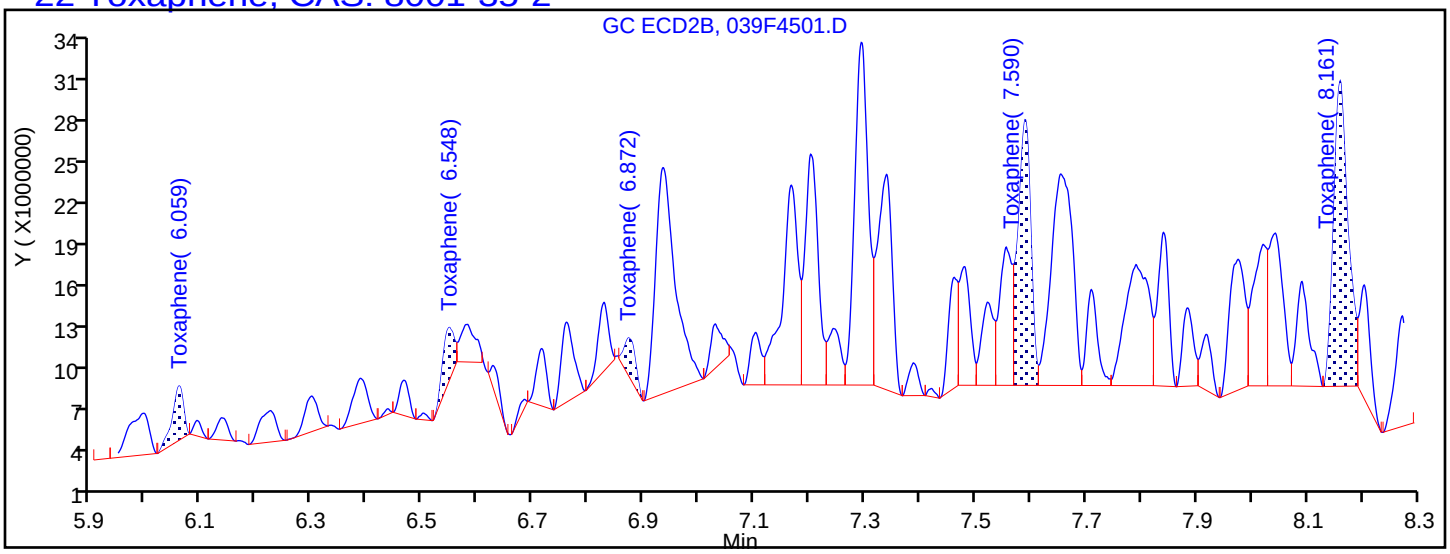
Report Date: 23-Jan-2019 11:16:32 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\039F4501.D

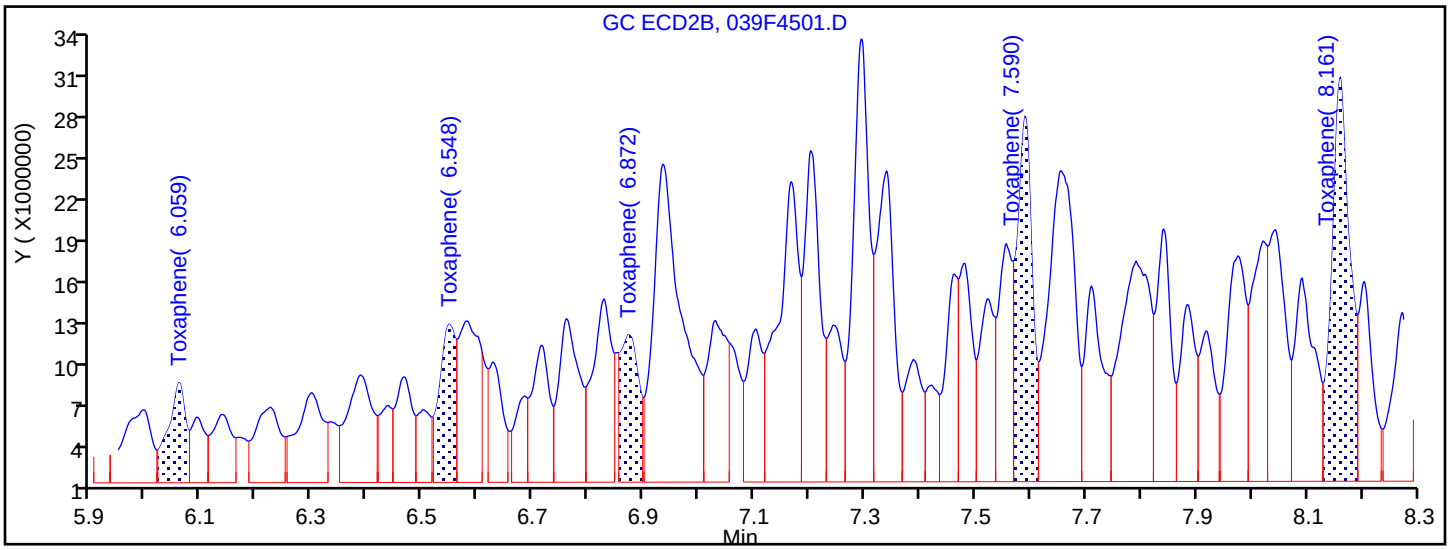
| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 21:32:44 | Instrument ID: | SGC_C | | |
| Lims ID: | CCV TOX | | | | |
| Client ID: | | | | | |
| Operator ID: | TEB | ALS Bottle#: | 39 | Worklist Smp#: | 45 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |
| Column: | Rxi-XLB ( 0.32 mm) | Detector | GC ECD2B | | |

## 22 Toxaphene, CAS: 8001-35-2




Processing Integration Results

| | |
|---|---|
| 6.059 | Response = 5421192 |
| 6.548 | Response = 5400038 |
| 6.872 | Response = 3954794 |
| 7.590 | Response = 30269560 |
| 8.161 | Response = 39527439 |




Manual Integration Results

| | | |
|---|---|---|
| 6.059 | Response = 15783593 | M |
| 6.548 | Response = 22464432 | M |
| 6.872 | Response = 23427251 | M |
| 7.590 | Response = 49296540 | M |
| 8.161 | Response = 65608798 | M |

Reviewer: bacat, 23-Jan-2019 11:10:49

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-444894/47  Calibration Date: 01/22/2019 22:07

Instrument ID: SGC_C  Calib Start Date: 01/09/2019 00:04

GC Column: Rxi-35Sil MS  ID: 0.32(mm)  Calib End Date: 01/09/2019 01:30

Lab File ID: 041F4701.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Hexachlorobenzene | Lin2 | | 1.233 | | 45.1 | 50.0 | -9.7 | 20.0 |
| alpha-BHC | Lin2 | | 1.869 | | 46.5 | 50.0 | -6.9 | 20.0 |
| gamma-BHC (Lindane) | Ave | 1.503 | 1.414 | | 47.1 | 50.0 | -5.9 | 20.0 |
| beta-BHC | Lin2 | | 0.7192 | | 47.1 | 50.0 | -5.8 | 20.0 |
| Heptachlor | Lin2 | | 1.357 | | 46.6 | 50.0 | -6.8 | 20.0 |
| delta-BHC | Lin2 | | 1.665 | | 47.4 | 50.0 | -5.2 | 20.0 |
| Aldrin | Lin2 | | 1.593 | | 44.8 | 50.0 | -10.4 | 20.0 |
| Isodrin | Lin2 | | 1.342 | | 45.0 | 50.0 | -10.0 | 20.0 |
| Heptachlor epoxide | Ave | 1.512 | 1.352 | | 44.7 | 50.0 | -10.6 | 20.0 |
| gamma-Chlordane | Qua | | 1.420 | | 43.7 | 50.0 | -12.5 | 20.0 |
| alpha-Chlordane | Ave | 1.644 | 1.427 | | 43.4 | 50.0 | -13.2 | 20.0 |
| Endosulfan I | Ave | 1.574 | 1.375 | | 43.7 | 50.0 | -12.7 | 20.0 |
| 4,4'-DDE | Lin | | 1.517 | | 44.7 | 50.0 | -10.7 | 20.0 |
| Dieldrin | Ave | 1.411 | 1.123 | | 39.8 | 50.0 | -20.4* | 20.0 |
| Endrin | Lin2 | | 1.424 | | 47.0 | 50.0 | -6.0 | 20.0 |
| 4,4'-DDD | Ave | 1.372 | 1.151 | | 41.9 | 50.0 | -16.1 | 20.0 |
| Endosulfan II | Ave | 1.514 | 1.343 | | 44.4 | 50.0 | -11.3 | 20.0 |
| 4,4'-DDT | Lin2 | | 1.135 | | 45.9 | 50.0 | -8.2 | 20.0 |
| Endrin aldehyde | Lin2 | | 1.119 | | 46.1 | 50.0 | -7.9 | 20.0 |
| Endosulfan sulfate | Ave | 1.436 | 1.237 | | 43.1 | 50.0 | -13.8 | 20.0 |
| Methoxychlor | Lin2 | | 0.5665 | | 48.2 | 50.0 | -3.6 | 20.0 |
| Endrin ketone | Lin2 | | 1.418 | | 47.6 | 50.0 | -4.8 | 20.0 |
| Mirex | Lin2 | | 0.9671 | | 47.0 | 50.0 | -5.9 | 20.0 |
| Tetrachloro-m-xylene | Lin2 | | 1.161 | | 45.0 | 50.0 | -10.1 | 20.0 |
| DCB Decachlorobiphenyl | Lin2 | | 1.131 | | 44.9 | 50.0 | -10.2 | 20.0 |

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-444894/47 Calibration Date: 01/22/2019 22:07

Instrument ID: SGC_C Calib Start Date: 01/09/2019 00:04

GC Column: Rxi-35Sil MS ID: 0.32(mm) Calib End Date: 01/09/2019 01:30

Lab File ID: 041F4701.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| Hexachlorobenzene | 3.97 | 3.96 | 3.98 |
| alpha-BHC | 4.06 | 4.05 | 4.08 |
| gamma-BHC (Lindane) | 4.35 | 4.34 | 4.37 |
| beta-BHC | 4.54 | 4.53 | 4.55 |
| Heptachlor | 4.60 | 4.59 | 4.62 |
| delta-BHC | 4.73 | 4.72 | 4.75 |
| Aldrin | 4.82 | 4.81 | 4.83 |
| Isodrin | 5.11 | 5.11 | 5.13 |
| Heptachlor epoxide | 5.22 | 5.21 | 5.24 |
| gamma-Chlordane | 5.41 | 5.41 | 5.43 |
| alpha-Chlordane | 5.50 | 5.49 | 5.52 |
| Endosulfan I | 5.55 | 5.54 | 5.56 |
| 4,4'-DDE | 5.72 | 5.71 | 5.73 |
| Dieldrin | 5.83 | 5.82 | 5.85 |
| Endrin | 6.18 | 6.17 | 6.20 |
| 4,4'-DDD | 6.39 | 6.38 | 6.40 |
| Endosulfan II | 6.53 | 6.52 | 6.55 |
| 4,4'-DDT | 6.74 | 6.74 | 6.76 |
| Endrin aldehyde | 6.83 | 6.82 | 6.85 |
| Endosulfan sulfate | 7.08 | 7.07 | 7.10 |
| Methoxychlor | 7.61 | 7.60 | 7.62 |
| Endrin ketone | 7.77 | 7.76 | 7.78 |
| Mirex | 7.87 | 7.87 | 7.89 |
| Tetrachloro-m-xylene | 3.53 | 3.52 | 3.55 |
| DCB Decachlorobiphenyl | 9.00 | 8.99 | 9.02 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\041F4701.D
Lims ID: CCV AB
Client ID:
Sample Type: CCV
Inject. Date: 22-Jan-2019 22:07:53 ALS Bottle#: 41 Worklist Smp#: 47
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV AB
Operator ID: TEB Instrument ID: SGC_C
Sublist: chrom-C 8081 IS*sub5

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| S 1 Hexachlorocyclohexane, technical | | | | | | | |
| 1 | | | | | | 188.1 | |
| 2 | | | | | | 190.0 | |
| | | | | | | RPD = 1.01 | |
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.557 | 2.559 | -0.002 | 132625285 | 150.0 | 150.0 | |
| 2 | 2.814 | 2.816 | -0.002 | 113355876 | 150.0 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | | |
| 1 | 3.534 | 3.537 | -0.003 | 51337070 | 50.0 | 45.0 | |
| 2 | 4.112 | 4.113 | -0.001 | 56929427 | 50.0 | 39.9 | |
| | | | | | | RPD = 12.04 | |
| 6 Hexachlorobenzene | | | | | | | |
| 1 | 3.969 | 3.971 | -0.002 | 54492771 | 50.0 | 45.1 | |
| 2 | 4.495 | 4.498 | -0.003 | 57194118 | 50.0 | 41.1 | |
| | | | | | | RPD = 9.45 | |
| 7 alpha-BHC | | | | | | | |
| 1 | 4.064 | 4.066 | -0.002 | 82611992 | 50.0 | 46.5 | |
| 2 | 4.436 | 4.438 | -0.002 | 65797334 | 50.0 | 46.3 | |
| | | | | | | RPD = 0.60 | |
| 8 gamma-BHC (Lindane) | | | | | | | |
| 1 | 4.350 | 4.353 | -0.003 | 62527072 | 50.0 | 47.1 | |
| 2 | 4.682 | 4.683 | -0.001 | 51136156 | 50.0 | 47.9 | |
| | | | | | | RPD = 1.73 | |
| 11 beta-BHC | | | | | | | |
| 1 | 4.538 | 4.540 | -0.002 | 31794453 | 50.0 | 47.1 | |
| 2 | 4.886 | 4.888 | -0.002 | 26057940 | 50.0 | 48.5 | |
| | | | | | | RPD = 2.96 | |
| 12 Heptachlor | | | | | | | |
| 1 | 4.603 | 4.605 | -0.002 | 59972757 | 50.0 | 46.6 | |
| 2 | 5.124 | 5.126 | -0.002 | 46023065 | 50.0 | 49.0 | |
| | | | | | | RPD = 5.09 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 13 delta-BHC | | | | | | | |
| 1 | 4.732 | 4.734 | -0.002 | 73626991 | 50.0 | 47.4 | |
| 2 | 5.073 | 5.075 | -0.002 | 61574455 | 50.0 | 47.3 | |
| | | | | | | RPD = 0.12 | |
| 15 Aldrin | | | | | | | |
| 1 | 4.818 | 4.821 | -0.003 | 70415501 | 50.0 | 44.8 | |
| 2 | 5.393 | 5.394 | -0.001 | 57794574 | 50.0 | 46.6 | |
| | | | | | | RPD = 3.96 | |
| 17 Isodrin | | | | | | | |
| 1 | 5.114 | 5.118 | -0.004 | 59308141 | 50.0 | 45.0 | |
| 2 | 5.697 | 5.699 | -0.002 | 50569359 | 50.0 | 47.2 | |
| | | | | | | RPD = 4.73 | |
| 19 Heptachlor epoxide | | | | | | | |
| 1 | 5.224 | 5.227 | -0.003 | 59779772 | 50.0 | 44.7 | |
| 2 | 5.811 | 5.814 | -0.003 | 52428845 | 50.0 | 47.3 | |
| | | | | | | RPD = 5.61 | |
| 20 trans-Chlordane | | | | | | | |
| 1 | 5.414 | 5.418 | -0.004 | 62755640 | 50.0 | 43.7 | |
| 2 | 6.168 | 6.170 | -0.002 | 55756609 | 50.0 | 48.0 | |
| | | | | | | RPD = 9.33 | |
| 23 cis-Chlordane | | | | | | | |
| 1 | 5.503 | 5.507 | -0.004 | 63070006 | 50.0 | 43.4 | |
| 2 | 6.229 | 6.231 | -0.002 | 48563185 | 50.0 | 42.3 | |
| | | | | | | RPD = 2.66 | |
| 24 Endosulfan I | | | | | | | |
| 1 | 5.545 | 5.548 | -0.003 | 60790968 | 50.0 | 43.7 | |
| 2 | 6.269 | 6.272 | -0.003 | 40290097 | 50.0 | 42.0 | |
| | | | | | | RPD = 3.79 | |
| 25 4,4'-DDE | | | | | | | |
| 1 | 5.715 | 5.718 | -0.003 | 67059784 | 50.0 | 44.7 | |
| 2 | 6.447 | 6.449 | -0.002 | 58766408 | 50.0 | 41.2 | |
| | | | | | | RPD = 7.99 | |
| 26 Dieldrin | | | | | | | |
| 1 | 5.829 | 5.832 | -0.003 | 49648165 | 50.0 | 39.8 | |
| 2 | 6.602 | 6.603 | -0.001 | 56814996 | 50.0 | 45.4 | |
| | | | | | | RPD = 13.15 | |
| 29 Endrin | | | | | | | |
| 1 | 6.181 | 6.184 | -0.003 | 62932941 | 50.0 | 47.0 | |
| 2 | 6.884 | 6.886 | -0.002 | 52318943 | 50.0 | 47.6 | |
| | | | | | | RPD = 1.20 | |
| 32 4,4'-DDD | | | | | | | |
| 1 | 6.386 | 6.391 | -0.005 | 50875160 | 50.0 | 41.9 | |
| 2 | 7.099 | 7.100 | -0.001 | 46386128 | 50.0 | 48.1 | |
| | | | | | | RPD = 13.70 | |
| 33 Endosulfan II | | | | | | | |
| 1 | 6.529 | 6.533 | -0.004 | 59366884 | 50.0 | 44.4 | |
| 2 | 7.209 | 7.213 | -0.004 | 48304287 | 50.0 | 48.1 | |
| | | | | | | RPD = 8.04 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 34 4,4'-DDT | | | | | | | |
| 1 | 6.744 | 6.750 | -0.006 | 50177420 | 50.0 | 45.9 | |
| 2 | 7.461 | 7.464 | -0.003 | 41333356 | 50.0 | 49.4 | |
| | | | | | | RPD = 7.39 | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | 6.831 | 6.836 | -0.005 | 49454459 | 50.0 | 46.1 | |
| 2 | 7.341 | 7.343 | -0.002 | 39706392 | 50.0 | 47.8 | |
| | | | | | | RPD = 3.73 | |
| 36 Endosulfan sulfate | | | | | | | |
| 1 | 7.081 | 7.084 | -0.003 | 54699157 | 50.0 | 43.1 | |
| 2 | 7.670 | 7.673 | -0.003 | 45089143 | 50.0 | 49.1 | |
| | | | | | | RPD = 12.99 | |
| 37 Methoxychlor | | | | | | | |
| 1 | 7.607 | 7.611 | -0.004 | 25044721 | 50.0 | 48.2 | |
| 2 | 7.978 | 7.981 | -0.003 | 22096594 | 50.0 | 50.4 | |
| | | | | | | RPD = 4.44 | |
| 38 Endrin ketone | | | | | | | |
| 1 | 7.766 | 7.770 | -0.004 | 62674372 | 50.0 | 47.6 | |
| 2 | 8.119 | 8.121 | -0.002 | 43712616 | 50.0 | 44.7 | |
| | | | | | | RPD = 6.28 | |
| 39 Mirex | | | | | | | |
| 1 | 7.874 | 7.878 | -0.004 | 42755010 | 50.0 | 47.0 | |
| 2 | 8.639 | 8.642 | -0.003 | 30174575 | 50.0 | 44.5 | |
| | | | | | | RPD = 5.44 | |
| $ 40 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 8.998 | 9.004 | -0.006 | 50003246 | 50.0 | 44.9 | |
| 2 | 9.864 | 9.869 | -0.005 | 43960247 | 50.0 | 43.3 | |
| | | | | | | RPD = 3.54 | |
| S 42 Endosulfan, Total | | | | | | | |
| 1 | | | | | | 131.1 | |
| 2 | | | | | | 139.2 | |
| | | | | | | RPD = 5.98 | |

## Reagents:

| | | | |
|---|---|---|---|
| 8081IcalL4_00033 | Amount Added: 1.00 | Units: mL | |
| 8081_IS_00010 | Amount Added: 75.00 | Units: uL | Run Reagent |

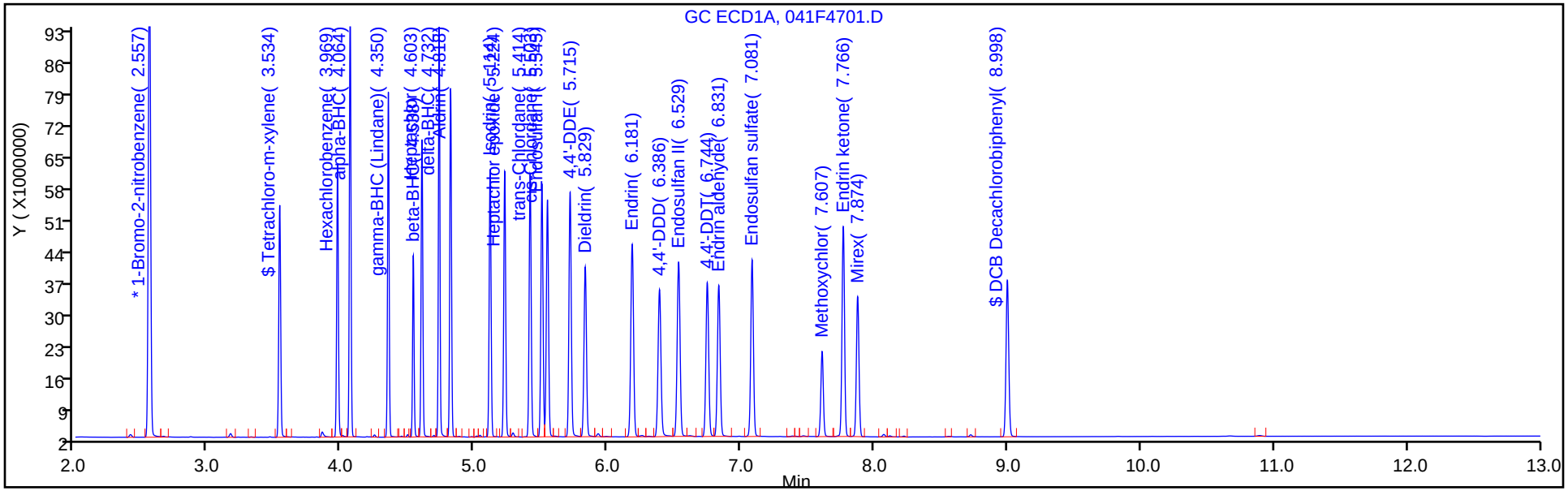
Report Date: 23-Jan-2019 11:16:37 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

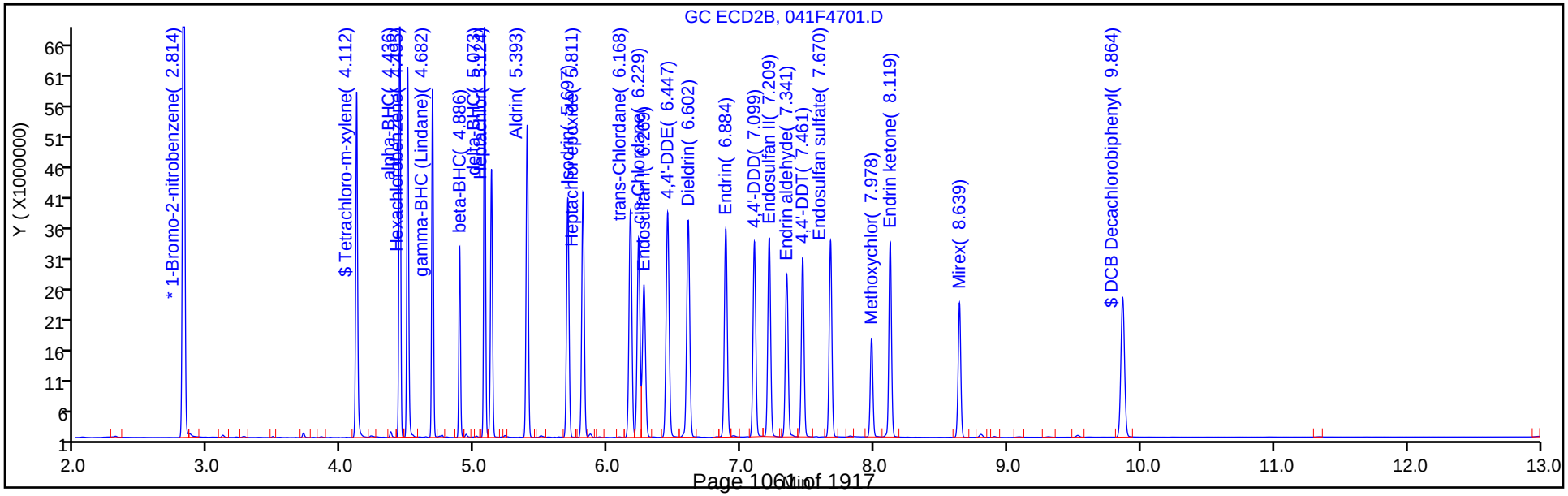
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\041F4701.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 22:07:53 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | CCV AB | | | Worklist Smp#: | 47 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 41 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-444894/47 Calibration Date: 01/22/2019 22:07

Instrument ID: SGC_C Calib Start Date: 01/09/2019 00:04

GC Column: Rxi-XLB ID: 0.32(mm) Calib End Date: 01/09/2019 01:30

Lab File ID: 041F4701.D Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| alpha-BHC | Ave | 1.882 | 1.741 | | 46.3 | 50.0 | -7.5 | 20.0 |
| Hexachlorobenzene | Lin2 | | 1.514 | | 41.1 | 50.0 | -17.9 | 20.0 |
| gamma-BHC (Lindane) | Ave | 1.413 | 1.353 | | 47.9 | 50.0 | -4.3 | 20.0 |
| beta-BHC | Lin2 | | 0.6896 | | 48.5 | 50.0 | -3.0 | 20.0 |
| delta-BHC | Lin2 | | 1.630 | | 47.3 | 50.0 | -5.3 | 20.0 |
| Heptachlor | Lin2 | | 1.218 | | 49.0 | 50.0 | -2.0 | 20.0 |
| Aldrin | Lin2 | | 1.530 | | 46.6 | 50.0 | -6.7 | 20.0 |
| Isodrin | Lin2 | | 1.338 | | 47.2 | 50.0 | -5.7 | 20.0 |
| Heptachlor epoxide | Lin2 | | 1.388 | | 47.3 | 50.0 | -5.4 | 20.0 |
| gamma-Chlordane | Lin2 | | 1.476 | | 48.0 | 50.0 | -4.0 | 20.0 |
| alpha-Chlordane | Ave | 1.521 | 1.285 | | 42.3 | 50.0 | -15.5 | 20.0 |
| Endosulfan I | Ave | 1.268 | 1.066 | | 42.0 | 50.0 | -15.9 | 20.0 |
| 4,4'-DDE | Lin2 | | 1.555 | | 41.2 | 50.0 | -17.6 | 20.0 |
| Dieldrin | Ave | 1.657 | 1.504 | | 45.4 | 50.0 | -9.2 | 20.0 |
| Endrin | Lin2 | | 1.385 | | 47.6 | 50.0 | -4.9 | 20.0 |
| 4,4'-DDD | Lin2 | | 1.228 | | 48.1 | 50.0 | -3.8 | 20.0 |
| Endosulfan II | Lin2 | | 1.278 | | 48.1 | 50.0 | -3.9 | 20.0 |
| Endrin aldehyde | Lin2 | | 1.051 | | 47.8 | 50.0 | -4.4 | 20.0 |
| 4,4'-DDT | Lin2 | | 1.094 | | 49.4 | 50.0 | -1.2 | 20.0 |
| Endosulfan sulfate | Lin2 | | 1.193 | | 49.1 | 50.0 | -1.8 | 20.0 |
| Methoxychlor | Lin2 | | 0.5848 | | 50.4 | 50.0 | 0.8 | 20.0 |
| Endrin ketone | Lin2 | | 1.157 | | 44.7 | 50.0 | -10.6 | 20.0 |
| Mirex | Ave | 0.8964 | 0.7986 | | 44.5 | 50.0 | -10.9 | 20.0 |
| Tetrachloro-m-xylene | Lin2 | | 1.507 | | 39.9 | 50.0 | -20.3* | 20.0 |
| DCB Decachlorobiphenyl | Lin2 | | 1.163 | | 43.3 | 50.0 | -13.3 | 20.0 |

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCV 280-444894/47 Calibration Date: 01/22/2019 22:07

Instrument ID: SGC_C Calib Start Date: 01/09/2019 00:04

GC Column: Rxi-XLB ID: 0.32(mm) Calib End Date: 01/09/2019 01:30

Lab File ID: 041F4701.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| alpha-BHC | 4.44 | 4.43 | 4.45 |
| Hexachlorobenzene | 4.50 | 4.49 | 4.51 |
| gamma-BHC (Lindane) | 4.68 | 4.67 | 4.70 |
| beta-BHC | 4.89 | 4.88 | 4.90 |
| delta-BHC | 5.07 | 5.06 | 5.09 |
| Heptachlor | 5.12 | 5.11 | 5.14 |
| Aldrin | 5.39 | 5.38 | 5.41 |
| Isodrin | 5.70 | 5.69 | 5.71 |
| Heptachlor epoxide | 5.81 | 5.80 | 5.83 |
| gamma-Chlordane | 6.17 | 6.16 | 6.18 |
| alpha-Chlordane | 6.23 | 6.22 | 6.24 |
| Endosulfan I | 6.27 | 6.26 | 6.29 |
| 4,4'-DDE | 6.45 | 6.44 | 6.46 |
| Dieldrin | 6.60 | 6.59 | 6.62 |
| Endrin | 6.88 | 6.87 | 6.90 |
| 4,4'-DDD | 7.10 | 7.09 | 7.11 |
| Endosulfan II | 7.21 | 7.20 | 7.23 |
| Endrin aldehyde | 7.34 | 7.33 | 7.36 |
| 4,4'-DDT | 7.46 | 7.45 | 7.48 |
| Endosulfan sulfate | 7.67 | 7.66 | 7.69 |
| Methoxychlor | 7.98 | 7.97 | 7.99 |
| Endrin ketone | 8.12 | 8.11 | 8.13 |
| Mirex | 8.64 | 8.63 | 8.66 |
| Tetrachloro-m-xylene | 4.11 | 4.10 | 4.13 |
| DCB Decachlorobiphenyl | 9.86 | 9.86 | 9.88 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\041F4701.D
Lims ID: CCV AB
Client ID:
Sample Type: CCV
Inject. Date: 22-Jan-2019 22:07:53 ALS Bottle#: 41 Worklist Smp#: 47
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV AB
Operator ID: TEB Instrument ID: SGC_C
Sublist: chrom-C 8081 IS*sub5

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| S 1 Hexachlorocyclohexane, technical | | | | | | | |
| 1 | | | | | | 188.1 | |
| 2 | | | | | | 190.0 | |
| | | | | | | RPD = 1.01 | |
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.557 | 2.559 | -0.002 | 132625285 | 150.0 | 150.0 | |
| 2 | 2.814 | 2.816 | -0.002 | 113355876 | 150.0 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | | |
| 1 | 3.534 | 3.537 | -0.003 | 51337070 | 50.0 | 45.0 | |
| 2 | 4.112 | 4.113 | -0.001 | 56929427 | 50.0 | 39.9 | |
| | | | | | | RPD = 12.04 | |
| 6 Hexachlorobenzene | | | | | | | |
| 1 | 3.969 | 3.971 | -0.002 | 54492771 | 50.0 | 45.1 | |
| 2 | 4.495 | 4.498 | -0.003 | 57194118 | 50.0 | 41.1 | |
| | | | | | | RPD = 9.45 | |
| 7 alpha-BHC | | | | | | | |
| 1 | 4.064 | 4.066 | -0.002 | 82611992 | 50.0 | 46.5 | |
| 2 | 4.436 | 4.438 | -0.002 | 65797334 | 50.0 | 46.3 | |
| | | | | | | RPD = 0.60 | |
| 8 gamma-BHC (Lindane) | | | | | | | |
| 1 | 4.350 | 4.353 | -0.003 | 62527072 | 50.0 | 47.1 | |
| 2 | 4.682 | 4.683 | -0.001 | 51136156 | 50.0 | 47.9 | |
| | | | | | | RPD = 1.73 | |
| 11 beta-BHC | | | | | | | |
| 1 | 4.538 | 4.540 | -0.002 | 31794453 | 50.0 | 47.1 | |
| 2 | 4.886 | 4.888 | -0.002 | 26057940 | 50.0 | 48.5 | |
| | | | | | | RPD = 2.96 | |
| 12 Heptachlor | | | | | | | |
| 1 | 4.603 | 4.605 | -0.002 | 59972757 | 50.0 | 46.6 | |
| 2 | 5.124 | 5.126 | -0.002 | 46023065 | 50.0 | 49.0 | |
| | | | | | | RPD = 5.09 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 13 delta-BHC | | | | | | | |
| 1 | 4.732 | 4.734 | -0.002 | 73626991 | 50.0 | 47.4 | |
| 2 | 5.073 | 5.075 | -0.002 | 61574455 | 50.0 | 47.3 | |
| | | | | | | RPD = 0.12 | |
| 15 Aldrin | | | | | | | |
| 1 | 4.818 | 4.821 | -0.003 | 70415501 | 50.0 | 44.8 | |
| 2 | 5.393 | 5.394 | -0.001 | 57794574 | 50.0 | 46.6 | |
| | | | | | | RPD = 3.96 | |
| 17 Isodrin | | | | | | | |
| 1 | 5.114 | 5.118 | -0.004 | 59308141 | 50.0 | 45.0 | |
| 2 | 5.697 | 5.699 | -0.002 | 50569359 | 50.0 | 47.2 | |
| | | | | | | RPD = 4.73 | |
| 19 Heptachlor epoxide | | | | | | | |
| 1 | 5.224 | 5.227 | -0.003 | 59779772 | 50.0 | 44.7 | |
| 2 | 5.811 | 5.814 | -0.003 | 52428845 | 50.0 | 47.3 | |
| | | | | | | RPD = 5.61 | |
| 20 trans-Chlordane | | | | | | | |
| 1 | 5.414 | 5.418 | -0.004 | 62755640 | 50.0 | 43.7 | |
| 2 | 6.168 | 6.170 | -0.002 | 55756609 | 50.0 | 48.0 | |
| | | | | | | RPD = 9.33 | |
| 23 cis-Chlordane | | | | | | | |
| 1 | 5.503 | 5.507 | -0.004 | 63070006 | 50.0 | 43.4 | |
| 2 | 6.229 | 6.231 | -0.002 | 48563185 | 50.0 | 42.3 | |
| | | | | | | RPD = 2.66 | |
| 24 Endosulfan I | | | | | | | |
| 1 | 5.545 | 5.548 | -0.003 | 60790968 | 50.0 | 43.7 | |
| 2 | 6.269 | 6.272 | -0.003 | 40290097 | 50.0 | 42.0 | |
| | | | | | | RPD = 3.79 | |
| 25 4,4'-DDE | | | | | | | |
| 1 | 5.715 | 5.718 | -0.003 | 67059784 | 50.0 | 44.7 | |
| 2 | 6.447 | 6.449 | -0.002 | 58766408 | 50.0 | 41.2 | |
| | | | | | | RPD = 7.99 | |
| 26 Dieldrin | | | | | | | |
| 1 | 5.829 | 5.832 | -0.003 | 49648165 | 50.0 | 39.8 | |
| 2 | 6.602 | 6.603 | -0.001 | 56814996 | 50.0 | 45.4 | |
| | | | | | | RPD = 13.15 | |
| 29 Endrin | | | | | | | |
| 1 | 6.181 | 6.184 | -0.003 | 62932941 | 50.0 | 47.0 | |
| 2 | 6.884 | 6.886 | -0.002 | 52318943 | 50.0 | 47.6 | |
| | | | | | | RPD = 1.20 | |
| 32 4,4'-DDD | | | | | | | |
| 1 | 6.386 | 6.391 | -0.005 | 50875160 | 50.0 | 41.9 | |
| 2 | 7.099 | 7.100 | -0.001 | 46386128 | 50.0 | 48.1 | |
| | | | | | | RPD = 13.70 | |
| 33 Endosulfan II | | | | | | | |
| 1 | 6.529 | 6.533 | -0.004 | 59366884 | 50.0 | 44.4 | |
| 2 | 7.209 | 7.213 | -0.004 | 48304287 | 50.0 | 48.1 | |
| | | | | | | RPD = 8.04 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 34 4,4'-DDT | | | | | | | |
| 1 | 6.744 | 6.750 | -0.006 | 50177420 | 50.0 | 45.9 | |
| 2 | 7.461 | 7.464 | -0.003 | 41333356 | 50.0 | 49.4 | |
| | | | | | | RPD = 7.39 | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | 6.831 | 6.836 | -0.005 | 49454459 | 50.0 | 46.1 | |
| 2 | 7.341 | 7.343 | -0.002 | 39706392 | 50.0 | 47.8 | |
| | | | | | | RPD = 3.73 | |
| 36 Endosulfan sulfate | | | | | | | |
| 1 | 7.081 | 7.084 | -0.003 | 54699157 | 50.0 | 43.1 | |
| 2 | 7.670 | 7.673 | -0.003 | 45089143 | 50.0 | 49.1 | |
| | | | | | | RPD = 12.99 | |
| 37 Methoxychlor | | | | | | | |
| 1 | 7.607 | 7.611 | -0.004 | 25044721 | 50.0 | 48.2 | |
| 2 | 7.978 | 7.981 | -0.003 | 22096594 | 50.0 | 50.4 | |
| | | | | | | RPD = 4.44 | |
| 38 Endrin ketone | | | | | | | |
| 1 | 7.766 | 7.770 | -0.004 | 62674372 | 50.0 | 47.6 | |
| 2 | 8.119 | 8.121 | -0.002 | 43712616 | 50.0 | 44.7 | |
| | | | | | | RPD = 6.28 | |
| 39 Mirex | | | | | | | |
| 1 | 7.874 | 7.878 | -0.004 | 42755010 | 50.0 | 47.0 | |
| 2 | 8.639 | 8.642 | -0.003 | 30174575 | 50.0 | 44.5 | |
| | | | | | | RPD = 5.44 | |
| $ 40 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 8.998 | 9.004 | -0.006 | 50003246 | 50.0 | 44.9 | |
| 2 | 9.864 | 9.869 | -0.005 | 43960247 | 50.0 | 43.3 | |
| | | | | | | RPD = 3.54 | |
| S 42 Endosulfan, Total | | | | | | | |
| 1 | | | | | | 131.1 | |
| 2 | | | | | | 139.2 | |
| | | | | | | RPD = 5.98 | |

## Reagents:

| | | | |
|---|---|---|---|
| 8081IcalL4_00033 | Amount Added: 1.00 | Units: mL | |
| 8081_IS_00010 | Amount Added: 75.00 | Units: uL | Run Reagent |

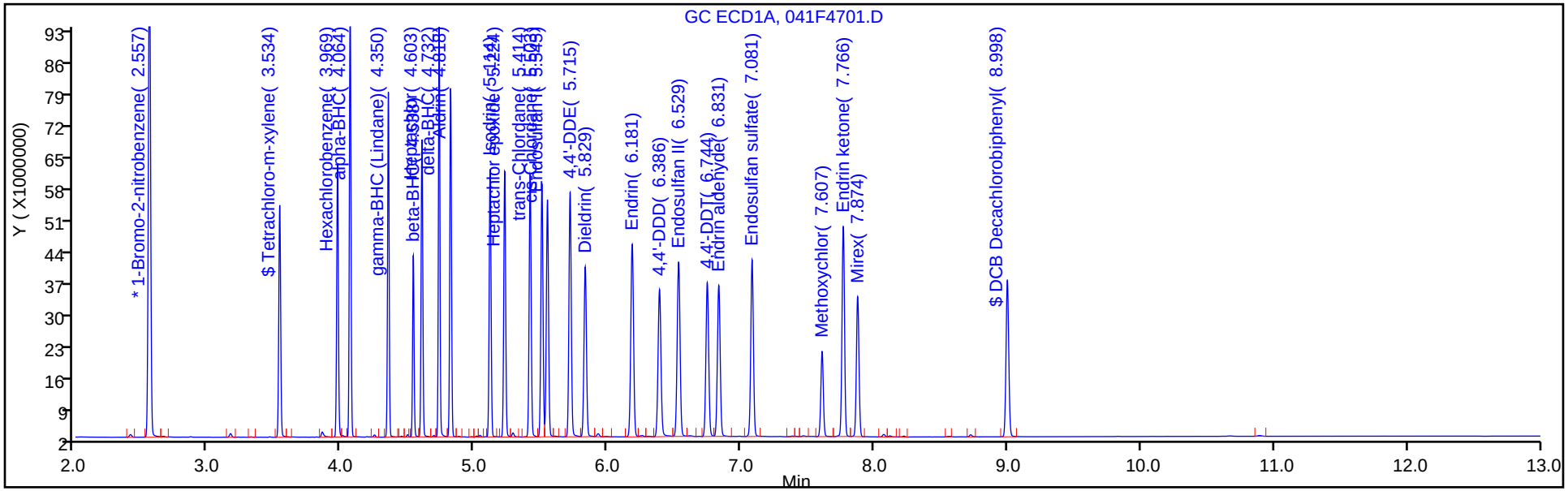
Report Date: 23-Jan-2019 11:16:37 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

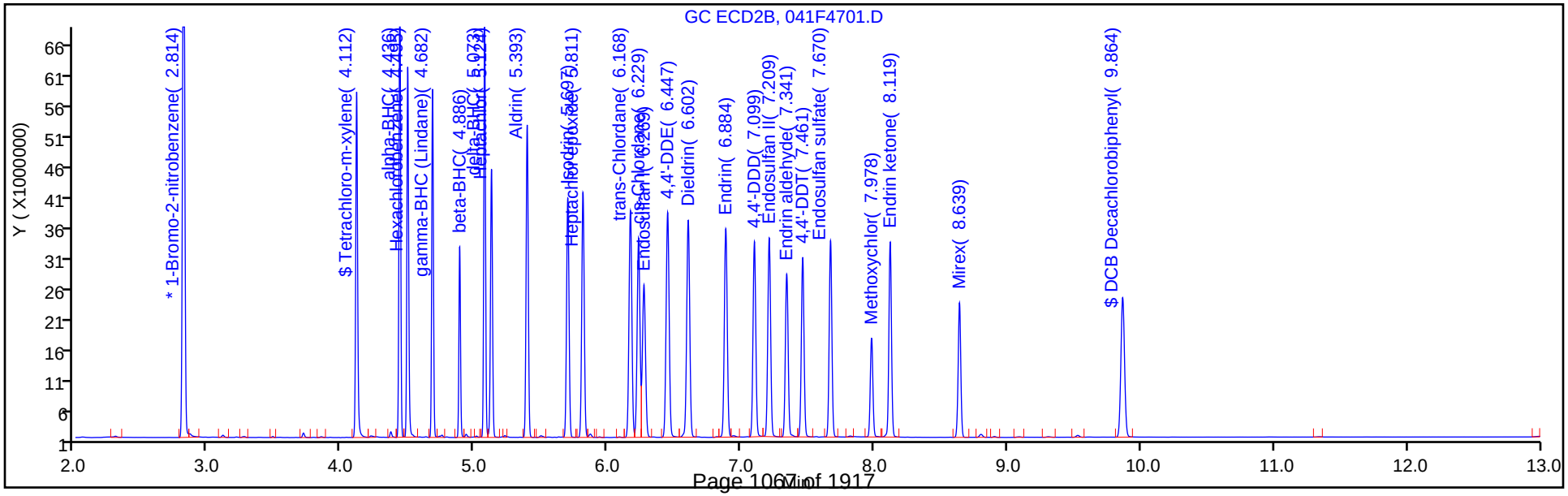
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\041F4701.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 22-Jan-2019 22:07:53 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | CCV AB | | | Worklist Smp#: | 47 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 41 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-444680/1-A

Matrix: Water | Lab File ID: 052F5801.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 01/18/2019 12:03

Sample wt/vol: 1000(mL) | Date Analyzed: 01/23/2019 01:19

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: Rxi-35Sil MS ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 444894 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | 0.0075 | U | 0.050 | 0.0075 |
| 50-29-3 | 4,4'-DDT | 0.015 | U | 0.050 | 0.015 |
| 309-00-2 | Aldrin | 0.0059 | U | 0.050 | 0.0059 |
| 319-84-6 | alpha-BHC | 0.0053 | U | 0.050 | 0.0053 |
| 5103-71-9 | alpha-Chlordane | 0.0053 | U | 0.050 | 0.0053 |
| 319-85-7 | beta-BHC | 0.0087 | U | 0.050 | 0.0087 |
| 319-86-8 | delta-BHC | 0.0058 | U | 0.050 | 0.0058 |
| 959-98-8 | Endosulfan I | 0.0058 | U | 0.050 | 0.0058 |
| 33213-65-9 | Endosulfan II | 0.0070 | U | 0.050 | 0.0070 |
| 1031-07-8 | Endosulfan sulfate | 0.0057 | U | 0.050 | 0.0057 |
| 72-20-8 | Endrin | 0.0079 | U | 0.050 | 0.0079 |
| 7421-93-4 | Endrin aldehyde | 0.0088 | U | 0.050 | 0.0088 |
| 53494-70-5 | Endrin ketone | 0.0070 | U | 0.050 | 0.0070 |
| 58-89-9 | gamma-BHC (Lindane) | 0.0069 | U | 0.050 | 0.0069 |
| 76-44-8 | Heptachlor | 0.0077 | U | 0.050 | 0.0077 |
| 1024-57-3 | Heptachlor epoxide | 0.0075 | U | 0.050 | 0.0075 |
| 72-43-5 | Methoxychlor | 0.013 | U | 0.10 | 0.013 |
| 8001-35-2 | Toxaphene | 0.37 | U | 2.0 | 0.37 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2051-24-3 | DCB Decachlorobiphenyl | 70 | | 34-122 |
| 877-09-8 | Tetrachloro-m-xylene | 54 | | 28-115 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\052F5801.D
Lims ID: MB 280-444680/1-A
Client ID:
Sample Type: MB
Inject. Date: 23-Jan-2019 01:19:59 ALS Bottle#: 52 Worklist Smp#: 75
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-444680/1-
Operator ID: TEB Instrument ID: SGC_C

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| S 1 Hexachlorocyclohexane, technical | | | | | | | |
| 1 | | 1.000 | | | | ND | |
| 2 | | 0.000 | | | | | |
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.557 | 2.559 | -0.001 | 171836980 | 150.0 | 150.0 | |
| 2 | 2.813 | 2.816 | -0.003 | 146756474 | 150.0 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | | |
| 1 | 3.535 | 3.537 | -0.002 | 17251143 | 20.0 | 10.8 | |
| 2 | 4.112 | 4.113 | -0.001 | 22305535 | 20.0 | 11.1 | |
| | | | | | | RPD = 2.68 | |
| 4 Propachlor | | | | | | | |
| 1 | | 3.676 | | | | ND | |
| 2 | | 4.142 | | | | | |
| 5 Diallate | | | | | | | |
| 1 | | 3.816 | | | | ND | |
| 2 | | 4.241 | | | | | |
| 6 Hexachlorobenzene | | | | | | | |
| 1 | | 3.971 | | | | ND | |
| 2 | | 4.498 | | | | | |
| 7 alpha-BHC | | | | | | | |
| 1 | | 4.066 | | | | ND | |
| 2 | | 4.438 | | | | | |
| 8 gamma-BHC (Lindane) | | | | | | | |
| 1 | | 4.353 | | | | ND | |
| 2 | | 4.683 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 10 Technical Chlordane | | | | | | | |
| 1 | | 4.475 | | | | ND | |
| 1 | | 4.934 | | | | | |
| 1 | | 5.419 | | | | | |
| 1 | | 5.507 | | | | | |
| 1 | | 6.568 | | | | | |
| 2 | | 4.966 | | | | | |
| 2 | | 5.413 | | | | | |
| 2 | | 6.172 | | | | | |
| 2 | | 6.295 | | | | | |
| 2 | | 7.293 | | | | | |
| 9 Chlordane (technical) | | | | | | | |
| 1 | | 4.475 | | | | ND | |
| 1 | | 4.934 | | | | | |
| 1 | | 5.419 | | | | | |
| 1 | | 5.507 | | | | | |
| 1 | | 6.568 | | | | | |
| 2 | | 4.966 | | | | | |
| 2 | | 5.413 | | | | | |
| 2 | | 6.172 | | | | | |
| 2 | | 6.295 | | | | | |
| 2 | | 7.293 | | | | | |
| 11 beta-BHC | | | | | | | |
| 1 | | 4.540 | | | | ND | |
| 2 | | 4.888 | | | | | |
| 12 Heptachlor | | | | | | | |
| 1 | | 4.605 | | | | ND | |
| 2 | | 5.126 | | | | | |
| 13 delta-BHC | | | | | | | |
| 1 | | 4.734 | | | | ND | |
| 2 | | 5.075 | | | | | |
| 15 Aldrin | | | | | | | |
| 1 | | 4.821 | | | | ND | |
| 2 | | 5.394 | | | | | |
| 22 Toxaphene | | | | | | | |
| 1 | | 4.858 | | | | ND | |
| 1 | | 6.241 | | | | | |
| 1 | | 6.852 | | | | | |
| 1 | | 7.407 | | | | | |
| 1 | | 7.546 | | | | | |
| 2 | | 6.061 | | | | | |
| 2 | | 6.552 | | | | | |
| 2 | | 6.876 | | | | | |
| 2 | | 7.593 | | | | | |
| 2 | | 8.163 | | | | | |
| 14 2,4,5-Trichlorophenol | | | | | | | |
| 1 | | 4.861 | | | | ND | |
| 2 | | 4.772 | | | | | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | | 4.939 | | | | ND | |
| 2 | | 5.328 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 17 Isodrin | | | | | | | |
| 1 | | 5.118 | | | | ND | |
| 2 | | 5.699 | | | | | |
| 18 Dicofol | | | | | | | |
| 1 | | 5.141 | | | | ND | |
| 2 | | 5.599 | | | | | |
| 19 Heptachlor epoxide | | | | | | | |
| 1 | | 5.227 | | | | ND | |
| 2 | | 5.814 | | | | | |
| 20 trans-Chlordane | | | | | | | |
| 1 | 5.422 | 5.418 | 0.004 | 375133 | | 1.10 | |
| 2 | 6.167 | 6.170 | -0.003 | 144268 | | -0.8730 | |
| | | | | | | RPD = 1732.79 | |
| 21 2,4'-DDE | | | | | | | |
| 1 | | 5.436 | | | | ND | |
| 2 | | 6.000 | | | | | |
| 23 cis-Chlordane | | | | | | | |
| 1 | | 5.507 | | | | ND | |
| 2 | | 6.231 | | | | | |
| 24 Endosulfan I | | | | | | | |
| 1 | | 5.548 | | | | ND | |
| 2 | | 6.272 | | | | | |
| 25 4,4'-DDE | | | | | | | |
| 1 | | 5.718 | | | | ND | |
| 2 | | 6.449 | | | | | |
| 26 Dieldrin | | | | | | | |
| 1 | | 5.832 | | | | ND | |
| 2 | | 6.603 | | | | | |
| 27 2,4'-DDD | | | | | | | |
| 1 | | 5.930 | | | | ND | |
| 2 | | 6.571 | | | | | |
| 28 Chlorobenzilate | | | | | | | |
| 1 | | 6.048 | | | | ND | |
| 2 | | 6.772 | | | | | |
| 29 Endrin | | | | | | | |
| 1 | | 6.184 | | | | ND | |
| 2 | | 6.886 | | | | | |
| 30 2,4'-DDT | | | | | | | |
| 1 | | 6.260 | | | | ND | |
| 2 | | 6.957 | | | | | |
| 31 Kepone | | | | | | | |
| 1 | | 6.307 | | | | ND | |
| 2 | | 7.235 | | | | | |
| 32 4,4'-DDD | | | | | | | |
| 1 | | 6.391 | | | | ND | |
| 2 | | 7.100 | | | | | |
| 33 Endosulfan II | | | | | | | |
| 1 | | 6.533 | | | | ND | |
| 2 | | 7.213 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 34 4,4'-DDT | | | | | | | |
| 1 | | 6.750 | | | | ND | |
| 2 | | 7.464 | | | | | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | | 6.836 | | | | ND | |
| 2 | | 7.343 | | | | | |
| 36 Endosulfan sulfate | | | | | | | |
| 1 | | 7.084 | | | | ND | |
| 2 | | 7.673 | | | | | |
| 37 Methoxychlor | | | | | | | |
| 1 | | 7.611 | | | | ND | |
| 2 | | 7.981 | | | | | |
| 38 Endrin ketone | | | | | | | |
| 1 | | 7.770 | | | | ND | |
| 2 | | 8.121 | | | | | |
| 39 Mirex | | | | | | | |
| 1 | | 7.878 | | | | ND | |
| 2 | | 8.642 | | | | | |
| $ 40 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 8.998 | 9.004 | -0.006 | 21332772 | 20.0 | 13.9 | |
| 2 | 9.866 | 9.869 | -0.003 | 18338885 | 20.0 | 12.9 | |
| | | | | | | RPD = 7.75 | |
| 41 Tris(2,3-dibromopropyl)phosphate | | | | | | | |
| 1 | | 10.902 | | | | ND | |
| 2 | | 11.348 | | | | | |
| S 42 Endosulfan, Total | | | | | | | |
| 1 | | 0.000 | | | | ND | |
| 2 | | 0.000 | | | | | |

## Reagents:

8081_IS_00010 Amount Added: 75.00 Units: uL Run Reagent

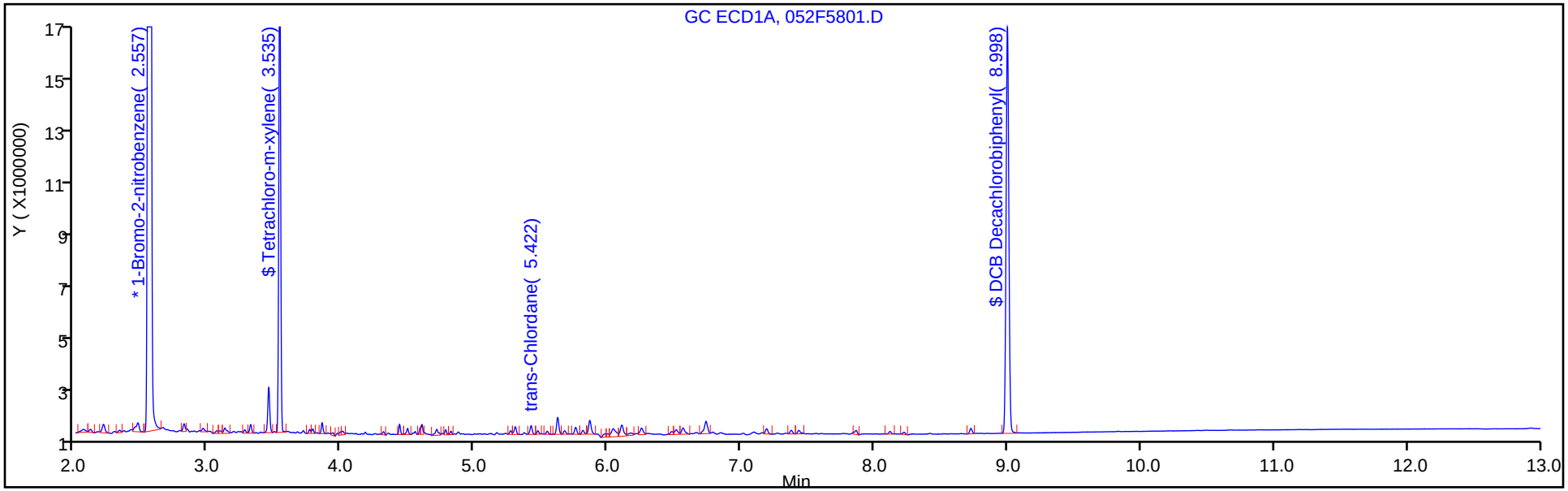
Report Date: 23-Jan-2019 11:17:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

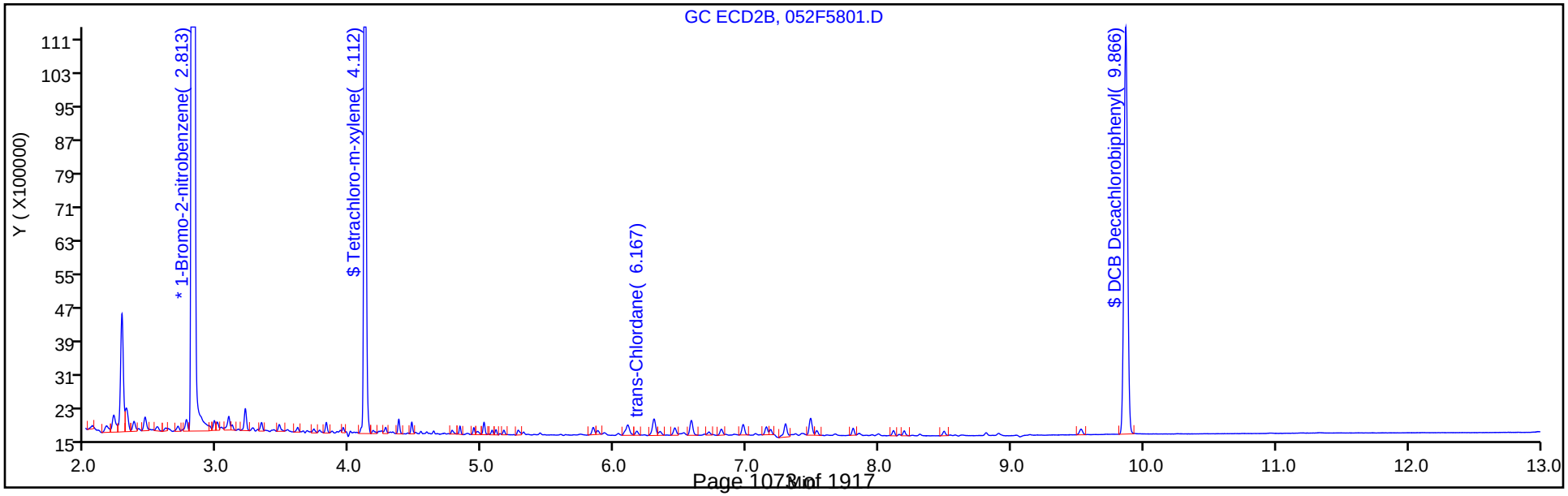
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\052F5801.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Jan-2019 01:19:59 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | MB 280-444680/1-A | | | Worklist Smp#: | 75 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 52 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\052F5801.D | | | | |
| Lims ID: | MB 280-444680/1-A | | | | |
| Client ID: | | | | | |
| Sample Type: | MB | | | | |
| Inject. Date: | 23-Jan-2019 01:19:59 | ALS Bottle#: | 52 | Worklist Smp#: | 75 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | MB 280-444680/1- | | | | |
| Operator ID: | TEB | Instrument ID: | SGC_C | | |
| Method: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m | | | | |
| Limit Group: | GCSV - 8081A - IS | | | | |
| Last Update: | 23-Jan-2019 11:16:36 | Calib Date: | 17-Jan-2019 18:56:49 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D | | | | |
| Column 1 : | Rxi-35Sil MS ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | Rxi-XLB ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0329 | | | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 10.8 | 54.01 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 13.9 | 69.56 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 11.1 | 55.48 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 12.9 | 64.37 |

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-444680/1-A

Matrix: Water | Lab File ID: 052F5801.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 01/18/2019 12:03

Sample wt/vol: 1000(mL) | Date Analyzed: 01/23/2019 01:19

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: Rxi-XLB ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 444894 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 0.0077 | U | 0.050 | 0.0077 |
| 60-57-1 | Dieldrin | 0.0063 | U | 0.050 | 0.0063 |
| 5103-74-2 | gamma-Chlordane | 0.0091 | U | 0.050 | 0.0091 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\052F5801.D
Lims ID: MB 280-444680/1-A
Client ID:
Sample Type: MB
Inject. Date: 23-Jan-2019 01:19:59 ALS Bottle#: 52 Worklist Smp#: 75
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-444680/1-
Operator ID: TEB Instrument ID: SGC_C

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| S 1 Hexachlorocyclohexane, technical | | | | | | | |
| 1 | | 1.000 | | | | ND | |
| 2 | | 0.000 | | | | | |
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.557 | 2.559 | -0.001 | 171836980 | 150.0 | 150.0 | |
| 2 | 2.813 | 2.816 | -0.003 | 146756474 | 150.0 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | | |
| 1 | 3.535 | 3.537 | -0.002 | 17251143 | 20.0 | 10.8 | |
| 2 | 4.112 | 4.113 | -0.001 | 22305535 | 20.0 | 11.1 | |
| | | | | | | RPD = 2.68 | |
| 4 Propachlor | | | | | | | |
| 1 | | 3.676 | | | | ND | |
| 2 | | 4.142 | | | | | |
| 5 Diallate | | | | | | | |
| 1 | | 3.816 | | | | ND | |
| 2 | | 4.241 | | | | | |
| 6 Hexachlorobenzene | | | | | | | |
| 1 | | 3.971 | | | | ND | |
| 2 | | 4.498 | | | | | |
| 7 alpha-BHC | | | | | | | |
| 1 | | 4.066 | | | | ND | |
| 2 | | 4.438 | | | | | |
| 8 gamma-BHC (Lindane) | | | | | | | |
| 1 | | 4.353 | | | | ND | |
| 2 | | 4.683 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 10 Technical Chlordane | | | | | | | |
| 1 | | 4.475 | | | | ND | |
| 1 | | 4.934 | | | | | |
| 1 | | 5.419 | | | | | |
| 1 | | 5.507 | | | | | |
| 1 | | 6.568 | | | | | |
| 2 | | 4.966 | | | | | |
| 2 | | 5.413 | | | | | |
| 2 | | 6.172 | | | | | |
| 2 | | 6.295 | | | | | |
| 2 | | 7.293 | | | | | |
| 9 Chlordane (technical) | | | | | | | |
| 1 | | 4.475 | | | | ND | |
| 1 | | 4.934 | | | | | |
| 1 | | 5.419 | | | | | |
| 1 | | 5.507 | | | | | |
| 1 | | 6.568 | | | | | |
| 2 | | 4.966 | | | | | |
| 2 | | 5.413 | | | | | |
| 2 | | 6.172 | | | | | |
| 2 | | 6.295 | | | | | |
| 2 | | 7.293 | | | | | |
| 11 beta-BHC | | | | | | | |
| 1 | | 4.540 | | | | ND | |
| 2 | | 4.888 | | | | | |
| 12 Heptachlor | | | | | | | |
| 1 | | 4.605 | | | | ND | |
| 2 | | 5.126 | | | | | |
| 13 delta-BHC | | | | | | | |
| 1 | | 4.734 | | | | ND | |
| 2 | | 5.075 | | | | | |
| 15 Aldrin | | | | | | | |
| 1 | | 4.821 | | | | ND | |
| 2 | | 5.394 | | | | | |
| 22 Toxaphene | | | | | | | |
| 1 | | 4.858 | | | | ND | |
| 1 | | 6.241 | | | | | |
| 1 | | 6.852 | | | | | |
| 1 | | 7.407 | | | | | |
| 1 | | 7.546 | | | | | |
| 2 | | 6.061 | | | | | |
| 2 | | 6.552 | | | | | |
| 2 | | 6.876 | | | | | |
| 2 | | 7.593 | | | | | |
| 2 | | 8.163 | | | | | |
| 14 2,4,5-Trichlorophenol | | | | | | | |
| 1 | | 4.861 | | | | ND | |
| 2 | | 4.772 | | | | | |
| 16 Chlorpyrifos | | | | | | | |
| 1 | | 4.939 | | | | ND | |
| 2 | | 5.328 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 17 Isodrin | | | | | | | |
| 1 | | 5.118 | | | | ND | |
| 2 | | 5.699 | | | | | |
| 18 Dicofol | | | | | | | |
| 1 | | 5.141 | | | | ND | |
| 2 | | 5.599 | | | | | |
| 19 Heptachlor epoxide | | | | | | | |
| 1 | | 5.227 | | | | ND | |
| 2 | | 5.814 | | | | | |
| 20 trans-Chlordane | | | | | | | |
| 1 | 5.422 | 5.418 | 0.004 | 375133 | | 1.10 | |
| 2 | 6.167 | 6.170 | -0.003 | 144268 | | -0.8730 | |
| | | | | | | RPD = 1732.79 | |
| 21 2,4'-DDE | | | | | | | |
| 1 | | 5.436 | | | | ND | |
| 2 | | 6.000 | | | | | |
| 23 cis-Chlordane | | | | | | | |
| 1 | | 5.507 | | | | ND | |
| 2 | | 6.231 | | | | | |
| 24 Endosulfan I | | | | | | | |
| 1 | | 5.548 | | | | ND | |
| 2 | | 6.272 | | | | | |
| 25 4,4'-DDE | | | | | | | |
| 1 | | 5.718 | | | | ND | |
| 2 | | 6.449 | | | | | |
| 26 Dieldrin | | | | | | | |
| 1 | | 5.832 | | | | ND | |
| 2 | | 6.603 | | | | | |
| 27 2,4'-DDD | | | | | | | |
| 1 | | 5.930 | | | | ND | |
| 2 | | 6.571 | | | | | |
| 28 Chlorobenzilate | | | | | | | |
| 1 | | 6.048 | | | | ND | |
| 2 | | 6.772 | | | | | |
| 29 Endrin | | | | | | | |
| 1 | | 6.184 | | | | ND | |
| 2 | | 6.886 | | | | | |
| 30 2,4'-DDT | | | | | | | |
| 1 | | 6.260 | | | | ND | |
| 2 | | 6.957 | | | | | |
| 31 Kepone | | | | | | | |
| 1 | | 6.307 | | | | ND | |
| 2 | | 7.235 | | | | | |
| 32 4,4'-DDD | | | | | | | |
| 1 | | 6.391 | | | | ND | |
| 2 | | 7.100 | | | | | |
| 33 Endosulfan II | | | | | | | |
| 1 | | 6.533 | | | | ND | |
| 2 | | 7.213 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 34 4,4'-DDT | | | | | | | |
| 1 | | 6.750 | | | | ND | |
| 2 | | 7.464 | | | | | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | | 6.836 | | | | ND | |
| 2 | | 7.343 | | | | | |
| 36 Endosulfan sulfate | | | | | | | |
| 1 | | 7.084 | | | | ND | |
| 2 | | 7.673 | | | | | |
| 37 Methoxychlor | | | | | | | |
| 1 | | 7.611 | | | | ND | |
| 2 | | 7.981 | | | | | |
| 38 Endrin ketone | | | | | | | |
| 1 | | 7.770 | | | | ND | |
| 2 | | 8.121 | | | | | |
| 39 Mirex | | | | | | | |
| 1 | | 7.878 | | | | ND | |
| 2 | | 8.642 | | | | | |
| $ 40 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 8.998 | 9.004 | -0.006 | 21332772 | 20.0 | 13.9 | |
| 2 | 9.866 | 9.869 | -0.003 | 18338885 | 20.0 | 12.9 | |
| | | | | | | RPD = 7.75 | |
| 41 Tris(2,3-dibromopropyl)phosphate | | | | | | | |
| 1 | | 10.902 | | | | ND | |
| 2 | | 11.348 | | | | | |
| S 42 Endosulfan, Total | | | | | | | |
| 1 | | 0.000 | | | | ND | |
| 2 | | 0.000 | | | | | |

## Reagents:

8081_IS_00010 Amount Added: 75.00 Units: uL Run Reagent

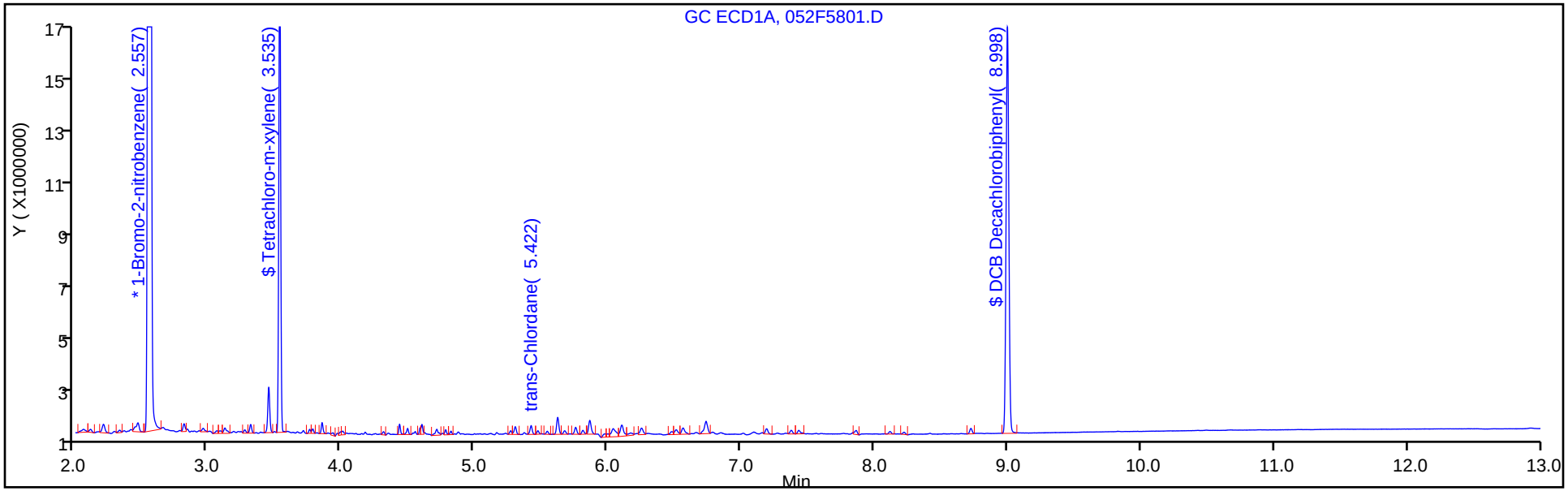
Report Date: 23-Jan-2019 11:17:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

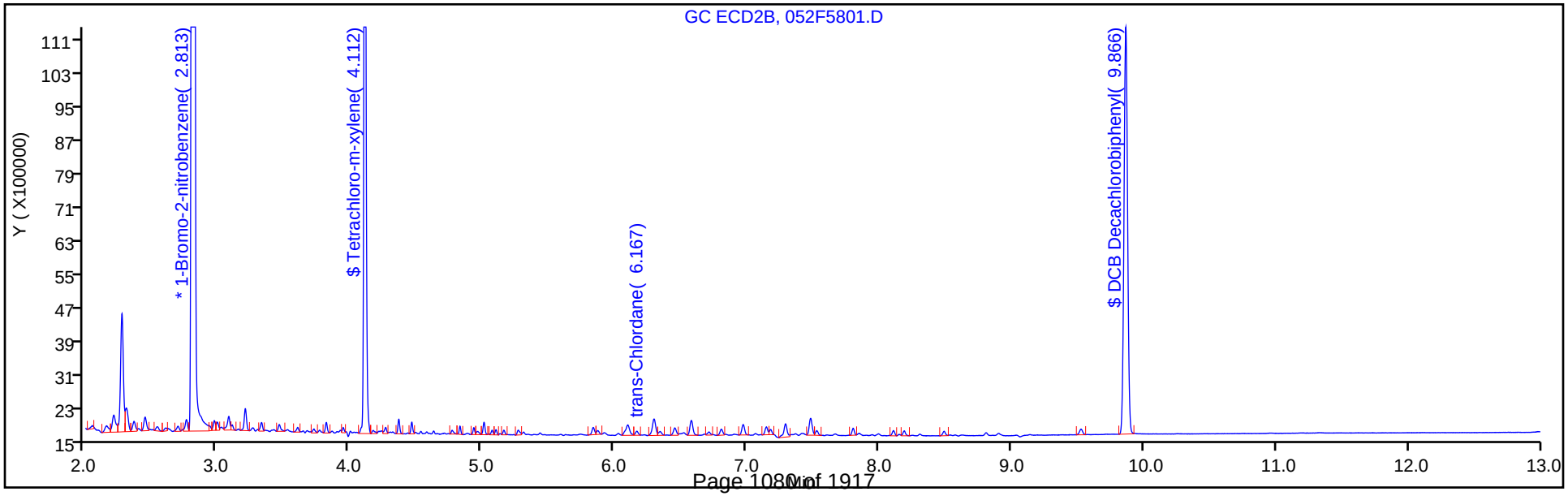
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\052F5801.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Jan-2019 01:19:59 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | MB 280-444680/1-A | | | Worklist Smp#: | 75 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 52 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\052F5801.D | | | | |
| Lims ID: | MB 280-444680/1-A | | | | |
| Client ID: | | | | | |
| Sample Type: | MB | | | | |
| Inject. Date: | 23-Jan-2019 01:19:59 | ALS Bottle#: | 52 | Worklist Smp#: | 75 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | MB 280-444680/1- | | | | |
| Operator ID: | TEB | Instrument ID: | SGC_C | | |
| Method: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m | | | | |
| Limit Group: | GCSV - 8081A - IS | | | | |
| Last Update: | 23-Jan-2019 11:16:36 | Calib Date: | 17-Jan-2019 18:56:49 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D | | | | |
| Column 1 : | Rxi-35Sil MS ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | Rxi-XLB ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0329 | | | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 10.8 | 54.01 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 13.9 | 69.56 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 11.1 | 55.48 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 12.9 | 64.37 |

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-444680/2-A

Matrix: Water | Lab File ID: 053F5901.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 01/18/2019 12:03

Sample wt/vol: 1000(mL) | Date Analyzed: 01/23/2019 01:37

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: Rxi-35Sil MS ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 444894 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | 0.421 | | 0.050 | 0.0075 |
| 50-29-3 | 4,4'-DDT | 0.407 | | 0.050 | 0.015 |
| 309-00-2 | Aldrin | 0.408 | | 0.050 | 0.0059 |
| 319-84-6 | alpha-BHC | 0.433 | | 0.050 | 0.0053 |
| 5103-71-9 | alpha-Chlordane | 0.417 | | 0.050 | 0.0053 |
| 319-85-7 | beta-BHC | 0.442 | | 0.050 | 0.0087 |
| 319-86-8 | delta-BHC | 0.452 | | 0.050 | 0.0058 |
| 959-98-8 | Endosulfan I | 0.398 | | 0.050 | 0.0058 |
| 33213-65-9 | Endosulfan II | 0.388 | | 0.050 | 0.0070 |
| 1031-07-8 | Endosulfan sulfate | 0.417 | | 0.050 | 0.0057 |
| 72-20-8 | Endrin | 0.430 | | 0.050 | 0.0079 |
| 7421-93-4 | Endrin aldehyde | 0.376 | | 0.050 | 0.0088 |
| 53494-70-5 | Endrin ketone | 0.423 | | 0.050 | 0.0070 |
| 58-89-9 | gamma-BHC (Lindane) | 0.459 | | 0.050 | 0.0069 |
| 5103-74-2 | gamma-Chlordane | 0.430 | | 0.050 | 0.0091 |
| 76-44-8 | Heptachlor | 0.420 | | 0.050 | 0.0077 |
| 1024-57-3 | Heptachlor epoxide | 0.430 | | 0.050 | 0.0075 |
| 72-43-5 | Methoxychlor | 0.432 | | 0.10 | 0.013 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2051-24-3 | DCB Decachlorobiphenyl | 86 | | 34-122 |
| 877-09-8 | Tetrachloro-m-xylene | 74 | | 28-115 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\053F5901.D
Lims ID: LCS 280-444680/2-A
Client ID:
Sample Type: LCS
Inject. Date: 23-Jan-2019 01:37:35 ALS Bottle#: 53 Worklist Smp#: 76
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-444680/2
Operator ID: TEB Instrument ID: SGC_C

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.558 | 2.559 | 0.000 | 138063018 | 150.0 | 150.0 | |
| 2 | 2.815 | 2.816 | -0.001 | 117004484 | 150.0 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | | |
| 1 | 3.536 | 3.537 | -0.001 | 18599826 | 20.0 | 14.9 | |
| 2 | 4.113 | 4.113 | 0.000 | 23104317 | 20.0 | 14.8 | |
| | | | | | | RPD = 0.42 | |
| 6 Hexachlorobenzene | | | | | | | |
| 1 | 3.969 | 3.971 | -0.002 | 53123077 | 50.0 | 42.2 | |
| 2 | 4.496 | 4.498 | -0.002 | 54646341 | 50.0 | 37.9 | |
| | | | | | | RPD = 10.65 | |
| 7 alpha-BHC | | | | | | | |
| 1 | 4.064 | 4.066 | -0.002 | 80053646 | 50.0 | 43.3 | |
| 2 | 4.437 | 4.438 | -0.001 | 63718737 | 50.0 | 43.4 | |
| | | | | | | RPD = 0.31 | |
| 8 gamma-BHC (Lindane) | | | | | | | |
| 1 | 4.351 | 4.353 | -0.002 | 63447748 | 50.0 | 45.9 | |
| 2 | 4.683 | 4.683 | 0.000 | 46664884 | 50.0 | 42.3 | |
| | | | | | | RPD = 8.02 | |
| 11 beta-BHC | | | | | | | |
| 1 | 4.538 | 4.540 | -0.002 | 31099151 | 50.0 | 44.2 | |
| 2 | 4.887 | 4.888 | -0.001 | 25045867 | 50.0 | 45.1 | |
| | | | | | | RPD = 2.03 | |
| 12 Heptachlor | | | | | | | |
| 1 | 4.603 | 4.605 | -0.002 | 56427721 | 50.0 | 42.0 | |
| 2 | 5.126 | 5.126 | 0.000 | 43356139 | 50.0 | 44.7 | |
| | | | | | | RPD = 6.08 | |
| 13 delta-BHC | | | | | | | |
| 1 | 4.732 | 4.734 | -0.002 | 73119421 | 50.0 | 45.2 | |
| 2 | 5.075 | 5.075 | 0.000 | 59456338 | 50.0 | 44.2 | |
| | | | | | | RPD = 2.13 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 15 Aldrin | | | | | | | |
| 1 | 4.818 | 4.821 | -0.003 | 66900051 | 50.0 | 40.8 | |
| 2 | 5.394 | 5.394 | 0.000 | 54664976 | 50.0 | 42.7 | |
| | | | | | | RPD = 4.42 | |
| 19 Heptachlor epoxide | | | | | | | |
| 1 | 5.224 | 5.227 | -0.003 | 59857314 | 50.0 | 43.0 | |
| 2 | 5.812 | 5.814 | -0.002 | 51426285 | 50.0 | 44.9 | |
| | | | | | | RPD = 4.27 | |
| 20 trans-Chlordane | | | | | | | |
| 1 | 5.416 | 5.418 | -0.002 | 64344329 | 50.0 | 43.0 | |
| 2 | 6.169 | 6.170 | -0.001 | 54134390 | 50.0 | 45.1 | |
| | | | | | | RPD = 4.76 | |
| 23 cis-Chlordane | | | | | | | |
| 1 | 5.505 | 5.507 | -0.002 | 63052168 | 50.0 | 41.7 | |
| 2 | 6.231 | 6.231 | 0.000 | 51230717 | 50.0 | 43.2 | |
| | | | | | | RPD = 3.56 | |
| 24 Endosulfan I | | | | | | | |
| 1 | 5.546 | 5.548 | -0.002 | 57636253 | 50.0 | 39.8 | |
| 2 | 6.271 | 6.272 | -0.001 | 43249884 | 50.0 | 43.7 | |
| | | | | | | RPD = 9.47 | |
| 25 4,4'-DDE | | | | | | | |
| 1 | 5.715 | 5.718 | -0.003 | 65931921 | 50.0 | 42.1 | |
| 2 | 6.449 | 6.449 | 0.000 | 56893101 | 50.0 | 38.6 | |
| | | | | | | RPD = 8.56 | |
| 26 Dieldrin | | | | | | | |
| 1 | 5.828 | 5.832 | -0.004 | 57762183 | 50.0 | 44.5 | |
| 2 | 6.603 | 6.603 | 0.000 | 56070564 | 50.0 | 43.4 | |
| | | | | | | RPD = 2.44 | |
| 29 Endrin | | | | | | | |
| 1 | 6.181 | 6.184 | -0.003 | 60073378 | 50.0 | 43.0 | |
| 2 | 6.885 | 6.886 | -0.001 | 49677313 | 50.0 | 43.7 | |
| | | | | | | RPD = 1.54 | |
| 32 4,4'-DDD | | | | | | | |
| 1 | 6.387 | 6.391 | -0.004 | 54355378 | 50.0 | 43.1 | |
| 2 | 7.099 | 7.100 | -0.001 | 45533535 | 50.0 | 45.7 | |
| | | | | | | RPD = 5.98 | |
| 33 Endosulfan II | | | | | | | |
| 1 | 6.530 | 6.533 | -0.003 | 54007941 | 50.0 | 38.8 | |
| 2 | 7.211 | 7.213 | -0.002 | 42244915 | 50.0 | 40.5 | |
| | | | | | | RPD = 4.50 | |
| 34 4,4'-DDT | | | | | | | |
| 1 | 6.746 | 6.750 | -0.004 | 46462695 | 50.0 | 40.7 | |
| 2 | 7.462 | 7.464 | -0.002 | 39024171 | 50.0 | 45.2 | |
| | | | | | | RPD = 10.28 | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | 6.832 | 6.836 | -0.004 | 42263795 | 50.0 | 37.6 | |
| 2 | 7.342 | 7.343 | -0.001 | 33857947 | 50.0 | 39.3 | |
| | | | | | | RPD = 4.34 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 36 Endosulfan sulfate | | | | | | | |
| 1 | 7.081 | 7.084 | -0.003 | 55044057 | 50.0 | 41.7 | |
| 2 | 7.671 | 7.673 | -0.002 | 43886009 | 50.0 | 46.2 | |
| | | | | | | RPD = 10.38 | |
| 37 Methoxychlor | | | | | | | |
| 1 | 7.606 | 7.611 | -0.005 | 23453573 | 50.0 | 43.2 | |
| 2 | 7.979 | 7.981 | -0.002 | 20192361 | 50.0 | 44.5 | |
| | | | | | | RPD = 2.92 | |
| 38 Endrin ketone | | | | | | | |
| 1 | 7.766 | 7.770 | -0.004 | 58246942 | 50.0 | 42.3 | |
| 2 | 8.120 | 8.121 | -0.001 | 45172243 | 50.0 | 44.7 | |
| | | | | | | RPD = 5.51 | |
| $ 40 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 8.999 | 9.004 | -0.005 | 20830593 | 20.0 | 17.2 | |
| 2 | 9.865 | 9.869 | -0.004 | 17988822 | 20.0 | 16.2 | |
| | | | | | | RPD = 5.85 | |

## Reagents:

8081_IS_00010 Amount Added: 75.00 Units: uL Run Reagent

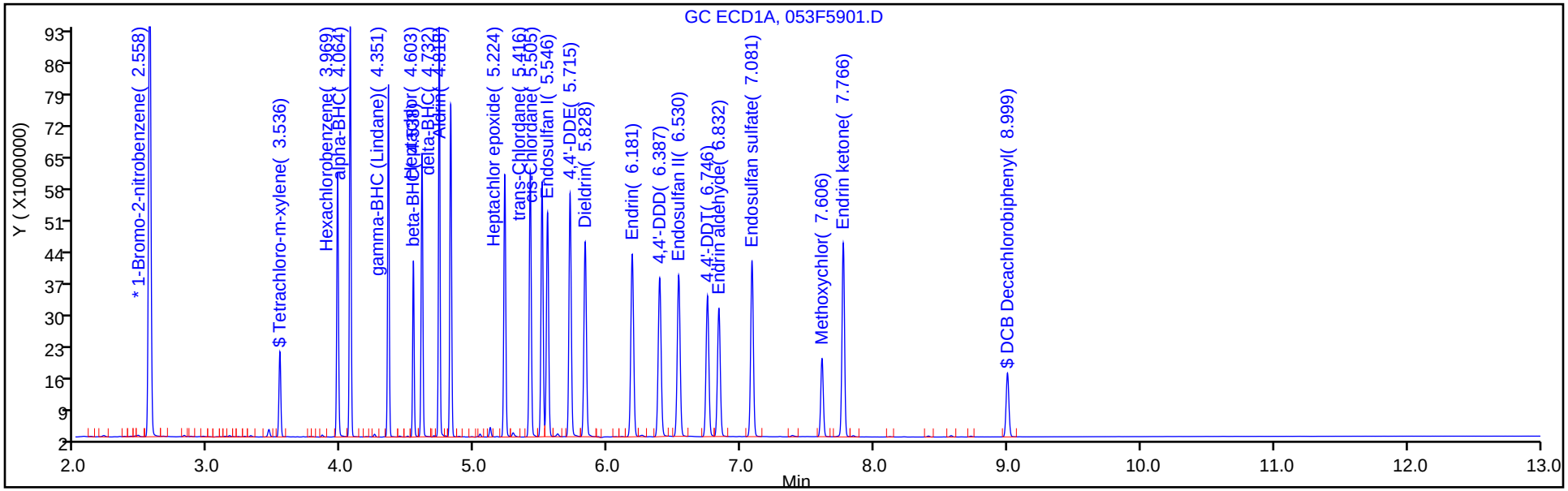
Report Date: 23-Jan-2019 11:17:09 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

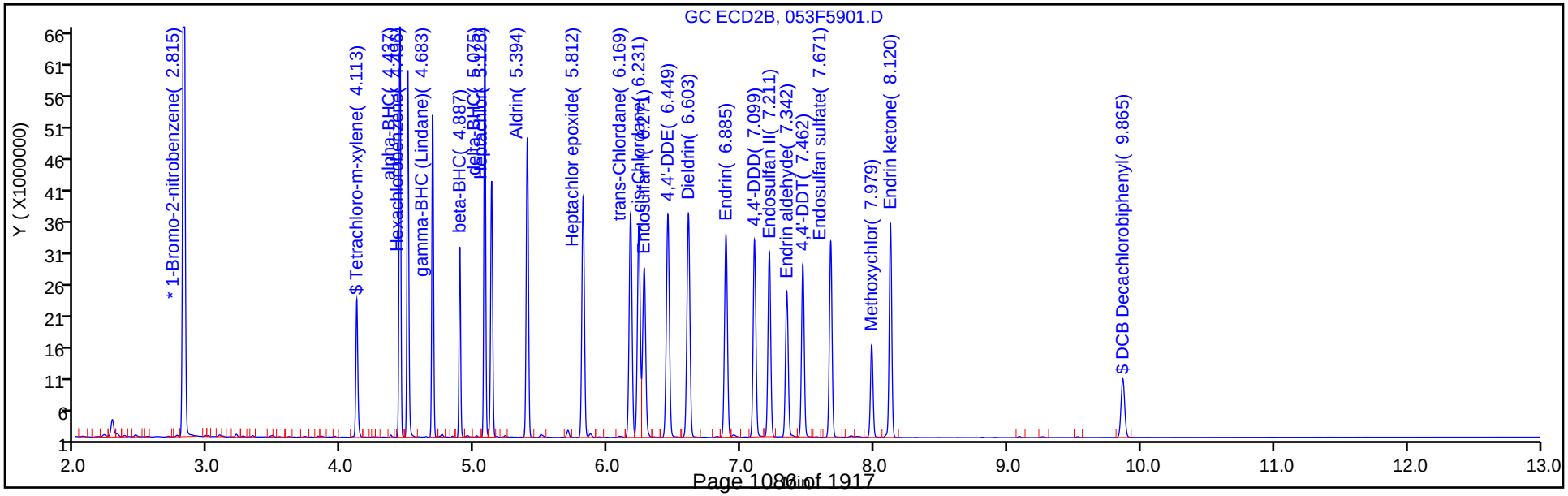
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\053F5901.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Jan-2019 01:37:35 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | LCS 280-444680/2-A | | | Worklist Smp#: | 76 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 53 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\053F5901.D | | | | |
| Lims ID: | LCS 280-444680/2-A | | | | |
| Client ID: | | | | | |
| Sample Type: | LCS | | | | |
| Inject. Date: | 23-Jan-2019 01:37:35 | ALS Bottle#: | 53 | Worklist Smp#: | 76 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | LCS 280-444680/2 | | | | |
| Operator ID: | TEB | Instrument ID: | SGC_C | | |
| Method: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m | | | | |
| Limit Group: | GCSV - 8081A - IS | | | | |
| Last Update: | 23-Jan-2019 11:16:36 | Calib Date: | 17-Jan-2019 18:56:49 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D | | | | |
| Column 1 : | Rxi-35Sil MS ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | Rxi-XLB ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0329 | | | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 14.9 | 74.47 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 17.2 | 85.94 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 14.8 | 74.15 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 16.2 | 81.06 |

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-444680/2-A

Matrix: Water | Lab File ID: 053F5901.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 01/18/2019 12:03

Sample wt/vol: 1000(mL) | Date Analyzed: 01/23/2019 01:37

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: Rxi-XLB ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 444894 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 0.457 | | 0.050 | 0.0077 |
| 60-57-1 | Dieldrin | 0.434 | | 0.050 | 0.0063 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\053F5901.D
Lims ID: LCS 280-444680/2-A
Client ID:
Sample Type: LCS
Inject. Date: 23-Jan-2019 01:37:35 ALS Bottle#: 53 Worklist Smp#: 76
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-444680/2
Operator ID: TEB Instrument ID: SGC_C

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.558 | 2.559 | 0.000 | 138063018 | 150.0 | 150.0 | |
| 2 | 2.815 | 2.816 | -0.001 | 117004484 | 150.0 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | | |
| 1 | 3.536 | 3.537 | -0.001 | 18599826 | 20.0 | 14.9 | |
| 2 | 4.113 | 4.113 | 0.000 | 23104317 | 20.0 | 14.8 | |
| | | | | | | RPD = 0.42 | |
| 6 Hexachlorobenzene | | | | | | | |
| 1 | 3.969 | 3.971 | -0.002 | 53123077 | 50.0 | 42.2 | |
| 2 | 4.496 | 4.498 | -0.002 | 54646341 | 50.0 | 37.9 | |
| | | | | | | RPD = 10.65 | |
| 7 alpha-BHC | | | | | | | |
| 1 | 4.064 | 4.066 | -0.002 | 80053646 | 50.0 | 43.3 | |
| 2 | 4.437 | 4.438 | -0.001 | 63718737 | 50.0 | 43.4 | |
| | | | | | | RPD = 0.31 | |
| 8 gamma-BHC (Lindane) | | | | | | | |
| 1 | 4.351 | 4.353 | -0.002 | 63447748 | 50.0 | 45.9 | |
| 2 | 4.683 | 4.683 | 0.000 | 46664884 | 50.0 | 42.3 | |
| | | | | | | RPD = 8.02 | |
| 11 beta-BHC | | | | | | | |
| 1 | 4.538 | 4.540 | -0.002 | 31099151 | 50.0 | 44.2 | |
| 2 | 4.887 | 4.888 | -0.001 | 25045867 | 50.0 | 45.1 | |
| | | | | | | RPD = 2.03 | |
| 12 Heptachlor | | | | | | | |
| 1 | 4.603 | 4.605 | -0.002 | 56427721 | 50.0 | 42.0 | |
| 2 | 5.126 | 5.126 | 0.000 | 43356139 | 50.0 | 44.7 | |
| | | | | | | RPD = 6.08 | |
| 13 delta-BHC | | | | | | | |
| 1 | 4.732 | 4.734 | -0.002 | 73119421 | 50.0 | 45.2 | |
| 2 | 5.075 | 5.075 | 0.000 | 59456338 | 50.0 | 44.2 | |
| | | | | | | RPD = 2.13 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 15 Aldrin | | | | | | | |
| 1 | 4.818 | 4.821 | -0.003 | 66900051 | 50.0 | 40.8 | |
| 2 | 5.394 | 5.394 | 0.000 | 54664976 | 50.0 | 42.7 | |
| | | | | | | RPD = 4.42 | |
| 19 Heptachlor epoxide | | | | | | | |
| 1 | 5.224 | 5.227 | -0.003 | 59857314 | 50.0 | 43.0 | |
| 2 | 5.812 | 5.814 | -0.002 | 51426285 | 50.0 | 44.9 | |
| | | | | | | RPD = 4.27 | |
| 20 trans-Chlordane | | | | | | | |
| 1 | 5.416 | 5.418 | -0.002 | 64344329 | 50.0 | 43.0 | |
| 2 | 6.169 | 6.170 | -0.001 | 54134390 | 50.0 | 45.1 | |
| | | | | | | RPD = 4.76 | |
| 23 cis-Chlordane | | | | | | | |
| 1 | 5.505 | 5.507 | -0.002 | 63052168 | 50.0 | 41.7 | |
| 2 | 6.231 | 6.231 | 0.000 | 51230717 | 50.0 | 43.2 | |
| | | | | | | RPD = 3.56 | |
| 24 Endosulfan I | | | | | | | |
| 1 | 5.546 | 5.548 | -0.002 | 57636253 | 50.0 | 39.8 | |
| 2 | 6.271 | 6.272 | -0.001 | 43249884 | 50.0 | 43.7 | |
| | | | | | | RPD = 9.47 | |
| 25 4,4'-DDE | | | | | | | |
| 1 | 5.715 | 5.718 | -0.003 | 65931921 | 50.0 | 42.1 | |
| 2 | 6.449 | 6.449 | 0.000 | 56893101 | 50.0 | 38.6 | |
| | | | | | | RPD = 8.56 | |
| 26 Dieldrin | | | | | | | |
| 1 | 5.828 | 5.832 | -0.004 | 57762183 | 50.0 | 44.5 | |
| 2 | 6.603 | 6.603 | 0.000 | 56070564 | 50.0 | 43.4 | |
| | | | | | | RPD = 2.44 | |
| 29 Endrin | | | | | | | |
| 1 | 6.181 | 6.184 | -0.003 | 60073378 | 50.0 | 43.0 | |
| 2 | 6.885 | 6.886 | -0.001 | 49677313 | 50.0 | 43.7 | |
| | | | | | | RPD = 1.54 | |
| 32 4,4'-DDD | | | | | | | |
| 1 | 6.387 | 6.391 | -0.004 | 54355378 | 50.0 | 43.1 | |
| 2 | 7.099 | 7.100 | -0.001 | 45533535 | 50.0 | 45.7 | |
| | | | | | | RPD = 5.98 | |
| 33 Endosulfan II | | | | | | | |
| 1 | 6.530 | 6.533 | -0.003 | 54007941 | 50.0 | 38.8 | |
| 2 | 7.211 | 7.213 | -0.002 | 42244915 | 50.0 | 40.5 | |
| | | | | | | RPD = 4.50 | |
| 34 4,4'-DDT | | | | | | | |
| 1 | 6.746 | 6.750 | -0.004 | 46462695 | 50.0 | 40.7 | |
| 2 | 7.462 | 7.464 | -0.002 | 39024171 | 50.0 | 45.2 | |
| | | | | | | RPD = 10.28 | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | 6.832 | 6.836 | -0.004 | 42263795 | 50.0 | 37.6 | |
| 2 | 7.342 | 7.343 | -0.001 | 33857947 | 50.0 | 39.3 | |
| | | | | | | RPD = 4.34 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 36 Endosulfan sulfate | | | | | | | |
| 1 | 7.081 | 7.084 | -0.003 | 55044057 | 50.0 | 41.7 | |
| 2 | 7.671 | 7.673 | -0.002 | 43886009 | 50.0 | 46.2 | |
| | | | | | | RPD = 10.38 | |
| 37 Methoxychlor | | | | | | | |
| 1 | 7.606 | 7.611 | -0.005 | 23453573 | 50.0 | 43.2 | |
| 2 | 7.979 | 7.981 | -0.002 | 20192361 | 50.0 | 44.5 | |
| | | | | | | RPD = 2.92 | |
| 38 Endrin ketone | | | | | | | |
| 1 | 7.766 | 7.770 | -0.004 | 58246942 | 50.0 | 42.3 | |
| 2 | 8.120 | 8.121 | -0.001 | 45172243 | 50.0 | 44.7 | |
| | | | | | | RPD = 5.51 | |
| $ 40 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 8.999 | 9.004 | -0.005 | 20830593 | 20.0 | 17.2 | |
| 2 | 9.865 | 9.869 | -0.004 | 17988822 | 20.0 | 16.2 | |
| | | | | | | RPD = 5.85 | |

## Reagents:

8081_IS_00010 Amount Added: 75.00 Units: uL Run Reagent

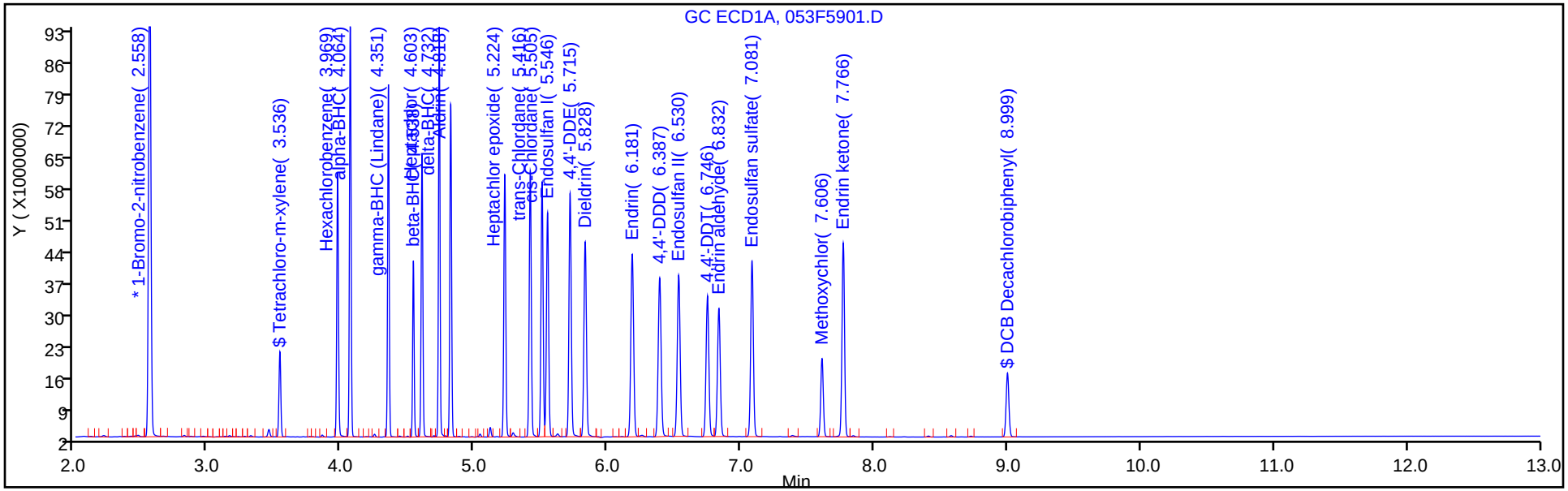
Report Date: 23-Jan-2019 11:17:09 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

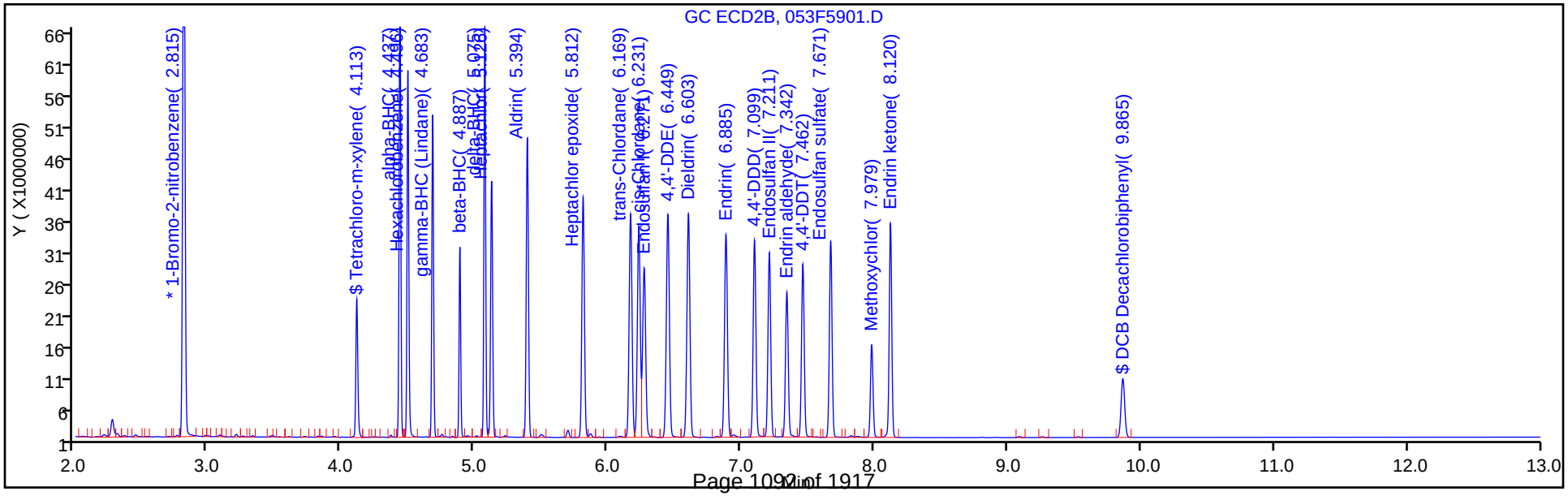
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\053F5901.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Jan-2019 01:37:35 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | LCS 280-444680/2-A | | | Worklist Smp#: | 76 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 53 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\053F5901.D | | | | |
| Lims ID: | LCS 280-444680/2-A | | | | |
| Client ID: | | | | | |
| Sample Type: | LCS | | | | |
| Inject. Date: | 23-Jan-2019 01:37:35 | ALS Bottle#: | 53 | Worklist Smp#: | 76 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | LCS 280-444680/2 | | | | |
| Operator ID: | TEB | Instrument ID: | SGC_C | | |
| Method: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m | | | | |
| Limit Group: | GCSV - 8081A - IS | | | | |
| Last Update: | 23-Jan-2019 11:16:36 | Calib Date: | 17-Jan-2019 18:56:49 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D | | | | |
| Column 1 : | Rxi-35Sil MS ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | Rxi-XLB ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0329 | | | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 14.9 | 74.47 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 17.2 | 85.94 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 14.8 | 74.15 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 16.2 | 81.06 |

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-444680/3-A

Matrix: Water | Lab File ID: 054F6001.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 01/18/2019 12:03

Sample wt/vol: 1000(mL) | Date Analyzed: 01/23/2019 01:55

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: Rxi-35Sil MS ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 444894 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | 0.466 | | 0.050 | 0.0075 |
| 50-29-3 | 4,4'-DDT | 0.444 | | 0.050 | 0.015 |
| 309-00-2 | Aldrin | 0.453 | | 0.050 | 0.0059 |
| 319-84-6 | alpha-BHC | 0.474 | | 0.050 | 0.0053 |
| 5103-71-9 | alpha-Chlordane | 0.459 | | 0.050 | 0.0053 |
| 319-85-7 | beta-BHC | 0.485 | | 0.050 | 0.0087 |
| 319-86-8 | delta-BHC | 0.496 | | 0.050 | 0.0058 |
| 959-98-8 | Endosulfan I | 0.438 | | 0.050 | 0.0058 |
| 33213-65-9 | Endosulfan II | 0.424 | | 0.050 | 0.0070 |
| 1031-07-8 | Endosulfan sulfate | 0.455 | | 0.050 | 0.0057 |
| 72-20-8 | Endrin | 0.466 | | 0.050 | 0.0079 |
| 7421-93-4 | Endrin aldehyde | 0.406 | | 0.050 | 0.0088 |
| 53494-70-5 | Endrin ketone | 0.466 | | 0.050 | 0.0070 |
| 58-89-9 | gamma-BHC (Lindane) | 0.507 | | 0.050 | 0.0069 |
| 5103-74-2 | gamma-Chlordane | 0.479 | | 0.050 | 0.0091 |
| 76-44-8 | Heptachlor | 0.462 | | 0.050 | 0.0077 |
| 1024-57-3 | Heptachlor epoxide | 0.472 | | 0.050 | 0.0075 |
| 72-43-5 | Methoxychlor | 0.468 | | 0.10 | 0.013 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2051-24-3 | DCB Decachlorobiphenyl | 95 | | 34-122 |
| 877-09-8 | Tetrachloro-m-xylene | 85 | | 28-115 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\054F6001.D
Lims ID: LCSD 280-444680/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 23-Jan-2019 01:55:06 ALS Bottle#: 54 Worklist Smp#: 77
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-444680/
Operator ID: TEB Instrument ID: SGC_C

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.558 | 2.559 | 0.000 | 127215702 | 150.0 | 150.0 | |
| 2 | 2.815 | 2.816 | -0.001 | 107758581 | 150.0 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | | |
| 1 | 3.536 | 3.537 | -0.001 | 19434585 | 20.0 | 17.0 | |
| 2 | 4.112 | 4.113 | -0.001 | 23711136 | 20.0 | 16.7 | |
| | | | | | | RPD = 2.13 | |
| 6 Hexachlorobenzene | | | | | | | |
| 1 | 3.969 | 3.971 | -0.002 | 54473930 | 50.0 | 47.1 | |
| 2 | 4.496 | 4.498 | -0.002 | 55183885 | 50.0 | 41.7 | |
| | | | | | | RPD = 12.16 | |
| 7 alpha-BHC | | | | | | | |
| 1 | 4.064 | 4.066 | -0.002 | 80745743 | 50.0 | 47.4 | |
| 2 | 4.437 | 4.438 | -0.001 | 64440089 | 50.0 | 47.7 | |
| | | | | | | RPD = 0.46 | |
| 8 gamma-BHC (Lindane) | | | | | | | |
| 1 | 4.351 | 4.353 | -0.002 | 64574513 | 50.0 | 50.7 | |
| 2 | 4.682 | 4.683 | -0.001 | 47784466 | 50.0 | 47.1 | |
| | | | | | | RPD = 7.37 | |
| 11 beta-BHC | | | | | | | |
| 1 | 4.538 | 4.540 | -0.002 | 31352942 | 50.0 | 48.5 | |
| 2 | 4.886 | 4.888 | -0.002 | 25376252 | 50.0 | 49.7 | |
| | | | | | | RPD = 2.60 | |
| 12 Heptachlor | | | | | | | |
| 1 | 4.602 | 4.605 | -0.003 | 57087255 | 50.0 | 46.2 | |
| 2 | 5.125 | 5.126 | -0.001 | 44249358 | 50.0 | 49.6 | |
| | | | | | | RPD = 7.03 | |
| 13 delta-BHC | | | | | | | |
| 1 | 4.732 | 4.734 | -0.002 | 73810759 | 50.0 | 49.6 | |
| 2 | 5.073 | 5.075 | -0.002 | 60048562 | 50.0 | 48.6 | |
| | | | | | | RPD = 1.99 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 15 Aldrin | | | | | | | |
| 1 | 4.818 | 4.821 | -0.003 | 68256998 | 50.0 | 45.3 | |
| 2 | 5.393 | 5.394 | -0.001 | 56089411 | 50.0 | 47.6 | |
| | | | | | | RPD = 4.99 | |
| 19 Heptachlor epoxide | | | | | | | |
| 1 | 5.223 | 5.227 | -0.004 | 60463226 | 50.0 | 47.2 | |
| 2 | 5.812 | 5.814 | -0.002 | 51828746 | 50.0 | 49.2 | |
| | | | | | | RPD = 4.32 | |
| 20 trans-Chlordane | | | | | | | |
| 1 | 5.415 | 5.418 | -0.003 | 65353355 | 50.0 | 47.9 | |
| 2 | 6.168 | 6.170 | -0.002 | 54861570 | 50.0 | 49.7 | |
| | | | | | | RPD = 3.70 | |
| 23 cis-Chlordane | | | | | | | |
| 1 | 5.503 | 5.507 | -0.004 | 63930674 | 50.0 | 45.9 | |
| 2 | 6.230 | 6.231 | -0.001 | 52210303 | 50.0 | 47.8 | |
| | | | | | | RPD = 4.12 | |
| 24 Endosulfan I | | | | | | | |
| 1 | 5.544 | 5.548 | -0.004 | 58477602 | 50.0 | 43.8 | |
| 2 | 6.269 | 6.272 | -0.003 | 44147492 | 50.0 | 48.5 | |
| | | | | | | RPD = 10.12 | |
| 25 4,4'-DDE | | | | | | | |
| 1 | 5.715 | 5.718 | -0.003 | 66973902 | 50.0 | 46.6 | |
| 2 | 6.447 | 6.449 | -0.002 | 57798199 | 50.0 | 42.7 | |
| | | | | | | RPD = 8.73 | |
| 26 Dieldrin | | | | | | | |
| 1 | 5.827 | 5.832 | -0.005 | 58857879 | 50.0 | 49.2 | |
| 2 | 6.602 | 6.603 | -0.001 | 56673513 | 50.0 | 47.6 | |
| | | | | | | RPD = 3.20 | |
| 29 Endrin | | | | | | | |
| 1 | 6.181 | 6.184 | -0.003 | 59868182 | 50.0 | 46.6 | |
| 2 | 6.885 | 6.886 | -0.001 | 49545889 | 50.0 | 47.4 | |
| | | | | | | RPD = 1.65 | |
| 32 4,4'-DDD | | | | | | | |
| 1 | 6.387 | 6.391 | -0.004 | 55075888 | 50.0 | 47.3 | |
| 2 | 7.099 | 7.100 | -0.001 | 46184489 | 50.0 | 50.4 | |
| | | | | | | RPD = 6.35 | |
| 33 Endosulfan II | | | | | | | |
| 1 | 6.528 | 6.533 | -0.005 | 54478392 | 50.0 | 42.4 | |
| 2 | 7.210 | 7.213 | -0.003 | 42979849 | 50.0 | 44.9 | |
| | | | | | | RPD = 5.68 | |
| 34 4,4'-DDT | | | | | | | |
| 1 | 6.747 | 6.750 | -0.003 | 46620349 | 50.0 | 44.4 | |
| 2 | 7.462 | 7.464 | -0.002 | 39289033 | 50.0 | 49.4 | |
| | | | | | | RPD = 10.61 | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | 6.832 | 6.836 | -0.004 | 41908915 | 50.0 | 40.6 | |
| 2 | 7.342 | 7.343 | -0.001 | 33625430 | 50.0 | 42.5 | |
| | | | | | | RPD = 4.56 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 36 Endosulfan sulfate | | | | | | | |
| 1 | 7.082 | 7.084 | -0.002 | 55423725 | 50.0 | 45.5 | |
| 2 | 7.671 | 7.673 | -0.002 | 44045864 | 50.0 | 50.5 | |
| | | | | | | RPD = 10.31 | |
| 37 Methoxychlor | | | | | | | |
| 1 | 7.606 | 7.611 | -0.005 | 23349881 | 50.0 | 46.8 | |
| 2 | 7.978 | 7.981 | -0.003 | 19991384 | 50.0 | 47.9 | |
| | | | | | | RPD = 2.32 | |
| 38 Endrin ketone | | | | | | | |
| 1 | 7.766 | 7.770 | -0.004 | 58869658 | 50.0 | 46.6 | |
| 2 | 8.120 | 8.121 | -0.001 | 45980828 | 50.0 | 49.6 | |
| | | | | | | RPD = 6.21 | |
| $ 40 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 8.999 | 9.004 | -0.005 | 21069843 | 20.0 | 19.0 | |
| 2 | 9.865 | 9.869 | -0.004 | 18140560 | 20.0 | 17.9 | |
| | | | | | | RPD = 5.92 | |

## Reagents:

8081_IS_00010 Amount Added: 75.00 Units: uL Run Reagent

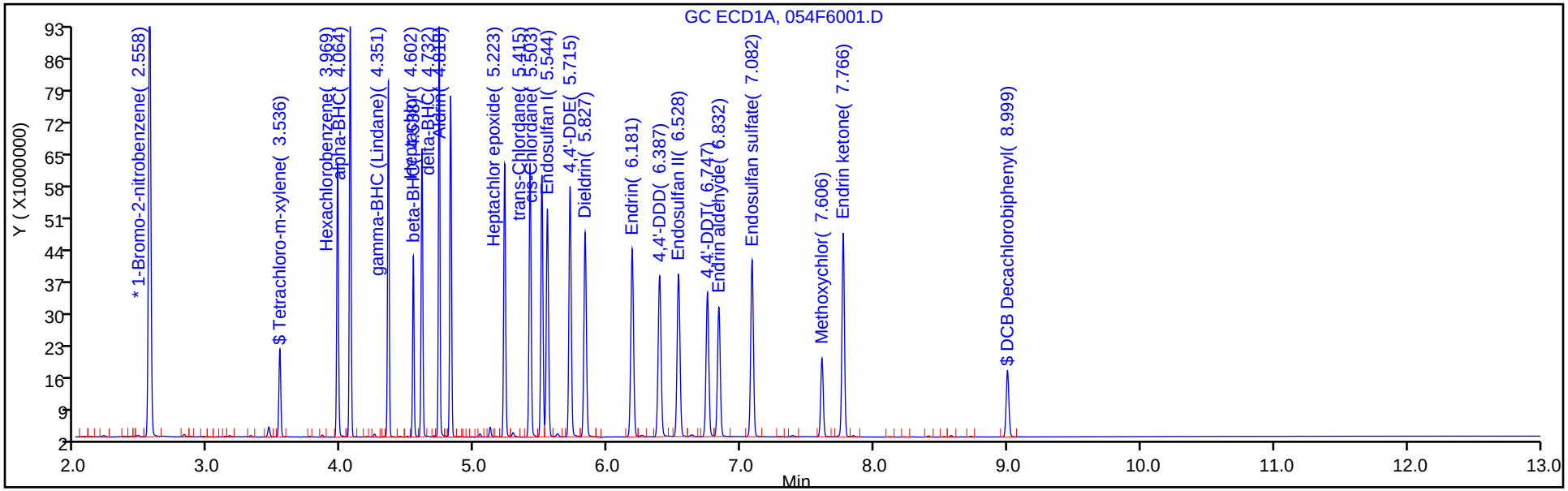
Report Date: 23-Jan-2019 11:17:10 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

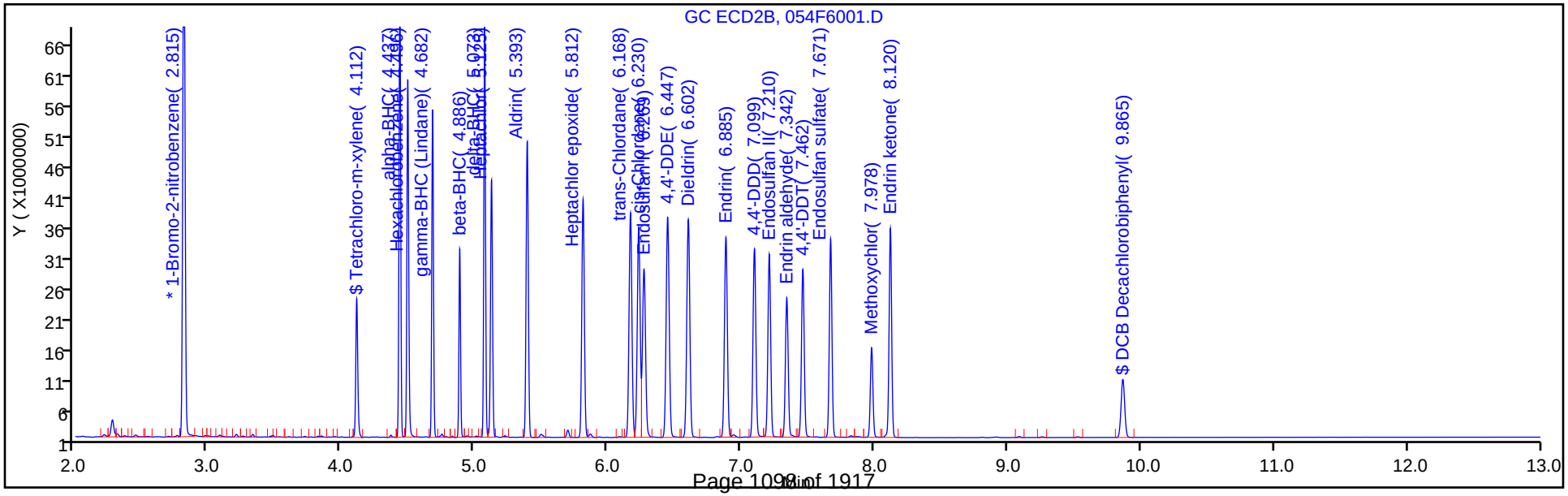
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\054F6001.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Jan-2019 01:55:06 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | LCSD 280-444680/3-A | | | Worklist Smp#: | 77 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 54 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\054F6001.D | | | | |
| Lims ID: | LCSD 280-444680/3-A | | | | |
| Client ID: | | | | | |
| Sample Type: | LCSD | | | | |
| Inject. Date: | 23-Jan-2019 01:55:06 | ALS Bottle#: | 54 | Worklist Smp#: | 77 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | LCSD 280-444680/ | | | | |
| Operator ID: | TEB | Instrument ID: | SGC_C | | |
| Method: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m | | | | |
| Limit Group: | GCSV - 8081A - IS | | | | |
| Last Update: | 23-Jan-2019 11:16:36 | Calib Date: | 17-Jan-2019 18:56:49 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D | | | | |
| Column 1 : | Rxi-35Sil MS ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | Rxi-XLB ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0329 | | | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 17.0 | 85.22 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 19.0 | 94.98 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 16.7 | 83.42 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 17.9 | 89.52 |

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-444680/3-A

Matrix: Water | Lab File ID: 054F6001.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 01/18/2019 12:03

Sample wt/vol: 1000(mL) | Date Analyzed: 01/23/2019 01:55

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: Rxi-XLB ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 444894 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 0.504 | | 0.050 | 0.0077 |
| 60-57-1 | Dieldrin | 0.476 | | 0.050 | 0.0063 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\054F6001.D
Lims ID: LCSD 280-444680/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 23-Jan-2019 01:55:06 ALS Bottle#: 54 Worklist Smp#: 77
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-444680/
Operator ID: TEB Instrument ID: SGC_C

Method: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 23-Jan-2019 11:16:36 Calib Date: 17-Jan-2019 18:56:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D

Column 1 : Rxi-35Sil MS ( 0.32 mm) Det: GC ECD1A
Column 2 : Rxi-XLB ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0329

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| * 2 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 2.558 | 2.559 | 0.000 | 127215702 | 150.0 | 150.0 | |
| 2 | 2.815 | 2.816 | -0.001 | 107758581 | 150.0 | 150.0 | |
| $ 3 Tetrachloro-m-xylene | | | | | | | |
| 1 | 3.536 | 3.537 | -0.001 | 19434585 | 20.0 | 17.0 | |
| 2 | 4.112 | 4.113 | -0.001 | 23711136 | 20.0 | 16.7 | |
| | | | | | | RPD = 2.13 | |
| 6 Hexachlorobenzene | | | | | | | |
| 1 | 3.969 | 3.971 | -0.002 | 54473930 | 50.0 | 47.1 | |
| 2 | 4.496 | 4.498 | -0.002 | 55183885 | 50.0 | 41.7 | |
| | | | | | | RPD = 12.16 | |
| 7 alpha-BHC | | | | | | | |
| 1 | 4.064 | 4.066 | -0.002 | 80745743 | 50.0 | 47.4 | |
| 2 | 4.437 | 4.438 | -0.001 | 64440089 | 50.0 | 47.7 | |
| | | | | | | RPD = 0.46 | |
| 8 gamma-BHC (Lindane) | | | | | | | |
| 1 | 4.351 | 4.353 | -0.002 | 64574513 | 50.0 | 50.7 | |
| 2 | 4.682 | 4.683 | -0.001 | 47784466 | 50.0 | 47.1 | |
| | | | | | | RPD = 7.37 | |
| 11 beta-BHC | | | | | | | |
| 1 | 4.538 | 4.540 | -0.002 | 31352942 | 50.0 | 48.5 | |
| 2 | 4.886 | 4.888 | -0.002 | 25376252 | 50.0 | 49.7 | |
| | | | | | | RPD = 2.60 | |
| 12 Heptachlor | | | | | | | |
| 1 | 4.602 | 4.605 | -0.003 | 57087255 | 50.0 | 46.2 | |
| 2 | 5.125 | 5.126 | -0.001 | 44249358 | 50.0 | 49.6 | |
| | | | | | | RPD = 7.03 | |
| 13 delta-BHC | | | | | | | |
| 1 | 4.732 | 4.734 | -0.002 | 73810759 | 50.0 | 49.6 | |
| 2 | 5.073 | 5.075 | -0.002 | 60048562 | 50.0 | 48.6 | |
| | | | | | | RPD = 1.99 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 15 Aldrin | | | | | | | |
| 1 | 4.818 | 4.821 | -0.003 | 68256998 | 50.0 | 45.3 | |
| 2 | 5.393 | 5.394 | -0.001 | 56089411 | 50.0 | 47.6 | |
| | | | | | | RPD = 4.99 | |
| 19 Heptachlor epoxide | | | | | | | |
| 1 | 5.223 | 5.227 | -0.004 | 60463226 | 50.0 | 47.2 | |
| 2 | 5.812 | 5.814 | -0.002 | 51828746 | 50.0 | 49.2 | |
| | | | | | | RPD = 4.32 | |
| 20 trans-Chlordane | | | | | | | |
| 1 | 5.415 | 5.418 | -0.003 | 65353355 | 50.0 | 47.9 | |
| 2 | 6.168 | 6.170 | -0.002 | 54861570 | 50.0 | 49.7 | |
| | | | | | | RPD = 3.70 | |
| 23 cis-Chlordane | | | | | | | |
| 1 | 5.503 | 5.507 | -0.004 | 63930674 | 50.0 | 45.9 | |
| 2 | 6.230 | 6.231 | -0.001 | 52210303 | 50.0 | 47.8 | |
| | | | | | | RPD = 4.12 | |
| 24 Endosulfan I | | | | | | | |
| 1 | 5.544 | 5.548 | -0.004 | 58477602 | 50.0 | 43.8 | |
| 2 | 6.269 | 6.272 | -0.003 | 44147492 | 50.0 | 48.5 | |
| | | | | | | RPD = 10.12 | |
| 25 4,4'-DDE | | | | | | | |
| 1 | 5.715 | 5.718 | -0.003 | 66973902 | 50.0 | 46.6 | |
| 2 | 6.447 | 6.449 | -0.002 | 57798199 | 50.0 | 42.7 | |
| | | | | | | RPD = 8.73 | |
| 26 Dieldrin | | | | | | | |
| 1 | 5.827 | 5.832 | -0.005 | 58857879 | 50.0 | 49.2 | |
| 2 | 6.602 | 6.603 | -0.001 | 56673513 | 50.0 | 47.6 | |
| | | | | | | RPD = 3.20 | |
| 29 Endrin | | | | | | | |
| 1 | 6.181 | 6.184 | -0.003 | 59868182 | 50.0 | 46.6 | |
| 2 | 6.885 | 6.886 | -0.001 | 49545889 | 50.0 | 47.4 | |
| | | | | | | RPD = 1.65 | |
| 32 4,4'-DDD | | | | | | | |
| 1 | 6.387 | 6.391 | -0.004 | 55075888 | 50.0 | 47.3 | |
| 2 | 7.099 | 7.100 | -0.001 | 46184489 | 50.0 | 50.4 | |
| | | | | | | RPD = 6.35 | |
| 33 Endosulfan II | | | | | | | |
| 1 | 6.528 | 6.533 | -0.005 | 54478392 | 50.0 | 42.4 | |
| 2 | 7.210 | 7.213 | -0.003 | 42979849 | 50.0 | 44.9 | |
| | | | | | | RPD = 5.68 | |
| 34 4,4'-DDT | | | | | | | |
| 1 | 6.747 | 6.750 | -0.003 | 46620349 | 50.0 | 44.4 | |
| 2 | 7.462 | 7.464 | -0.002 | 39289033 | 50.0 | 49.4 | |
| | | | | | | RPD = 10.61 | |
| 35 Endrin aldehyde | | | | | | | |
| 1 | 6.832 | 6.836 | -0.004 | 41908915 | 50.0 | 40.6 | |
| 2 | 7.342 | 7.343 | -0.001 | 33625430 | 50.0 | 42.5 | |
| | | | | | | RPD = 4.56 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/mL | OnCol Amt ng/mL | Flags |
|---|---|---|---|---|---|---|---|
| 36 Endosulfan sulfate | | | | | | | |
| 1 | 7.082 | 7.084 | -0.002 | 55423725 | 50.0 | 45.5 | |
| 2 | 7.671 | 7.673 | -0.002 | 44045864 | 50.0 | 50.5 | |
| | | | | | | RPD = 10.31 | |
| 37 Methoxychlor | | | | | | | |
| 1 | 7.606 | 7.611 | -0.005 | 23349881 | 50.0 | 46.8 | |
| 2 | 7.978 | 7.981 | -0.003 | 19991384 | 50.0 | 47.9 | |
| | | | | | | RPD = 2.32 | |
| 38 Endrin ketone | | | | | | | |
| 1 | 7.766 | 7.770 | -0.004 | 58869658 | 50.0 | 46.6 | |
| 2 | 8.120 | 8.121 | -0.001 | 45980828 | 50.0 | 49.6 | |
| | | | | | | RPD = 6.21 | |
| $ 40 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 8.999 | 9.004 | -0.005 | 21069843 | 20.0 | 19.0 | |
| 2 | 9.865 | 9.869 | -0.004 | 18140560 | 20.0 | 17.9 | |
| | | | | | | RPD = 5.92 | |

## Reagents:

8081_IS_00010 Amount Added: 75.00 Units: uL Run Reagent

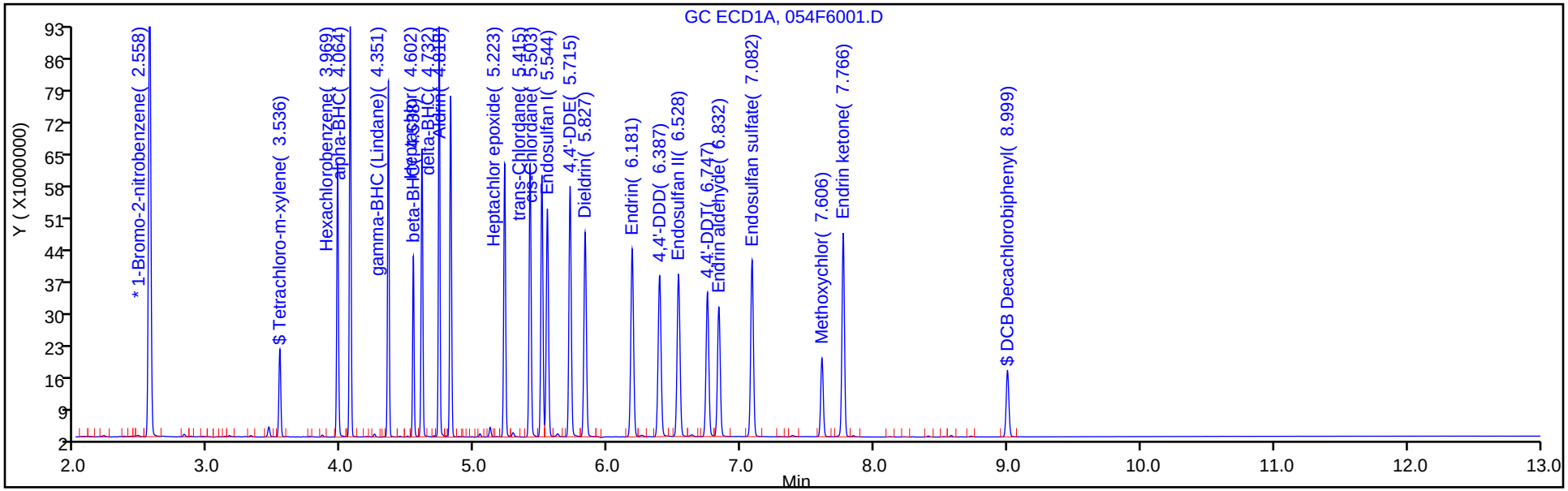
Report Date: 23-Jan-2019 11:17:11 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

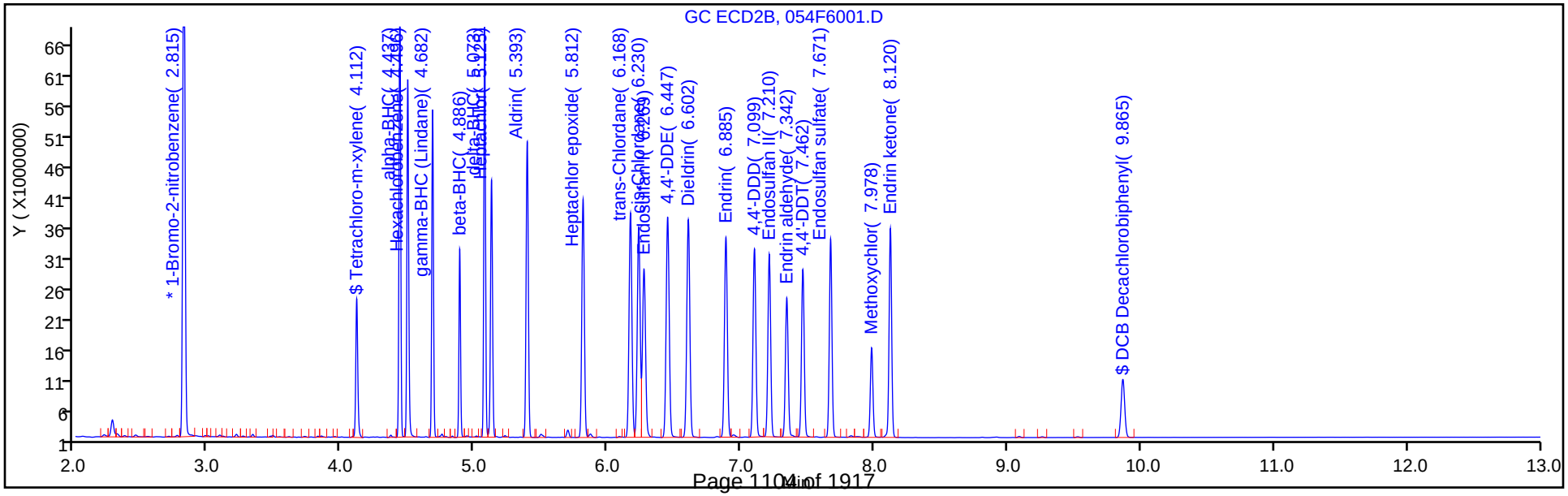
Data File: \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\054F6001.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-Jan-2019 01:55:06 | Instrument ID: | SGC_C | Operator ID: | TEB |
| Lims ID: | LCSD 280-444680/3-A | | | Worklist Smp#: | 77 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 54 |
| Method: | C 8081 IS | Limit Group: | GCSV - 8081A - IS | | |

Column: Rxi-35Sil MS ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3




Column: Rxi-XLB ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\054F6001.D | | | | |
| Lims ID: | LCSD 280-444680/3-A | | | | |
| Client ID: | | | | | |
| Sample Type: | LCSD | | | | |
| Inject. Date: | 23-Jan-2019 01:55:06 | ALS Bottle#: | 54 | Worklist Smp#: | 77 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | LCSD 280-444680/ | | | | |
| Operator ID: | TEB | Instrument ID: | SGC_C | | |
| Method: | \\chromna\Denver\ChromData\SGC_C\20190121-78230.b\C 8081 IS.m | | | | |
| Limit Group: | GCSV - 8081A - IS | | | | |
| Last Update: | 23-Jan-2019 11:16:36 | Calib Date: | 17-Jan-2019 18:56:49 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_C\20190118-78177.b\01170015.D | | | | |
| Column 1 : | Rxi-35Sil MS ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | Rxi-XLB ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0329 | | | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 17.0 | 85.22 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 19.0 | 94.98 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 3 Tetrachloro-m-xylene | 20.0 | 16.7 | 83.42 |
| $ 40 DCB Decachlorobiphenyl | 20.0 | 17.9 | 89.52 |

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_C Start Date: 01/21/2019 13:54

Analysis Batch Number: 444894 End Date: 01/23/2019 03:39

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| PEM 280-444894/7 | | 01/21/2019 13:54 | 1 | | Rxi-35Sil MS 0.32(mm) |
| PEM 280-444894/7 | | 01/21/2019 13:54 | 1 | | Rxi-XLB 0.32(mm) |
| CCV 280-444894/10 | | 01/21/2019 14:47 | 1 | | Rxi-35Sil MS 0.32(mm) |
| CCV 280-444894/10 | | 01/21/2019 14:47 | 1 | | Rxi-XLB 0.32(mm) |
| CCV 280-444894/11 | | 01/21/2019 15:04 | 1 | | Rxi-35Sil MS 0.32(mm) |
| CCV 280-444894/11 | | 01/21/2019 15:04 | 1 | | Rxi-XLB 0.32(mm) |
| CCV 280-444894/12 | | 01/21/2019 15:22 | 1 | | Rxi-35Sil MS 0.32(mm) |
| CCV 280-444894/12 | | 01/21/2019 15:22 | 1 | | Rxi-XLB 0.32(mm) |
| CCVIS 280-444894/13 | | 01/21/2019 15:39 | 1 | 01210013.D | Rxi-35Sil MS 0.32(mm) |
| CCVIS 280-444894/13 | | 01/21/2019 15:39 | 1 | 01210013.D | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/21/2019 15:57 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/21/2019 15:57 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/21/2019 16:15 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/21/2019 16:15 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/21/2019 16:32 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/21/2019 16:32 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/21/2019 16:50 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/21/2019 16:50 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/21/2019 17:07 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/21/2019 17:07 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/21/2019 17:25 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/21/2019 17:25 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/21/2019 17:42 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/21/2019 17:42 | 1 | | Rxi-XLB 0.32(mm) |
| CCV 280-444894/24 | | 01/21/2019 18:52 | 1 | | Rxi-35Sil MS 0.32(mm) |
| CCV 280-444894/24 | | 01/21/2019 18:52 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 14:51 | 100 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 14:51 | 100 | | Rxi-XLB 0.32(mm) |
| CCV 280-444894/25 | | 01/22/2019 15:43 | 1 | | Rxi-35Sil MS 0.32(mm) |
| CCV 280-444894/25 | | 01/22/2019 15:43 | 1 | | Rxi-XLB 0.32(mm) |
| CCV 280-444894/26 | | 01/22/2019 16:01 | 1 | | Rxi-35Sil MS 0.32(mm) |
| CCV 280-444894/26 | | 01/22/2019 16:01 | 1 | | Rxi-XLB 0.32(mm) |
| CCV 280-444894/27 | | 01/22/2019 16:18 | 1 | | Rxi-35Sil MS 0.32(mm) |
| CCV 280-444894/27 | | 01/22/2019 16:18 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 16:36 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 16:36 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 16:53 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 16:53 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 17:11 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 17:11 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 17:28 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 17:28 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 17:45 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 17:45 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 18:03 | 1 | | Rxi-35Sil MS 0.32(mm) |

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_C Start Date: 01/21/2019 13:54

Analysis Batch Number: 444894 End Date: 01/23/2019 03:39

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| ZZZZZ | | 01/22/2019 18:03 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 18:20 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 18:20 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 18:38 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 18:38 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 18:55 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 18:55 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 19:13 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 19:13 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 19:30 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 19:30 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 19:48 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 19:48 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 20:05 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 20:05 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 20:23 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 20:23 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 20:40 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 20:40 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 20:57 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 20:57 | 1 | | Rxi-XLB 0.32(mm) |
| CCV 280-444894/44 | | 01/22/2019 21:15 | 1 | | Rxi-35Sil MS 0.32(mm) |
| CCV 280-444894/44 | | 01/22/2019 21:15 | 1 | | Rxi-XLB 0.32(mm) |
| CCV 280-444894/45 | | 01/22/2019 21:32 | 1 | 039F4501.D | Rxi-35Sil MS 0.32(mm) |
| CCV 280-444894/45 | | 01/22/2019 21:32 | 1 | 039F4501.D | Rxi-XLB 0.32(mm) |
| CCV 280-444894/46 | | 01/22/2019 21:50 | 1 | | Rxi-35Sil MS 0.32(mm) |
| CCV 280-444894/46 | | 01/22/2019 21:50 | 1 | | Rxi-XLB 0.32(mm) |
| CCV 280-444894/47 | | 01/22/2019 22:07 | 1 | 041F4701.D | Rxi-35Sil MS 0.32(mm) |
| CCV 280-444894/47 | | 01/22/2019 22:07 | 1 | 041F4701.D | Rxi-XLB 0.32(mm) |
| PEM 280-444894/48 | | 01/22/2019 22:25 | 1 | 042F4801.D | Rxi-35Sil MS 0.32(mm) |
| PEM 280-444894/48 | | 01/22/2019 22:25 | 1 | 042F4801.D | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 22:42 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 22:42 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 23:00 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 23:00 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/22/2019 23:17 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/22/2019 23:17 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/23/2019 00:10 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/23/2019 00:10 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/23/2019 00:27 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/23/2019 00:27 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/23/2019 00:44 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/23/2019 00:44 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/23/2019 01:02 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/23/2019 01:02 | 1 | | Rxi-XLB 0.32(mm) |

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_C  Start Date: 01/21/2019 13:54

Analysis Batch Number: 444894  End Date: 01/23/2019 03:39

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| MB 280-444680/1-A | | 01/23/2019 01:19 | 1 | 052F5801.D | Rxi-35Sil MS 0.32(mm) |
| MB 280-444680/1-A | | 01/23/2019 01:19 | 1 | 052F5801.D | Rxi-XLB 0.32(mm) |
| LCS 280-444680/2-A | | 01/23/2019 01:37 | 1 | 053F5901.D | Rxi-35Sil MS 0.32(mm) |
| LCS 280-444680/2-A | | 01/23/2019 01:37 | 1 | 053F5901.D | Rxi-XLB 0.32(mm) |
| LCSD 280-444680/3-A | | 01/23/2019 01:55 | 1 | 054F6001.D | Rxi-35Sil MS 0.32(mm) |
| LCSD 280-444680/3-A | | 01/23/2019 01:55 | 1 | 054F6001.D | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/23/2019 02:12 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/23/2019 02:12 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/23/2019 02:30 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/23/2019 02:30 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/23/2019 02:47 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/23/2019 02:47 | 1 | | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/23/2019 03:04 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/23/2019 03:04 | 1 | | Rxi-XLB 0.32(mm) |
| 160-32649-1 | | 01/23/2019 03:22 | 1 | 059F6501.D | Rxi-35Sil MS 0.32(mm) |
| 160-32649-1 | | 01/23/2019 03:22 | 1 | 059F6501.D | Rxi-XLB 0.32(mm) |
| ZZZZZ | | 01/23/2019 03:39 | 1 | | Rxi-35Sil MS 0.32(mm) |
| ZZZZZ | | 01/23/2019 03:39 | 1 | | Rxi-XLB 0.32(mm) |

# PESTICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Batch Number: 444680  Batch Start Date: 01/18/19 12:03  Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C  Batch End Date: 01/21/19 19:20

| Lab Sample ID | Client Sample ID | Method Chain | Basis | GrossWeight | TareWeight | InitialAmount | FinalAmount | ReceivedpH | 8081 LCS 00460 |
|---|---|---|---|---|---|---|---|---|---|
| MB 280-444680/1 | | 3510C, 8081B | | | | 1000 mL | 10 mL | 7 SU | |
| LCS 280-444680/2 | | 3510C, 8081B | | | | 1000 mL | 10 mL | 7 SU | 1 mL |
| LCSD 280-444680/3 | | 3510C, 8081B | | | | 1000 mL | 10 mL | 7 SU | 1 mL |
| 160-32649-E-1 | CRC-MW-1-011519 | 3510C, 8081B | T | 1360.8 g | 393.1 g | 967.7 mL | 10 mL | 7 SU | |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | 8081/82 Surr 00106 | AnalysisComment | | | | |
|---|---|---|---|---|---|---|---|---|---|
| MB 280-444680/1 | | 3510C, 8081B | | 1 mL | | | | | |
| LCS 280-444680/2 | | 3510C, 8081B | | 1 mL | 8081 | | | | |
| LCSD 280-444680/3 | | 3510C, 8081B | | 1 mL | 8081 | | | | |
| 160-32649-E-1 | CRC-MW-1-011519 | 3510C, 8081B | T | 1 mL | CAT 1 | | | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# PESTICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Batch Number: 444680  Batch Start Date: 01/18/19 12:03  Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C  Batch End Date: 01/21/19 19:20

| Batch Notes | |
|---|---|
| Balance ID | 24750399 |
| Batch Comment | DV-OP-0006/0007; r2d2 @ 2x5.00 mL |
| Analyst ID - Concentration | CR |
| Concentration 1 Corrected Temperature | 88 Degrees C |
| Equipment ID - Concentration 1 | C |
| Exchange Solvent ID | Hexane_Cycl_00054 |
| Analyst ID - Extraction | KS |
| Method/Fraction | 3510C/8081A/8082 |
| Na2SO4 ID | 0000213903_00002 |
| NaCl ID | 184223 |
| Pipette/Syringe/Dispenser ID | 1n2s |
| Prep Solvent ID | MeCl2_Cycl_00422 |
| Prep Solvent Volume Used | 180 mL |
| Analyst ID - Spike Analyst | KS (trainer) + EB (trainee) |
| Analyst ID - Spike Witness Analyst | Reviewer: MM |
| Sufficient Volume for Batch QC | No |
| Concentration 1 Uncorrected Temperature | 87 Degrees C |
| Reagent Water ID | S. ELGA |

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Method 8082A

## Polychlorinated Biphenyls (PCBs) (GC) by Method 8082A

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): CLP2 ID: 0.32(mm)

| Client Sample ID | Lab Sample ID | TCX1 # | DCBP1 # |
|---|---|---|---|
| CRC-MW-1-011519 | 160-32649-1 | 87 | 41 |
| | MB 280-444887/1-A | 73 | 77 |
| | LCS 280-444887/2-A | 90 | 84 |
| | LCSD 280-444887/3-A | 93 | 88 |

| | QC LIMITS |
|---|---|
| TCX = Tetrachloro-m-xylene | 25-120 |
| DCBP = DCB Decachlorobiphenyl | 30-136 |

# Column to be used to flag recovery values

FORM II 8082A

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02040009.D

Lab ID: LCS 280-444887/2-A Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| PCB-1016 | 2.00 | 1.85 | 92 | 71-128 | |
| PCB-1260 | 2.00 | 1.92 | 96 | 75-126 | |

# Column to be used to flag recovery and RPD values

FORM III 8082A

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02040010.D

Lab ID: LCSD 280-444887/3-A Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| PCB-1016 | 2.00 | 1.85 | 93 | 0 | 30 | 71-128 | |
| PCB-1260 | 2.00 | 1.95 | 97 | 2 | 30 | 75-126 | |

# Column to be used to flag recovery and RPD values

FORM III 8082A

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: MB 280-444887/1-A

Matrix: Water  Date Extracted: 01/21/2019 11:30

Lab File ID:(1) 02040008.D  Lab File ID:(2) 02040008.D

Date Analyzed:(1) 02/05/2019 14:49  Date Analyzed:(2) 02/05/2019 14:49

Instrument ID:(1) SGC_J  Instrument ID:(2) SGC_J

GC Column:(1) CLP2 ID: 0.32(mm)  GC Column:(2) CLP1 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | DATE ANALYZED 1 | DATE ANALYZED 2 |
|---|---|---|---|
| | LCS 280-444887/2-A | 02/05/2019 15:11 | 02/05/2019 15:11 |
| | LCSD 280-444887/3-A | 02/05/2019 15:32 | 02/05/2019 15:32 |
| CRC-MW-1-011519 | 160-32649-1 | 02/05/2019 16:14 | 02/05/2019 16:14 |

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Sample No.: STD5 280-445745/23 Date Analyzed: 01/29/2019 21:55

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 01290023.D Heated Purge: (Y/N) N

Calibration ID: 35091

| | | BNB | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| INITIAL CALIBRATION MID-POINT | | 20507310 | 1.98 | | | | |
| UPPER LIMIT | | 41014620 | 2.48 | | | | |
| LOWER LIMIT | | 10253655 | 1.48 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICV 280-445745/26 | | 19116825 | 1.98 | | | | |
| ICV 280-445745/34 | | 17204313 | 1.98 | | | | |
| ICV 280-445745/42 | | 19419783 | 1.98 | | | | |

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Sample No.: STD5 280-445745/23 Date Analyzed: 01/29/2019 21:55

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 01290023.D Heated Purge: (Y/N) N

Calibration ID: 35092

| | | BNB | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| INITIAL CALIBRATION MID-POINT | | 113907969 | 1.79 | | | | |
| UPPER LIMIT | | 227815938 | 2.29 | | | | |
| LOWER LIMIT | | 56953985 | 1.29 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICV 280-445745/26 | | 106734485 | 1.79 | | | | |
| ICV 280-445745/34 | | 95342219 | 1.79 | | | | |
| ICV 280-445745/42 | | 105092238 | 1.79 | | | | |

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Sample No.: CCVIS 280-446463/5 Date Analyzed: 02/05/2019 13:46

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 02040005.D Heated Purge: (Y/N) N

Calibration ID: 35079

| | | BNB | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 17452101 | 1.97 | | | | |
| UPPER LIMIT | | 34904202 | 2.47 | | | | |
| LOWER LIMIT | | 8726051 | 1.47 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| MB 280-444887/1-A | | 15288773 | 1.98 | | | | |
| LCS 280-444887/2-A | | 17684531 | 1.98 | | | | |
| LCSD 280-444887/3-A | | 18878202 | 1.98 | | | | |
| 160-32649-1 | CRC-MW-1-011519 | 18989951 | 1.97 | | | | |

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Sample No.: CCVIS 280-446463/5 Date Analyzed: 02/05/2019 13:46

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 02040005.D Heated Purge: (Y/N) N

Calibration ID: 35080

| | | BNB | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 102812303 | 1.79 | | | | |
| UPPER LIMIT | | 205624606 | 2.29 | | | | |
| LOWER LIMIT | | 51406152 | 1.29 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| MB 280-444887/1-A | | 85555457 | 1.79 | | | | |
| LCS 280-444887/2-A | | 98778426 | 1.79 | | | | |
| LCSD 280-444887/3-A | | 104653224 | 1.79 | | | | |
| 160-32649-1 | CRC-MW-1-011519 | 104796641 | 1.79 | | | | |

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8082A

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-444887/2-A

Instrument ID (1): SGC_J Instrument ID (2): SGC_J

Date Analyzed (1): 02/05/2019 15:11 Date Analyzed (2): 02/05/2019 15:11

GC Column (1): CLP2 ID: 0.32(mm) GC Column (2): CLP1 ID: 0.32(mm)

| ANALYTE | COL | PEAK | RT | RT WINDOW | | CONCENTRATION | | RPD |
|---|---|---|---|---|---|---|---|---|
| | | | | FROM | TO | PEAK | MEAN | |
| PCB-1016 | 1 | 1 | 3.71 | 3.46 | 3.96 | 1.88 | 1.85 | 5.7 |
| | | 2 | 4.17 | 3.92 | 4.42 | 1.76 | | |
| | | 3 | 4.32 | 4.07 | 4.57 | 1.82 | | |
| | | 4 | 4.55 | 4.30 | 4.80 | 1.81 | | |
| | | 5 | 4.85 | 4.60 | 5.10 | 1.96 | | |
| | 2 | 1 | 3.28 | 3.03 | 3.53 | 2.07 | 1.95 | |
| | | 2 | 3.65 | 3.40 | 3.90 | 1.98 | | |
| | | 3 | 4.14 | 3.89 | 4.39 | 1.75 | | |
| | | 4 | 4.29 | 4.04 | 4.54 | 1.97 | | |
| | | 5 | 4.76 | 4.51 | 5.01 | 2.01 | | |
| PCB-1260 | 1 | 1 | 6.72 | 6.47 | 6.97 | 2.06 | 1.92 | 2.5 |
| | | 2 | 7.19 | 6.94 | 7.44 | 2.09 | | |
| | | 3 | 7.32 | 7.07 | 7.57 | 1.83 | | |
| | | 4 | 8.09 | 7.84 | 8.34 | 1.79 | | |
| | | 5 | 8.60 | 8.35 | 8.85 | 1.81 | | |
| | 2 | 1 | 6.28 | 6.03 | 6.53 | 2.23 | 1.97 | |
| | | 2 | 6.82 | 6.57 | 7.07 | 2.00 | | |
| | | 3 | 7.53 | 7.28 | 7.78 | 1.87 | | |
| | | 4 | 7.97 | 7.72 | 8.22 | 1.80 | | |
| | | 5 | 8.36 | 8.11 | 8.61 | 1.93 | | |

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-444887/3-A

Instrument ID (1): SGC_J Instrument ID (2): SGC_J

Date Analyzed (1): 02/05/2019 15:32 Date Analyzed (2): 02/05/2019 15:32

GC Column (1): CLP2 ID: 0.32(mm) GC Column (2): CLP1 ID: 0.32(mm)

| ANALYTE | COL | PEAK | RT | RT WINDOW | | CONCENTRATION | | RPD |
|---|---|---|---|---|---|---|---|---|
| | | | | FROM | TO | PEAK | MEAN | |
| PCB-1016 | 1 | 1 | 3.71 | 3.46 | 3.96 | 1.88 | 1.85 | 4.7 |
| | | 2 | 4.17 | 3.92 | 4.42 | 1.79 | | |
| | | 3 | 4.32 | 4.07 | 4.57 | 1.88 | | |
| | | 4 | 4.55 | 4.30 | 4.80 | 1.79 | | |
| | | 5 | 4.85 | 4.60 | 5.10 | 1.93 | | |
| | 2 | 1 | 3.29 | 3.03 | 3.53 | 2.08 | 1.94 | |
| | | 2 | 3.65 | 3.40 | 3.90 | 1.98 | | |
| | | 3 | 4.14 | 3.89 | 4.39 | 1.74 | | |
| | | 4 | 4.29 | 4.04 | 4.54 | 1.93 | | |
| | | 5 | 4.76 | 4.51 | 5.01 | 1.98 | | |
| PCB-1260 | 1 | 1 | 6.72 | 6.47 | 6.97 | 2.07 | 1.95 | 2.7 |
| | | 2 | 7.19 | 6.94 | 7.44 | 2.08 | | |
| | | 3 | 7.33 | 7.07 | 7.57 | 1.86 | | |
| | | 4 | 8.09 | 7.84 | 8.34 | 1.86 | | |
| | | 5 | 8.60 | 8.35 | 8.85 | 1.86 | | |
| | 2 | 1 | 6.28 | 6.03 | 6.53 | 2.20 | 2.00 | |
| | | 2 | 6.82 | 6.57 | 7.07 | 2.00 | | |
| | | 3 | 7.53 | 7.28 | 7.78 | 1.97 | | |
| | | 4 | 7.97 | 7.72 | 8.22 | 1.85 | | |
| | | 5 | 8.36 | 8.11 | 8.61 | 1.97 | | |

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: CRC-MW-1-011519 | Lab Sample ID: 160-32649-1

Matrix: Water | Lab File ID: 02040012.D

Analysis Method: 8082A | Date Collected: 01/15/2019 12:30

Extraction Method: 3510C | Date Extracted: 01/21/2019 11:30

Sample wt/vol: 983.6(mL) | Date Analyzed: 02/05/2019 16:14

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 446463 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 11104-28-2 | PCB-1221 | 0.22 | U | 1.0 | 0.22 |
| 12674-11-2 | PCB-1016 | 0.13 | U | 1.0 | 0.13 |
| 11141-16-5 | PCB-1232 | 0.17 | U | 1.0 | 0.17 |
| 53469-21-9 | PCB-1242 | 0.11 | U | 1.0 | 0.11 |
| 12672-29-6 | PCB-1248 | 0.093 | U | 1.0 | 0.093 |
| 11097-69-1 | PCB-1254 | 0.12 | U | 1.0 | 0.12 |
| 11096-82-5 | PCB-1260 | 0.16 | U | 1.0 | 0.16 |
| 37324-23-5 | PCB-1262 | 0.086 | U | 1.0 | 0.086 |
| 11100-14-4 | PCB-1268 | 0.37 | U | 1.0 | 0.37 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 877-09-8 | Tetrachloro-m-xylene | 87 | | 25-120 |
| 2051-24-3 | DCB Decachlorobiphenyl | 41 | | 30-136 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040012.D
Lims ID: 160-32649-G-1-A
Client ID: CRC-MW-1-011519
Sample Type: Client
Inject. Date: 05-Feb-2019 16:14:26 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 160-32649-G-1-A
Misc. Info.: 280-0078693-012
Operator ID: TEM Instrument ID: SGC_J

Method: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 06-Feb-2019 10:46:07 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0325

First Level Reviewer: mooret Date: 06-Feb-2019 10:46:07

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | |
| 1 | 1.973 | 1.973 | 0.000 | 18989951 | 100.0 | |
| 2 | 1.786 | 1.787 | -0.001 | 104796641 | 100.0 | |
| | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | |
| 1 | 2.890 | 2.890 | 0.000 | 13290795 | 16.7 | |
| 2 | 2.816 | 2.817 | -0.001 | 34702749 | 17.4 | |
| | | | | | RPD = 3.86 | |
| 3 PCB-1221 | | | | | | U |
| 1 | | 3.100 | | | ND | |
| 1 | | 3.243 | | | | |
| 1 | | 3.283 | | | | |
| 2 | | 3.130 | | | | |
| 2 | | 3.260 | | | | |
| 2 | | 3.316 | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|
| 1 | PCB-1016 | | | | | U |
| 1 | | 3.283 | | | ND | |
| 1 | | 3.650 | | | | |
| 1 | | 4.140 | | | | |
| 1 | | 4.286 | | | | |
| 1 | | 4.760 | | | | |
| 2 | | 3.710 | | | | |
| 2 | | 4.173 | | | | |
| 2 | | 4.317 | | | | |
| 2 | | 4.553 | | | | |
| 2 | | 4.847 | | | | |
| 7 | PCB-1232 | | | | | U |
| 1 | | 3.284 | | | ND | |
| 1 | | 3.651 | | | | |
| 1 | | 4.137 | | | | |
| 1 | | 4.287 | | | | |
| 1 | | 4.757 | | | | |
| 2 | | 3.314 | | | | |
| 2 | | 3.711 | | | | |
| 2 | | 4.171 | | | | |
| 2 | | 4.317 | | | | |
| 2 | | 4.844 | | | | |
| 10 | PCB-1242 | | | | | U |
| 1 | | 3.650 | | | ND | |
| 1 | | 4.140 | | | | |
| 1 | | 4.757 | | | | |
| 1 | | 5.274 | | | | |
| 1 | | 5.290 | | | | |
| 2 | | 3.710 | | | | |
| 2 | | 4.170 | | | | |
| 2 | | 4.317 | | | | |
| 2 | | 4.844 | | | | |
| 2 | | 4.984 | | | | |
| 4 | PCB-1248 | | | | | U |
| 1 | | 4.522 | | | ND | |
| 1 | | 4.759 | | | | |
| 1 | | 4.855 | | | | |
| 1 | | 5.535 | | | | |
| 1 | | 6.039 | | | | |
| 2 | | 4.169 | | | | |
| 2 | | 4.549 | | | | |
| 2 | | 4.845 | | | | |
| 2 | | 4.985 | | | | |
| 2 | | 6.169 | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | U |
| 1 | | 5.540 | | | ND | |
| 1 | | 5.883 | | | | |
| 1 | | 6.040 | | | | |
| 1 | | 6.406 | | | | |
| 1 | | 7.030 | | | | |
| 2 | | 5.593 | | | | |
| 2 | | 6.020 | | | | |
| 2 | | 6.166 | | | | |
| 2 | | 6.720 | | | | |
| 2 | | 7.193 | | | | |
| 12 PCB-1260 | | | | | | U |
| 1 | | 6.283 | | | ND | |
| 1 | | 6.823 | | | | |
| 1 | | 7.526 | | | | |
| 1 | | 7.970 | | | | |
| 1 | | 8.360 | | | | |
| 2 | | 6.720 | | | | |
| 2 | | 7.190 | | | | |
| 2 | | 7.323 | | | | |
| 2 | | 8.090 | | | | |
| 2 | | 8.597 | | | | |
| 5 PCB-1262 | | | | | | U |
| 1 | | 6.657 | | | ND | |
| 1 | | 7.194 | | | | |
| 1 | | 7.527 | | | | |
| 1 | | 7.971 | | | | |
| 1 | | 8.361 | | | | |
| 2 | | 6.721 | | | | |
| 2 | | 7.324 | | | | |
| 2 | | 7.724 | | | | |
| 2 | | 8.091 | | | | |
| 2 | | 8.597 | | | | |
| 13 PCB-1268 | | | | | | U |
| 1 | | 8.423 | | | ND | |
| 1 | | 8.473 | | | | |
| 1 | | 8.747 | | | | |
| 1 | | 8.867 | | | | |
| 1 | | 9.680 | | | | |
| 2 | | 8.594 | | | | |
| 2 | | 8.654 | | | | |
| 2 | | 9.010 | | | | |
| 2 | | 9.150 | | | | |
| 2 | | 9.907 | | | | |
| $ 15 DCB Decachlorobiphenyl | | | | | | |
| 1 | 9.953 | 9.953 | 0.000 | 4870207 | 7.94 | |
| 2 | 10.273 | 10.273 | 0.000 | 13972617 | 8.11 | |
| | | | | | RPD = 2.07 | |

## QC Flag Legend

Review Flags

U - Marked Undetected

## Reagents:

| | | | | |
|---|---|---|---|---|
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

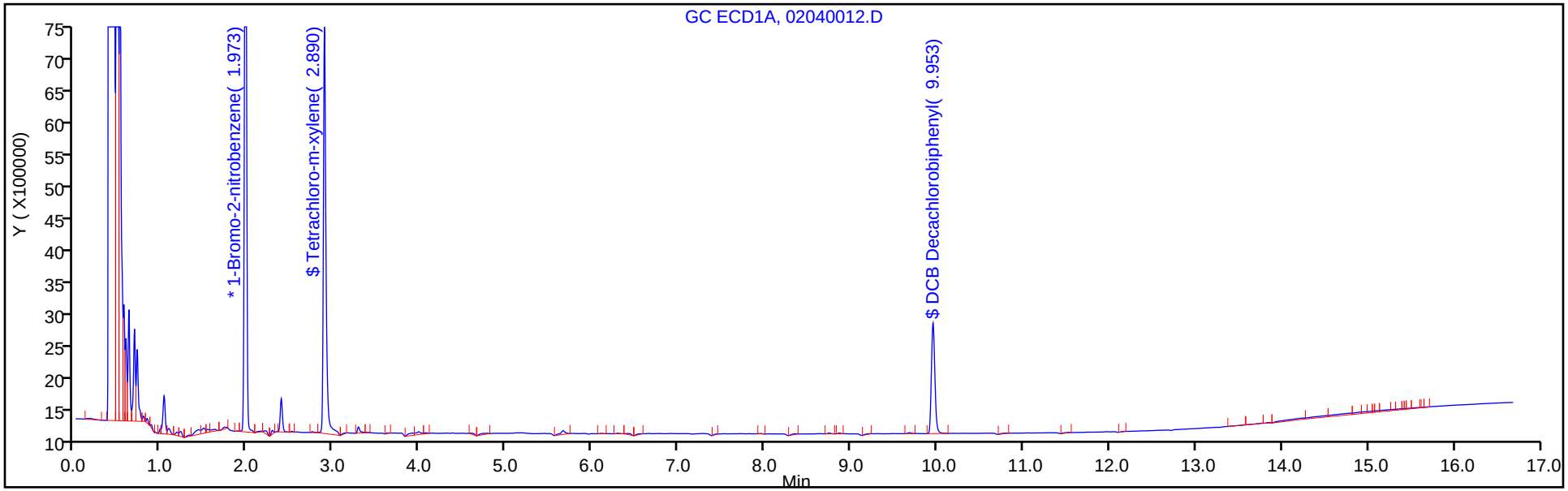
Report Date: 06-Feb-2019 10:46:35 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

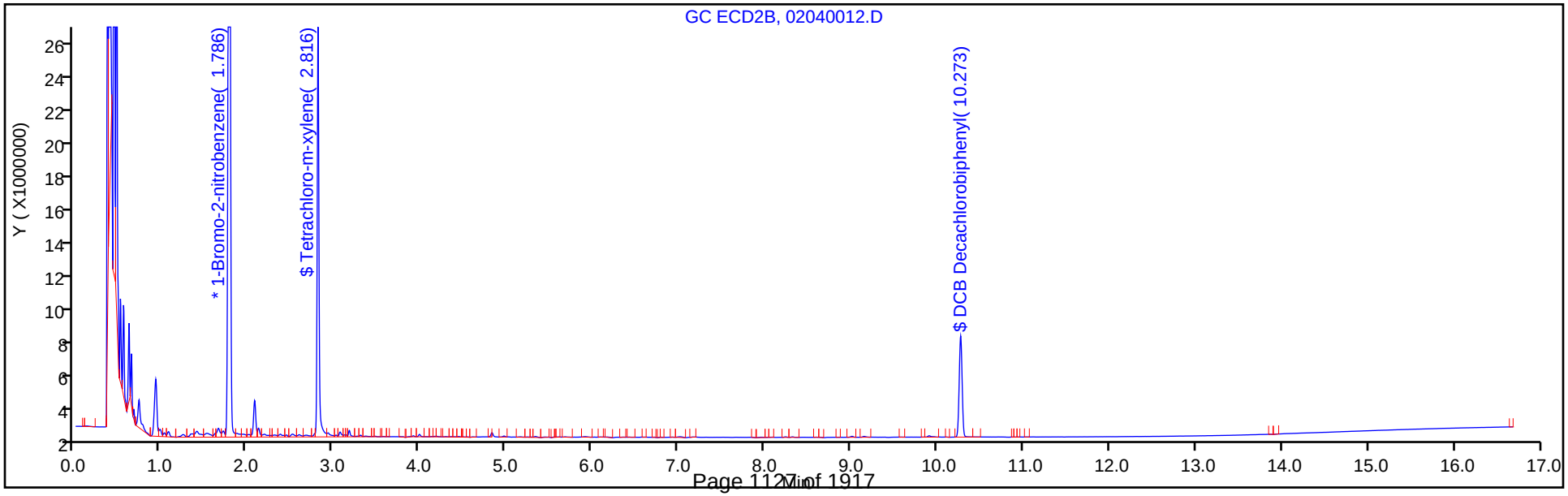
Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040012.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Feb-2019 16:14:26 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | 160-32649-G-1-A | Lab Sample ID: | 280-32649-1 | Worklist Smp#: | 12 |
| Client ID: | CRC-MW-1-011519 | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 12 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040012.D | | | | |
| Lims ID: | 160-32649-G-1-A | | | | |
| Client ID: | CRC-MW-1-011519 | | | | |
| Sample Type: | Client | | | | |
| Inject. Date: | 05-Feb-2019 16:14:26 | ALS Bottle#: | 12 | Worklist Smp#: | 12 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | 160-32649-G-1-A | | | | |
| Misc. Info.: | 280-0078693-012 | | | | |
| Operator ID: | TEM | Instrument ID: | SGC_J | | |
| Method: | \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\8082_J.m | | | | |
| Limit Group: | GCSV - 8082 - IS | | | | |
| Last Update: | 06-Feb-2019 10:46:07 | Calib Date: | 30-Jan-2019 04:15:34 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D | | | | |
| Column 1 : | CLP1 Pesticides Column 1 ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | CLP2 Pesticides Column 2 ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0325 | | | | |
| First Level Reviewer: mooret | | Date: | 06-Feb-2019 10:46:07 | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 14 Tetrachloro-m-xylene | 20.0 | 16.7 | 83.75 |
| $ 15 DCB Decachlorobiphenyl | 20.0 | 7.94 | 39.70 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 14 Tetrachloro-m-xylene | 20.0 | 17.4 | 87.04 |
| $ 15 DCB Decachlorobiphenyl | 20.0 | 8.11 | 40.53 |

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP1  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 14:54  Calibration End Date: 01/29/2019 17:00  Calibration ID: 35083

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/3 | 01290003.D |
| Level 2 | STD2 280-445745/4 | 01290004.D |
| Level 3 | STD3 280-445745/5 | 01290005.D |
| Level 4 | STD4 280-445745/6 | 01290006.D |
| Level 5 | STD5 280-445745/7 | 01290007.D |
| Level 6 | STD6 280-445745/8 | 01290008.D |
| Level 7 | STD7 280-445745/9 | 01290009.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| PCB-1248 Peak 1 | 0.2741<br>0.2009 | 0.2709<br>0.1933 | 0.2507 | 0.2399 | 0.2131 | Lin1 | 3.1311 | 0.1997 | | | | | | | 0.9950 | | 0.9900 |
| PCB-1248 Peak 2 | 0.2311<br>0.1877 | 0.2373<br>0.1796 | 0.2205 | 0.2104 | 0.1984 | Lin1 | 2.0931 | 0.1859 | | | | | | | 0.9970 | | 0.9900 |
| PCB-1248 Peak 3 | 0.1149<br>0.1057 | 0.1190<br>0.1031 | 0.1153 | 0.1144 | 0.1094 | Lin1 | 0.5530 | 0.1055 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1248 Peak 4 | 0.1483<br>0.1264 | 0.1445<br>0.1181 | 0.1420 | 0.1478 | 0.1340 | Lin1 | 1.1030 | 0.1249 | | | | | | | 0.9940 | | 0.9900 |
| PCB-1248 Peak 5 | 0.0947<br>0.0853 | 0.0891<br>0.0832 | 0.0924 | 0.0943 | 0.0897 | Lin1 | 0.3753 | 0.0856 | | | | | | | 0.9980 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP1  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 14:54  Calibration End Date: 01/29/2019 17:00  Calibration ID: 35083

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/3 | 01290003.D |
| Level 2 | STD2 280-445745/4 | 01290004.D |
| Level 3 | STD3 280-445745/5 | 01290005.D |
| Level 4 | STD4 280-445745/6 | 01290006.D |
| Level 5 | STD5 280-445745/7 | 01290007.D |
| Level 6 | STD6 280-445745/8 | 01290008.D |
| Level 7 | STD7 280-445745/9 | 01290009.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1248 Peak 1 | BNB | Lin1 | 1163827<br>27736945 | 2266683<br>35853709 | 4240796 | 10590722 | 18857597 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1248 Peak 2 | BNB | Lin1 | 981347<br>25906293 | 1985725<br>33304383 | 3730445 | 9286249 | 17551899 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1248 Peak 3 | BNB | Lin1 | 487917<br>14594133 | 995524<br>19127578 | 1949790 | 5049650 | 9676529 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1248 Peak 4 | BNB | Lin1 | 629616<br>17442778 | 1209560<br>21903990 | 2401447 | 6522540 | 11855327 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1248 Peak 5 | BNB | Lin1 | 401944<br>11771745 | 745755<br>15423807 | 1562529 | 4162761 | 7933541 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290003.D
Lims ID: STDL1 1248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Jan-2019 14:54:21 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL1 1248
Misc. Info.: 280-0078470-003
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:52 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 10:24:44

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.975 | 0.001 | 16982149 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.788 | 0.002 | 102558174 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | |
| 1 | 4.523 | 4.528 | -0.005 | 1163827 | 25.0 | 18.6 | |
| 1 | 4.759 | 4.761 | -0.002 | 981347 | 25.0 | 19.8 | |
| 1 | 4.859 | 4.861 | -0.002 | 487917 | 25.0 | 22.0 | |
| 1 | 5.543 | 5.541 | 0.002 | 629616 | 25.0 | 20.8 | |
| 1 | 6.043 | 6.045 | -0.002 | 401944 | 25.0 | 23.3 | |
| | | Average of Peak Amounts = | | | | 20.9 | |
| 2 | 4.173 | 4.175 | -0.002 | 2748219 | 25.0 | 19.4 | |
| 2 | 4.556 | 4.555 | 0.001 | 1657466 | 25.0 | 17.8 | |
| 2 | 4.850 | 4.851 | -0.001 | 2371071 | 25.0 | 22.7 | |
| 2 | 4.990 | 4.991 | -0.001 | 2513977 | 25.0 | 18.0 | |
| 2 | 6.173 | 6.175 | -0.002 | 1553798 | 25.0 | 17.2 | |
| | | Average of Peak Amounts = | | | | 19.0 | |
| | | | | | | RPD = 9.45 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 20.9 | |
| 2 | | | | | | 19.0 | |
| | | | | | | RPD = 9.45 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 0.03 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

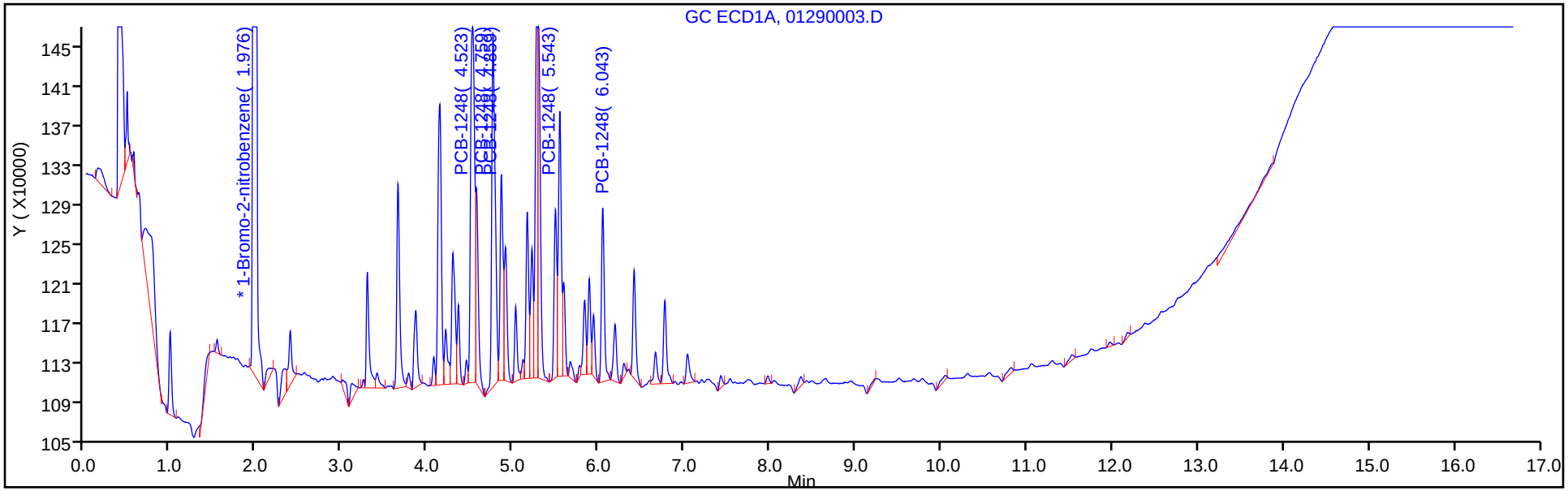
Report Date: 30-Jan-2019 14:59:53 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

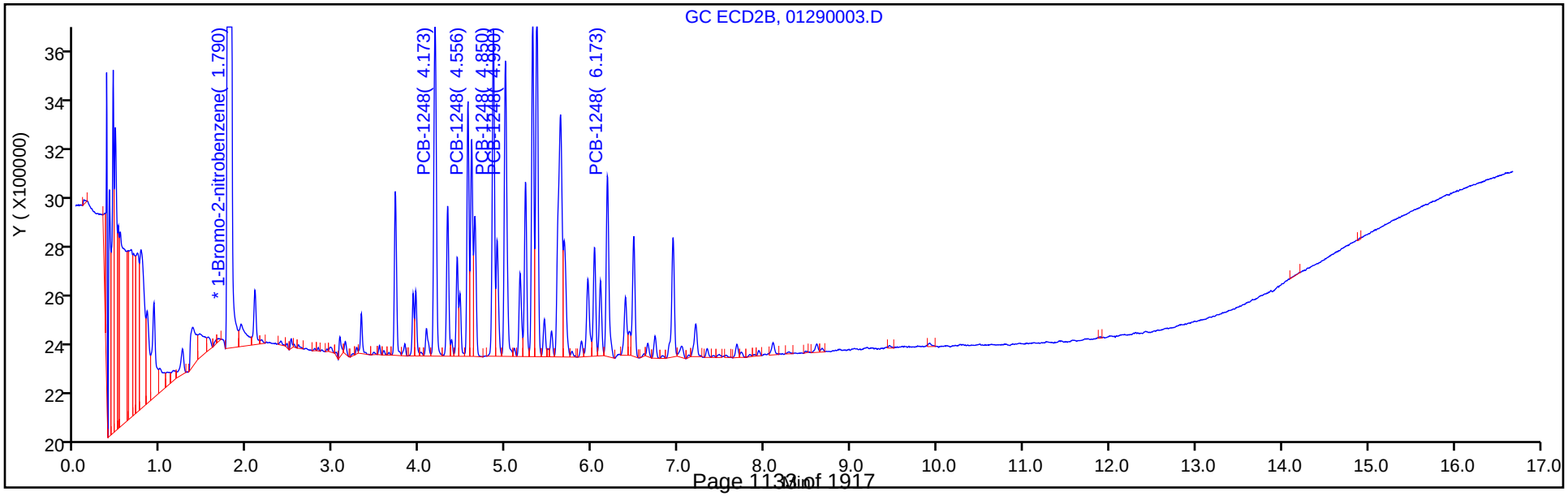
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290003.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 14:54:21 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STDL1 1248 | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 3 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290004.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Jan-2019 15:15:24 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0078470-004
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:50 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:19:15

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.975 | 0.002 | 16736886 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.788 | 0.002 | 100380199 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | |
| 1 | 4.524 | 4.528 | -0.004 | 2266683 | 50.0 | 52.1 | |
| 1 | 4.760 | 4.761 | -0.001 | 1985725 | 50.0 | 52.6 | |
| 1 | 4.857 | 4.861 | -0.004 | 995524 | 50.0 | 51.1 | |
| 1 | 5.540 | 5.541 | -0.001 | 1209560 | 50.0 | 49.0 | |
| 1 | 6.043 | 6.045 | -0.002 | 745755 | 50.0 | 47.7 | |
| | | Average of Peak Amounts = | | | | 50.5 | |
| 2 | 4.174 | 4.175 | -0.001 | 4949630 | 50.0 | 52.4 | |
| 2 | 4.557 | 4.555 | 0.002 | 2949575 | 50.0 | 52.1 | |
| 2 | 4.850 | 4.851 | -0.001 | 4239416 | 50.0 | 53.0 | |
| 2 | 4.990 | 4.991 | -0.001 | 4580946 | 50.0 | 53.6 | |
| 2 | 6.174 | 6.175 | -0.001 | 2907338 | 50.0 | 53.7 | |
| | | Average of Peak Amounts = | | | | 52.9 | |
| | | | | | | RPD = 4.71 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 50.5 | |
| 2 | | | | | | 52.9 | |
| | | | | | | RPD = 4.71 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 0.05 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

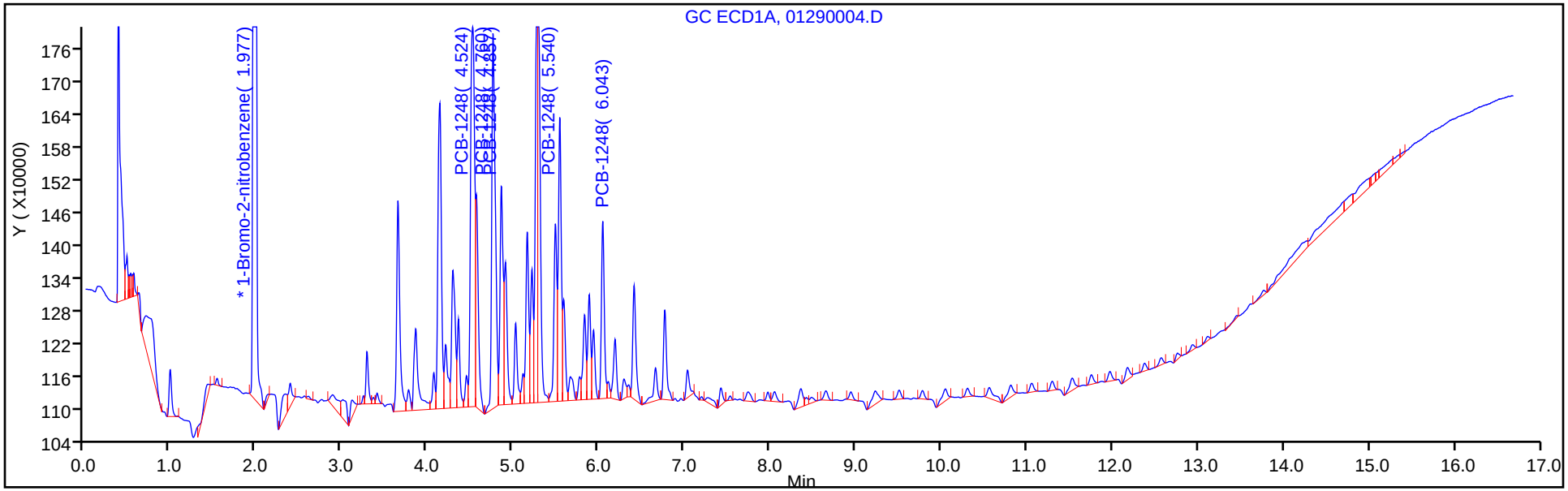
Report Date: 30-Jan-2019 14:59:50 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

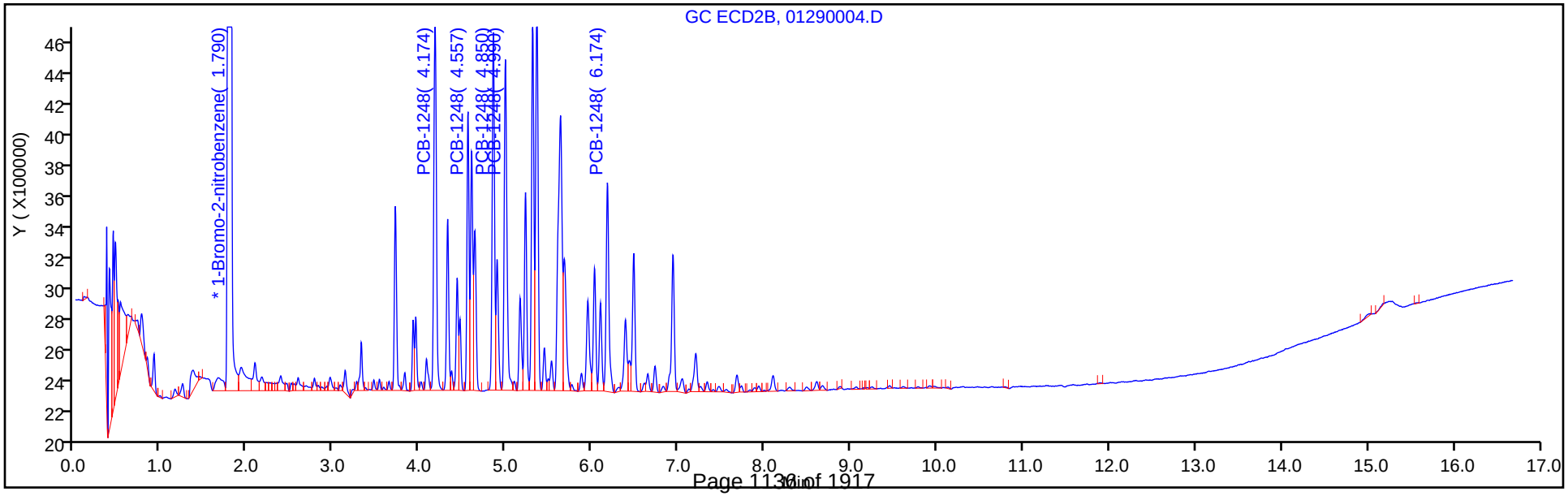
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290004.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 15:15:24 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD2 | | | Worklist Smp#: | 4 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 4 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290005.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Jan-2019 15:36:28 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0078470-005
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:48 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:19:29

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.975 | 0.003 | 16917073 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.788 | 0.000 | 100351458 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | |
| 1 | 4.524 | 4.528 | -0.004 | 4240796 | 100.0 | 109.9 | |
| 1 | 4.761 | 4.761 | 0.000 | 3730445 | 100.0 | 107.4 | |
| 1 | 4.858 | 4.861 | -0.003 | 1949790 | 100.0 | 104.0 | |
| 1 | 5.541 | 5.541 | 0.000 | 2401447 | 100.0 | 104.8 | |
| 1 | 6.044 | 6.045 | -0.001 | 1562529 | 100.0 | 103.5 | |
| | | Average of Peak Amounts = | | | | 105.9 | |
| 2 | 4.174 | 4.175 | -0.001 | 8848809 | 100.0 | 109.3 | |
| 2 | 4.554 | 4.555 | -0.001 | 5311539 | 100.0 | 113.1 | |
| 2 | 4.851 | 4.851 | 0.000 | 7421848 | 100.0 | 104.1 | |
| 2 | 4.991 | 4.991 | 0.000 | 8043947 | 100.0 | 111.7 | |
| 2 | 6.174 | 6.175 | -0.001 | 5181312 | 100.0 | 113.7 | |
| | | Average of Peak Amounts = | | | | 110.4 | |
| | | | | | | RPD = 4.11 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 105.9 | |
| 2 | | | | | | 110.4 | |
| | | | | | | RPD = 4.11 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 0.10 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

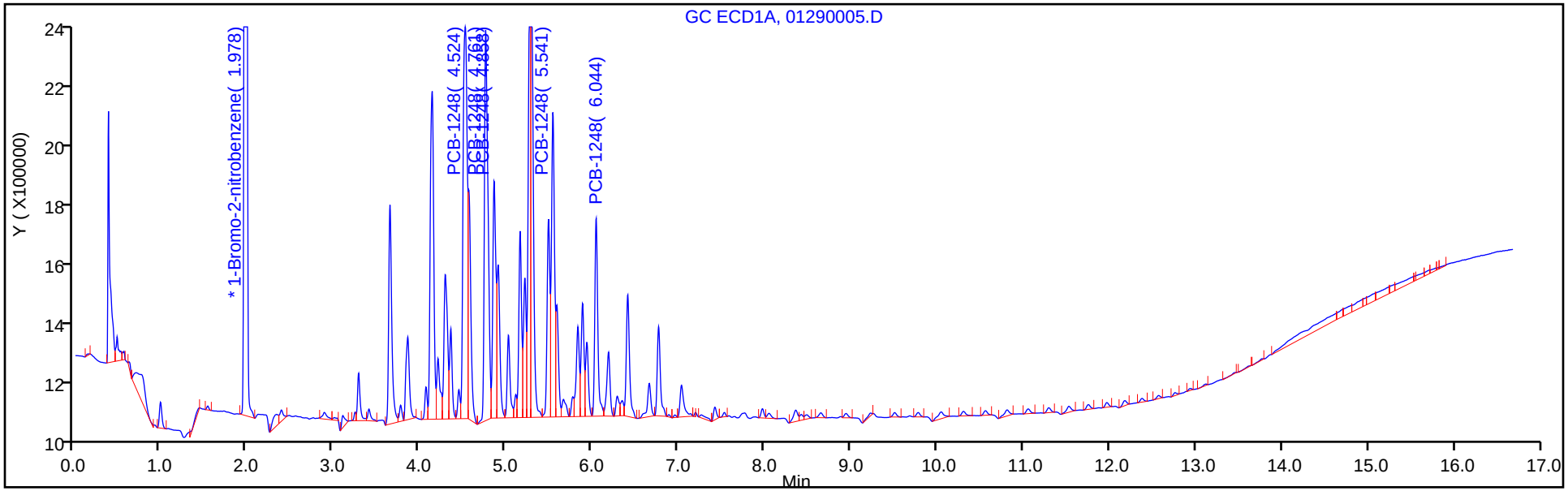
Report Date: 30-Jan-2019 14:59:48 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

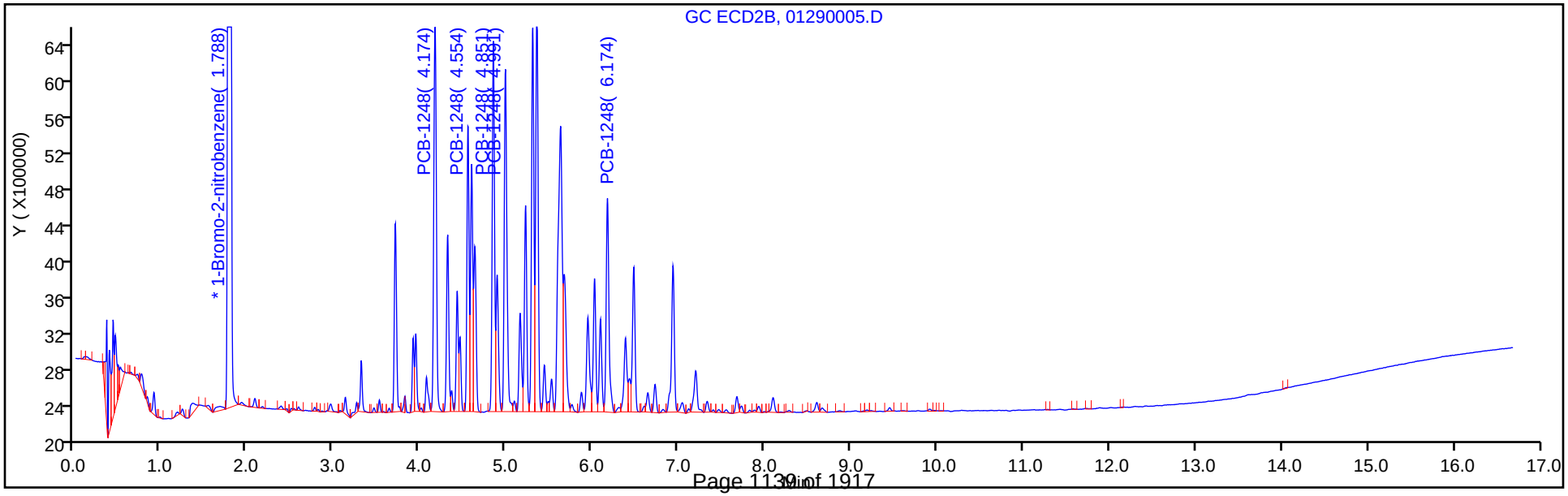
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290005.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 15:36:28 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD3 | | | Worklist Smp#: | 5 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 5 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290006.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Jan-2019 15:57:37 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0078470-006
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:46 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 10:20:52

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.975 | 0.000 | 17656818 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.788 | 0.001 | 104102185 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | M |
| 1 | 4.525 | 4.528 | -0.003 | 10590722 | 250.0 | 284.7 | M |
| 1 | 4.762 | 4.761 | 0.001 | 9286249 | 250.0 | 271.7 | M |
| 1 | 4.859 | 4.861 | -0.002 | 5049650 | 250.0 | 265.9 | |
| 1 | 5.542 | 5.541 | 0.001 | 6522540 | 250.0 | 286.8 | |
| 1 | 6.045 | 6.045 | 0.000 | 4162761 | 250.0 | 271.0 | |
| | | Average of Peak Amounts = | | | | 276.0 | |
| 2 | 4.176 | 4.175 | 0.001 | 20829423 | 250.0 | 273.1 | |
| 2 | 4.556 | 4.555 | 0.001 | 12340855 | 250.0 | 283.3 | |
| 2 | 4.852 | 4.851 | 0.001 | 16893460 | 250.0 | 252.8 | |
| 2 | 4.992 | 4.991 | 0.001 | 18586781 | 250.0 | 277.2 | |
| 2 | 6.176 | 6.175 | 0.001 | 11892704 | 250.0 | 279.2 | |
| | | Average of Peak Amounts = | | | | 273.1 | |
| | | | | | | RPD = 1.06 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 276.0 | |
| 2 | | | | | | 273.1 | |
| | | | | | | RPD = 1.06 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 0.25 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

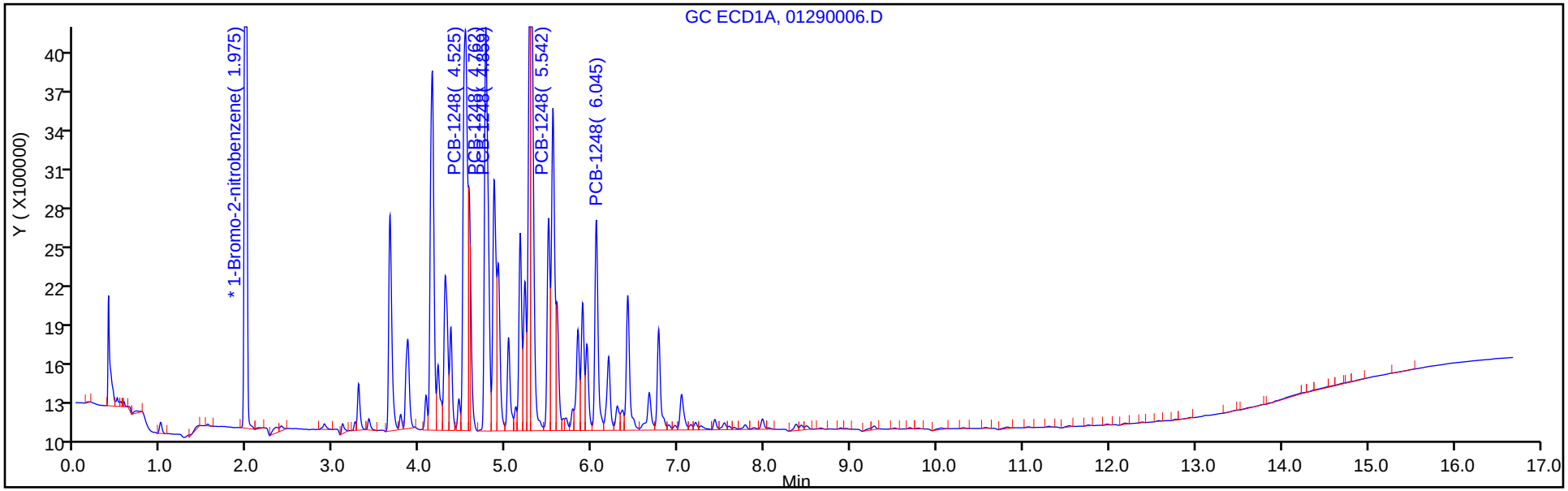
Report Date: 30-Jan-2019 14:59:46 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

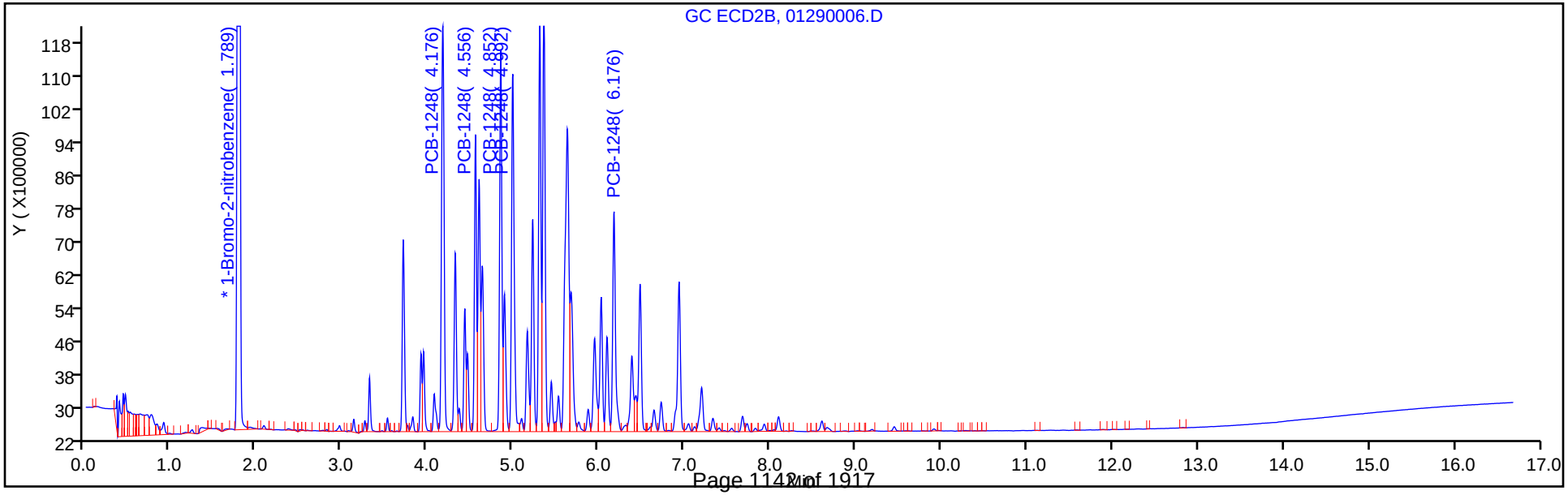
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290006.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 15:57:37 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD4 | | | Worklist Smp#: | 6 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 6 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:59:46 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290006.D

Injection Date: 29-Jan-2019 15:57:37 Instrument ID: SGC_J

Lims ID: STD4

Client ID:

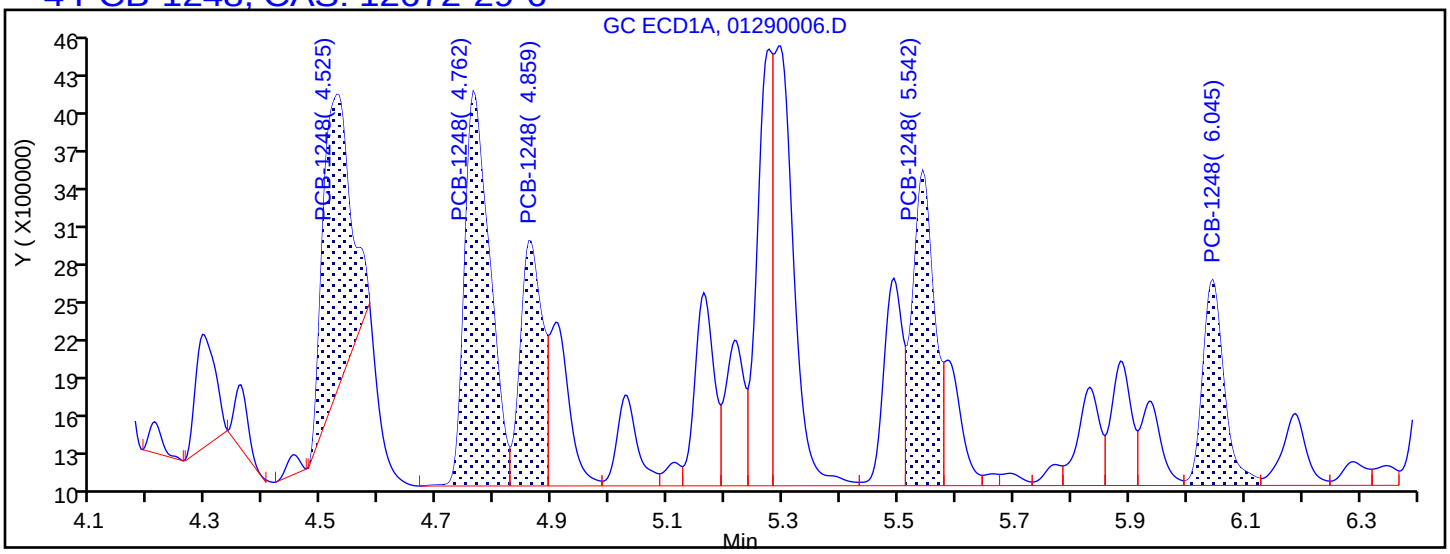
Operator ID: TEM ALS Bottle#: 6 Worklist Smp#: 6

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

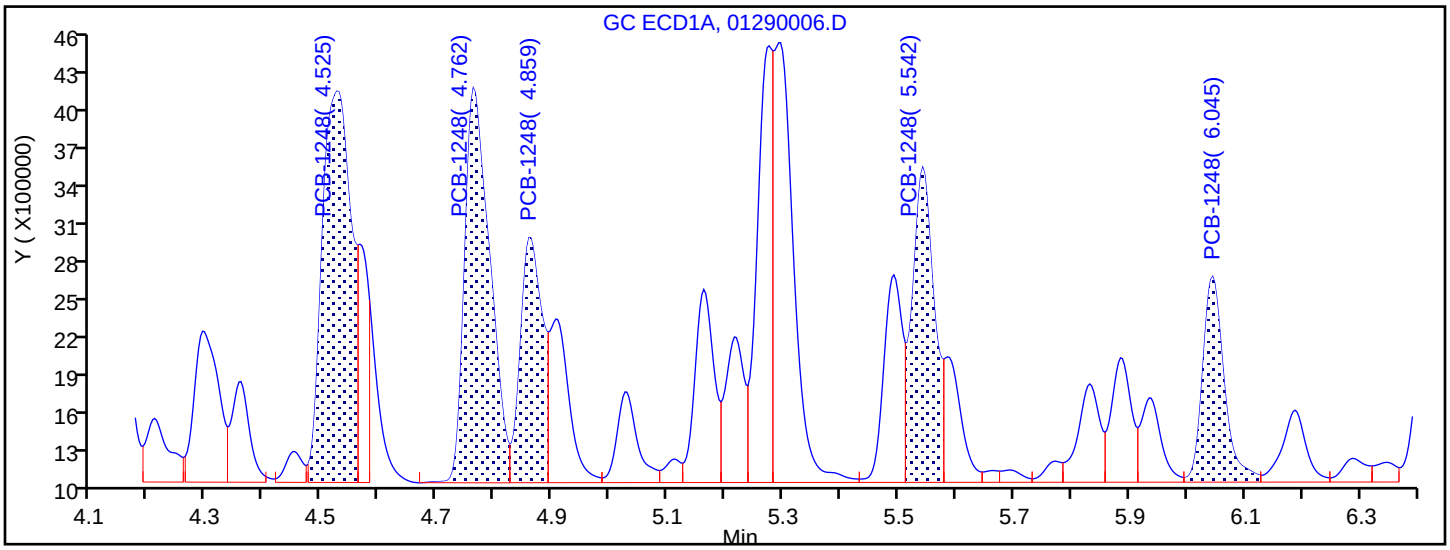
Column: CLP1 Pesticides Column 1 ( 0.32 mm) Detector GC ECD1A

## 4 PCB-1248, CAS: 12672-29-6




Processing Integration Results

| | |
|---|---|
| 4.525 | Response = 7722637 |
| 4.762 | Response = 9283612 |
| 4.859 | Response = 5049650 |
| 5.542 | Response = 6522540 |
| 6.045 | Response = 4162761 |




Manual Integration Results

| | | |
|---|---|---|
| 4.525 | Response = 10590722 | M |
| 4.762 | Response = 9286249 | M |
| 4.859 | Response = 5049650 | |
| 5.542 | Response = 6522540 | |
| 6.045 | Response = 4162761 | |

Reviewer: mooret, 30-Jan-2019 11:44:26

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290007.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 29-Jan-2019 16:18:40 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0078470-007
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:43 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:22:01

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.975 | 0.000 | 17694680 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.788 | 0.000 | 103772524 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | M |
| 1 | 4.528 | 4.528 | 0.000 | 18857597 | 500.0 | 518.0 | M |
| 1 | 4.761 | 4.761 | 0.000 | 17551899 | 500.0 | 522.4 | |
| 1 | 4.861 | 4.861 | 0.000 | 9676529 | 500.0 | 513.1 | |
| 1 | 5.541 | 5.541 | 0.000 | 11855327 | 500.0 | 527.4 | |
| 1 | 6.045 | 6.045 | 0.000 | 7933541 | 500.0 | 519.4 | |
| | | Average of Peak Amounts = | | | | 520.1 | |
| 2 | 4.175 | 4.175 | 0.000 | 38272064 | 500.0 | 520.1 | |
| 2 | 4.555 | 4.555 | 0.000 | 22021490 | 500.0 | 526.3 | |
| 2 | 4.851 | 4.851 | 0.000 | 30313300 | 500.0 | 492.4 | |
| 2 | 4.991 | 4.991 | 0.000 | 33411377 | 500.0 | 518.6 | |
| 2 | 6.175 | 6.175 | 0.000 | 21533148 | 500.0 | 525.8 | |
| | | Average of Peak Amounts = | | | | 516.6 | |
| | | | | | | RPD = 0.67 | |

## QC Flag Legend

Review Flags
M - Manually Integrated

## Reagents:

AR_1248_L7_00018 Amount Added: 0.50 Units: mL
BNB IS_00013 Amount Added: 0.10 Units: mL Run Reagent

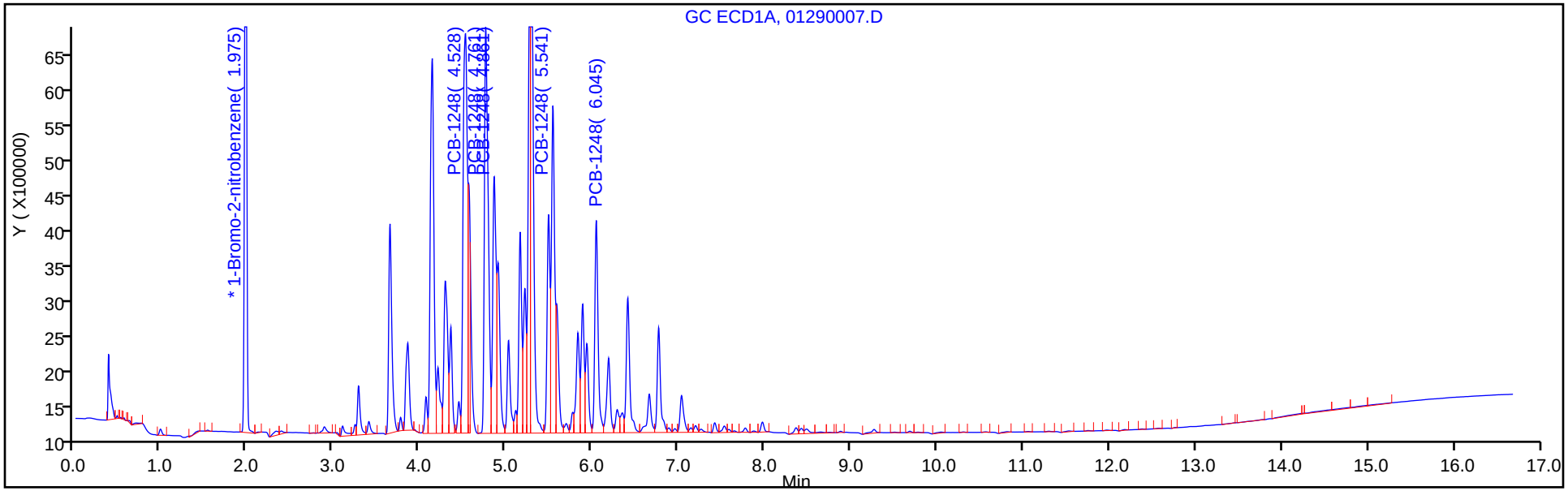
Report Date: 30-Jan-2019 14:59:44 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

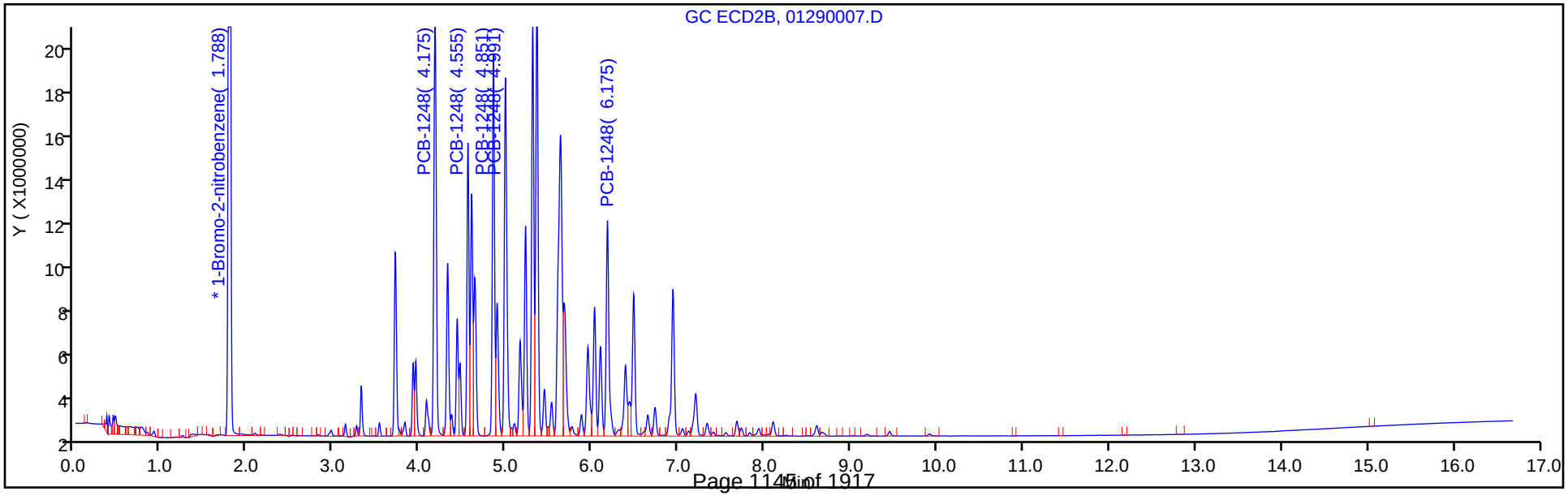
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290007.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 16:18:40 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD5 | | | Worklist Smp#: | 7 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 7 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:59:44 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290007.D

Injection Date: 29-Jan-2019 16:18:40 Instrument ID: SGC_J

Lims ID: STD5

Client ID:

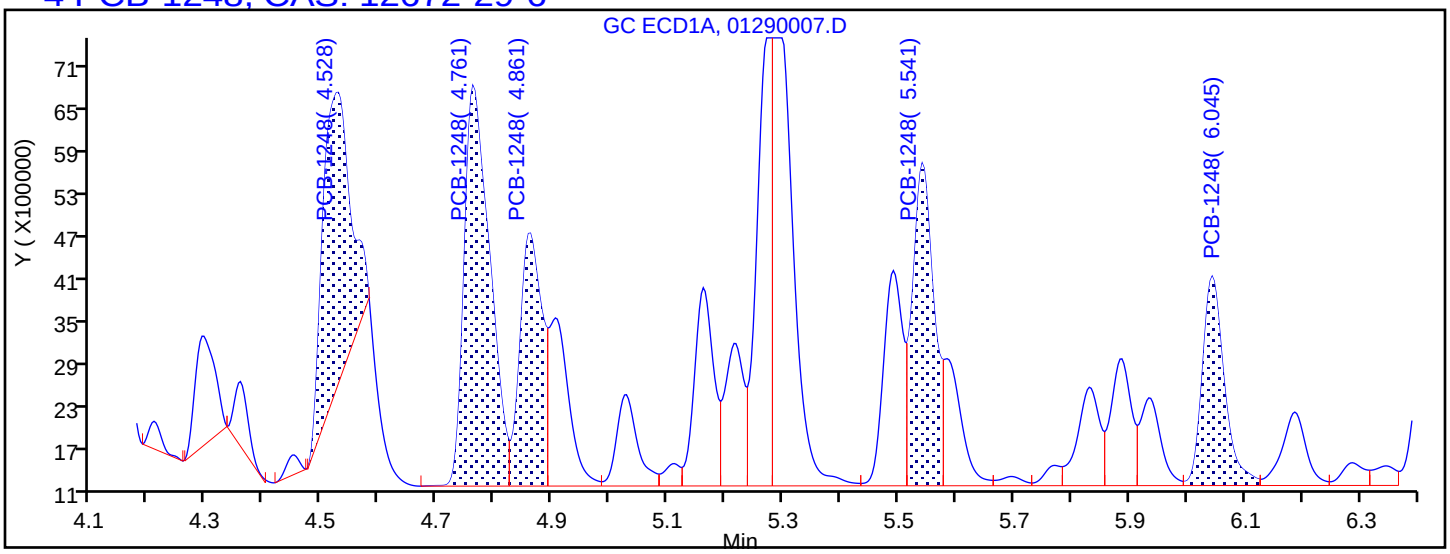
Operator ID: TEM ALS Bottle#: 7 Worklist Smp#: 7

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

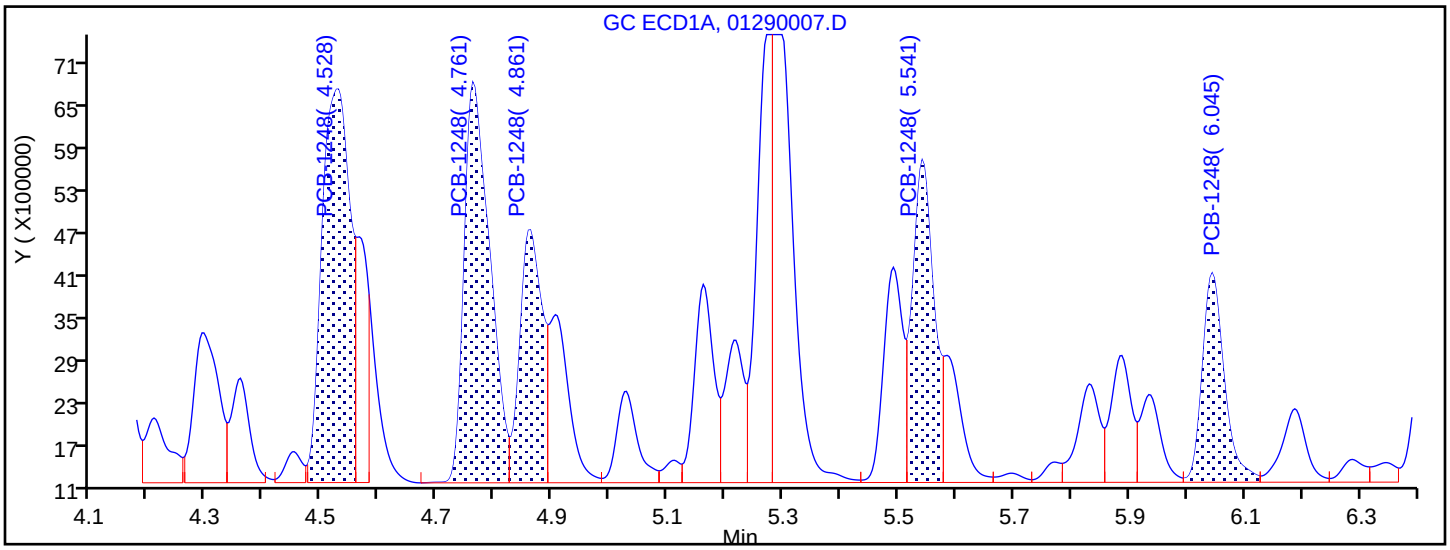
Column: CLP1 Pesticides Column 1 ( 0.32 mm) Detector GC ECD1A

## 4 PCB-1248, CAS: 12672-29-6




Processing Integration Results

| | |
|---|---|
| 4.528 | Response = 14154129 |
| 4.761 | Response = 17551899 |
| 4.861 | Response = 9676529 |
| 5.541 | Response = 11855327 |
| 6.045 | Response = 7933541 |




Manual Integration Results

| | | |
|---|---|---|
| 4.528 | Response = 18857597 | M |
| 4.761 | Response = 17551899 | |
| 4.861 | Response = 9676529 | |
| 5.541 | Response = 11855327 | |
| 6.045 | Response = 7933541 | |

Reviewer: mooret, 30-Jan-2019 11:45:02

Audit Action: Split an Integrated Peak Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290008.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 29-Jan-2019 16:39:43 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0078470-008
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:40 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:36:47

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.977 | -0.001 | 18406030 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.791 | -0.002 | 106858223 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | M |
| 1 | 4.526 | 4.528 | -0.002 | 27736945 | 750.0 | 739.0 | M |
| 1 | 4.762 | 4.761 | 0.001 | 25906293 | 750.0 | 746.0 | |
| 1 | 4.859 | 4.861 | -0.002 | 14594133 | 750.0 | 746.4 | |
| 1 | 5.539 | 5.541 | -0.002 | 17442778 | 750.0 | 749.6 | |
| 1 | 6.046 | 6.045 | 0.001 | 11771745 | 750.0 | 742.8 | |
| | | Average of Peak Amounts = | | | | 744.8 | |
| 2 | 4.172 | 4.175 | -0.003 | 56286634 | 750.0 | 751.3 | |
| 2 | 4.556 | 4.555 | 0.001 | 31814524 | 750.0 | 748.1 | |
| 2 | 4.852 | 4.851 | 0.001 | 43474403 | 750.0 | 732.9 | |
| 2 | 4.989 | 4.991 | -0.002 | 48741818 | 750.0 | 744.3 | |
| 2 | 6.172 | 6.175 | -0.003 | 30729957 | 750.0 | 737.5 | |
| | | Average of Peak Amounts = | | | | 742.8 | |
| | | | | | | RPD = 0.26 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 744.8 | |
| 2 | | | | | | 742.8 | |
| | | | | | | RPD = 0.26 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 0.75 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

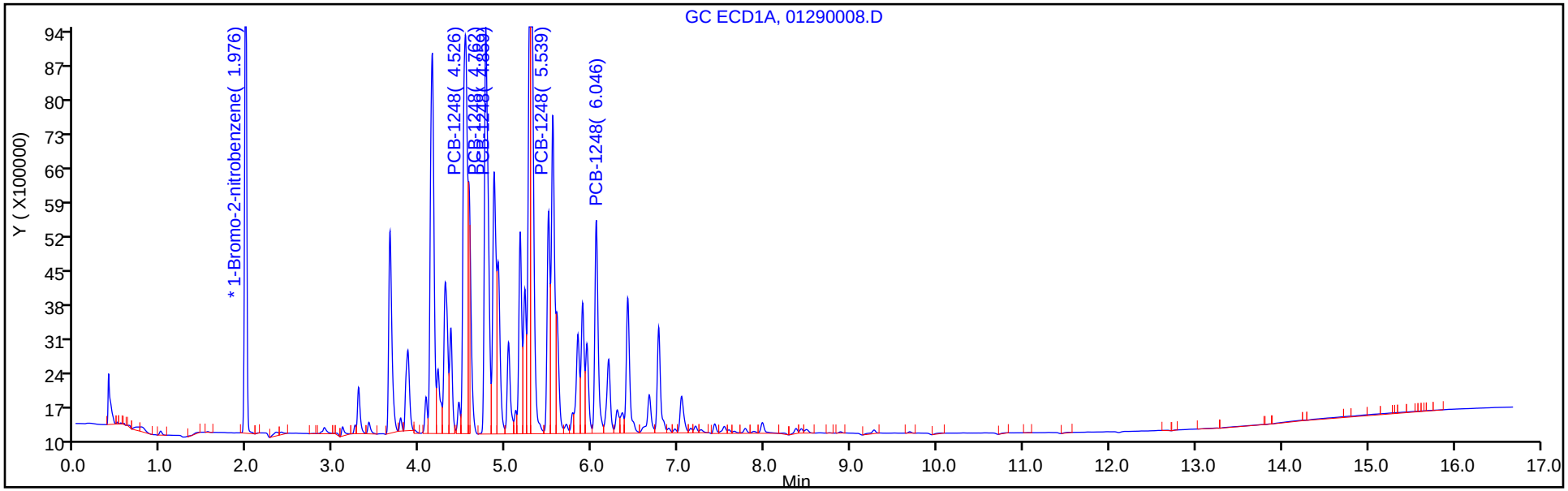
Report Date: 30-Jan-2019 14:59:40 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

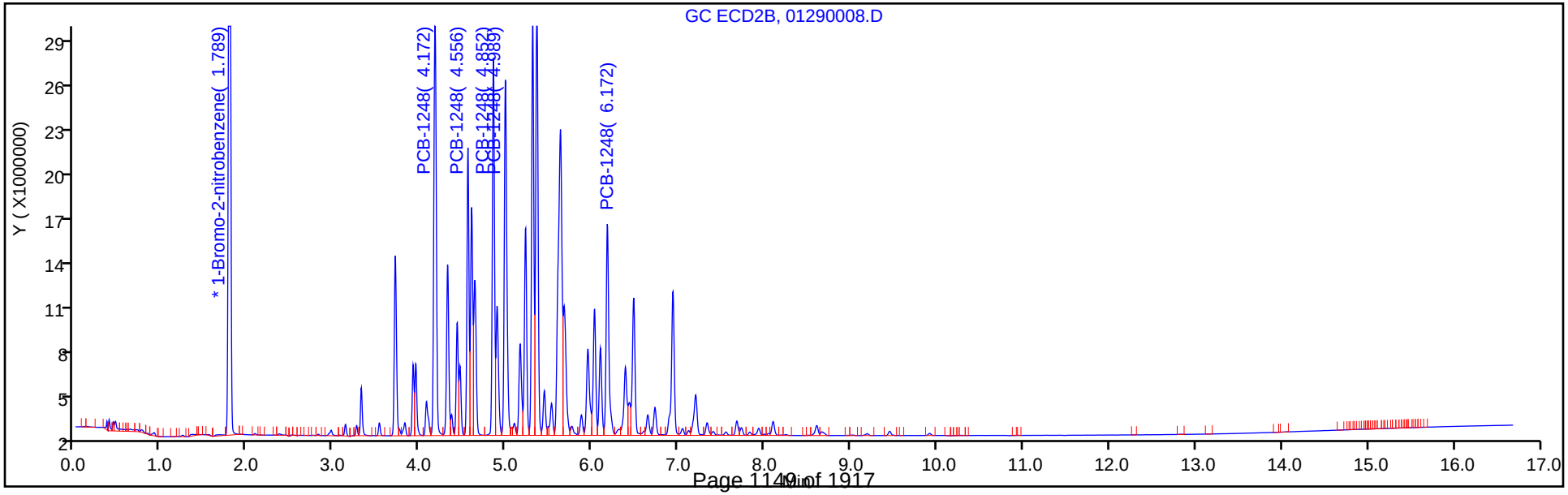
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290008.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 16:39:43 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD6 | | | Worklist Smp#: | 8 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 8 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:59:40 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290008.D

Injection Date: 29-Jan-2019 16:39:43 Instrument ID: SGC_J

Lims ID: STD6

Client ID:

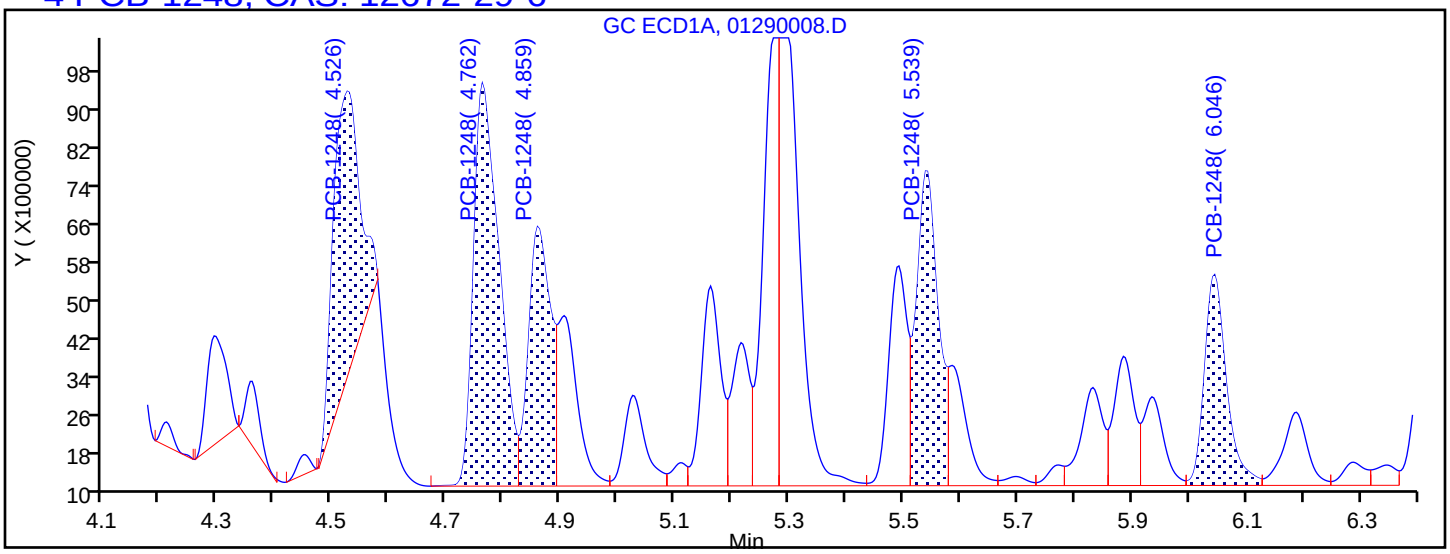
Operator ID: TEM ALS Bottle#: 8 Worklist Smp#: 8

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

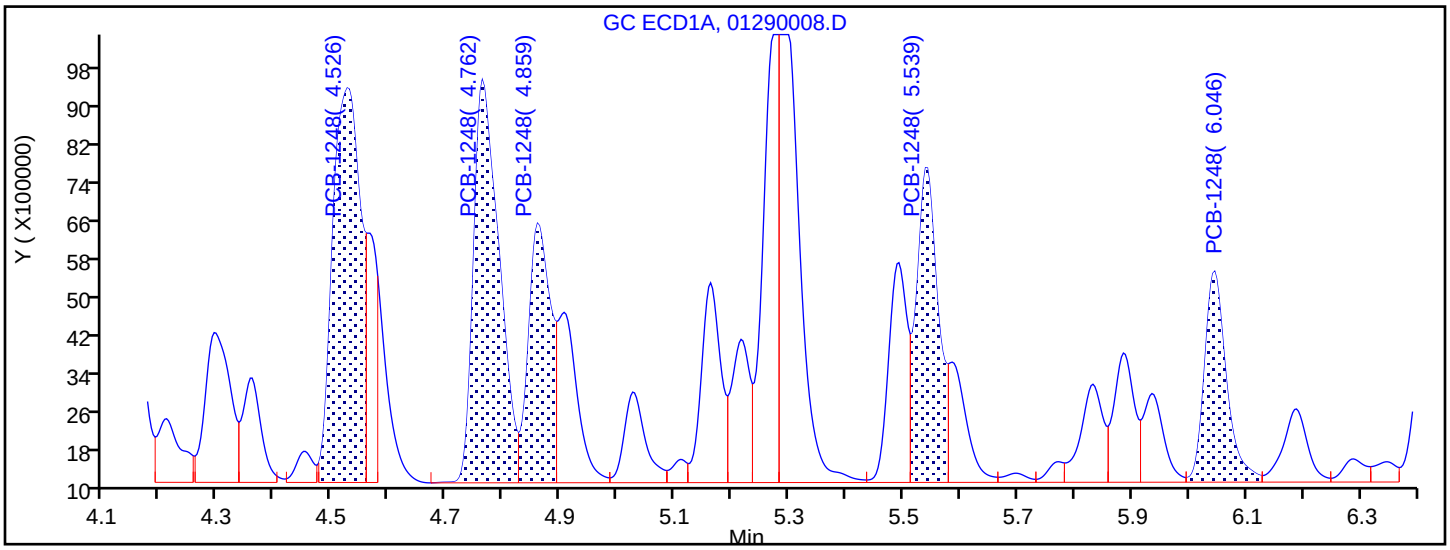
Column: CLP1 Pesticides Column 1 ( 0.32 mm) Detector GC ECD1A

## 4 PCB-1248, CAS: 12672-29-6




Processing Integration Results

| | |
|---|---|
| 4.526 | Response = 19300669 |
| 4.762 | Response = 25906293 |
| 4.859 | Response = 14594133 |
| 5.539 | Response = 17442778 |
| 6.046 | Response = 11771745 |




Manual Integration Results

| | | |
|---|---|---|
| 4.526 | Response = 27736945 | M |
| 4.762 | Response = 25906293 | |
| 4.859 | Response = 14594133 | |
| 5.539 | Response = 17442778 | |
| 6.046 | Response = 11771745 | |

Reviewer: mooret, 30-Jan-2019 11:46:54

Audit Action: Split an Integrated Peak Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290009.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Jan-2019 17:00:54 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0078470-009
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:38 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:31:10

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.977 | 0.000 | 18544340 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.791 | -0.003 | 107714909 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | M |
| 1 | 4.527 | 4.528 | -0.001 | 35853709 | 1000.0 | 952.6 | M |
| 1 | 4.764 | 4.761 | 0.003 | 33304383 | 1000.0 | 955.0 | |
| 1 | 4.861 | 4.861 | 0.000 | 19127578 | 1000.0 | 972.5 | |
| 1 | 5.541 | 5.541 | 0.000 | 21903990 | 1000.0 | 936.5 | |
| 1 | 6.044 | 6.045 | -0.001 | 15423807 | 1000.0 | 967.3 | |
| | | Average of Peak Amounts = | | | | 956.8 | |
| 2 | 4.174 | 4.175 | -0.001 | 71321502 | 1000.0 | 949.5 | |
| 2 | 4.554 | 4.555 | -0.001 | 39804527 | 1000.0 | 934.4 | |
| 2 | 4.851 | 4.851 | 0.000 | 56321052 | 1000.0 | 1018.6 | |
| 2 | 4.991 | 4.991 | 0.000 | 62401335 | 1000.0 | 951.6 | |
| 2 | 6.174 | 6.175 | -0.001 | 39545554 | 1000.0 | 947.8 | |
| | | Average of Peak Amounts = | | | | 960.4 | |
| | | | | | | RPD = 0.37 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 956.8 | |
| 2 | | | | | | 960.4 | |
| | | | | | | RPD = 0.37 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

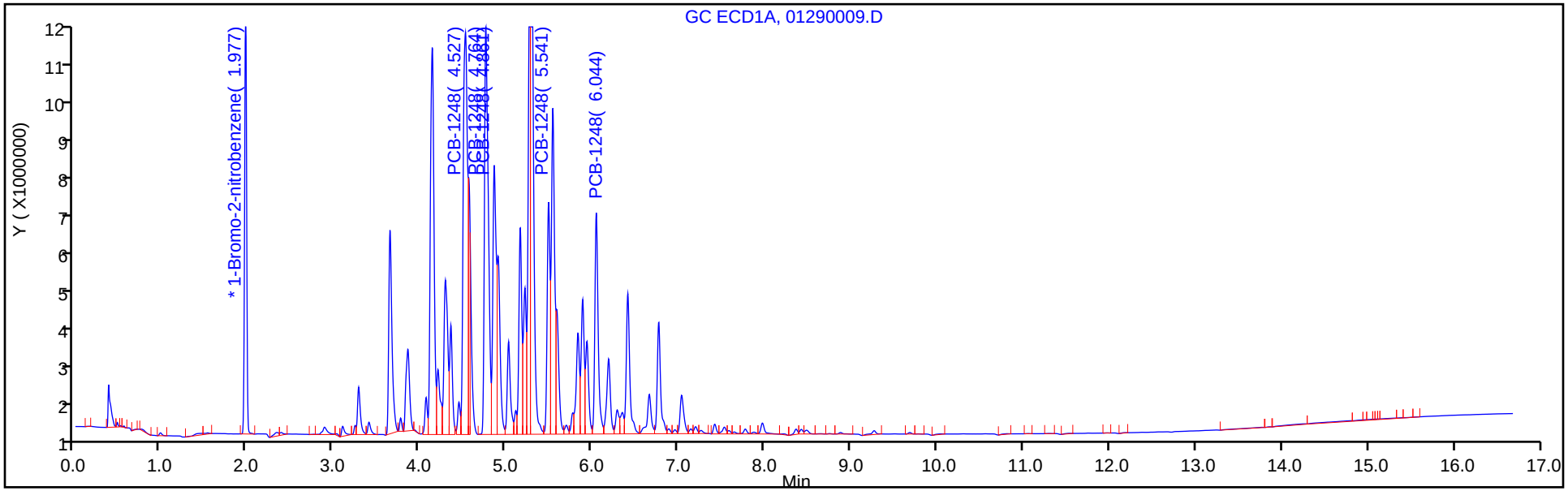
Report Date: 30-Jan-2019 14:59:38 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

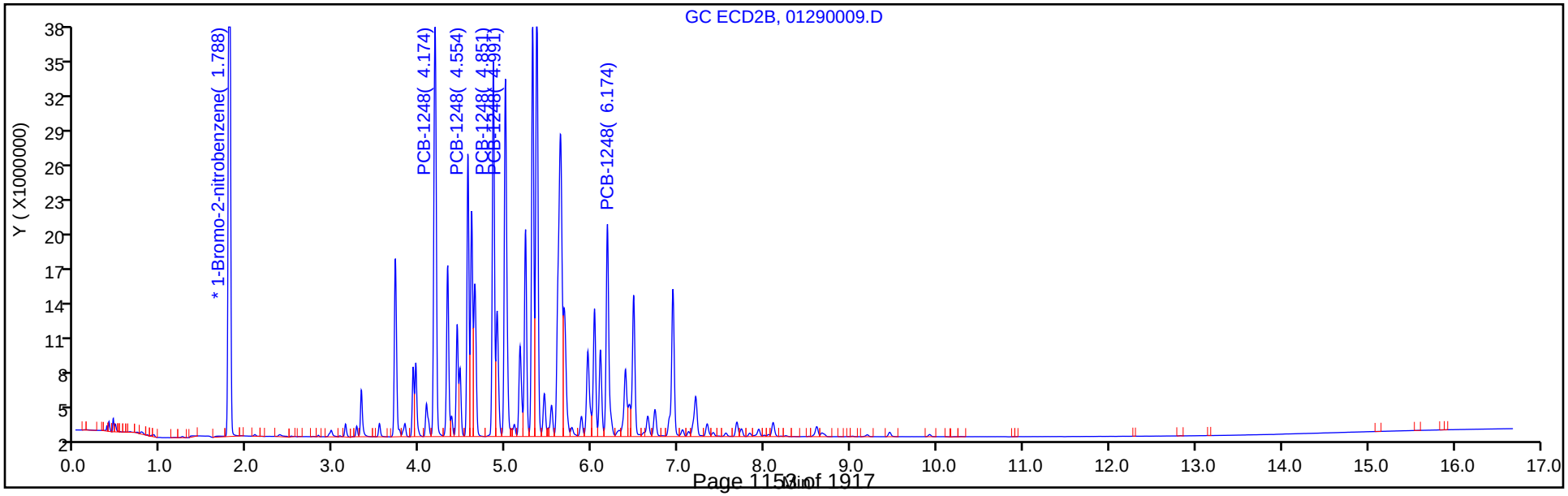
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290009.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 17:00:54 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD7 | | | Worklist Smp#: | 9 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 9 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:59:38 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290009.D

Injection Date: 29-Jan-2019 17:00:54 Instrument ID: SGC_J

Lims ID: STD7

Client ID:

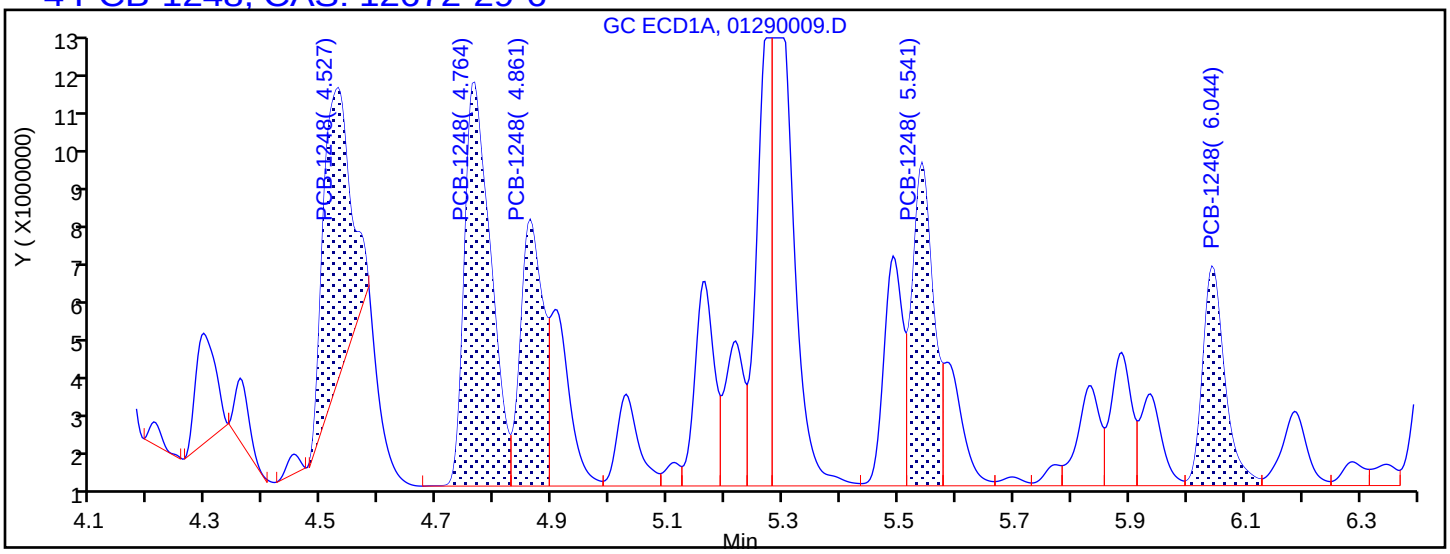
Operator ID: TEM ALS Bottle#: 9 Worklist Smp#: 9

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

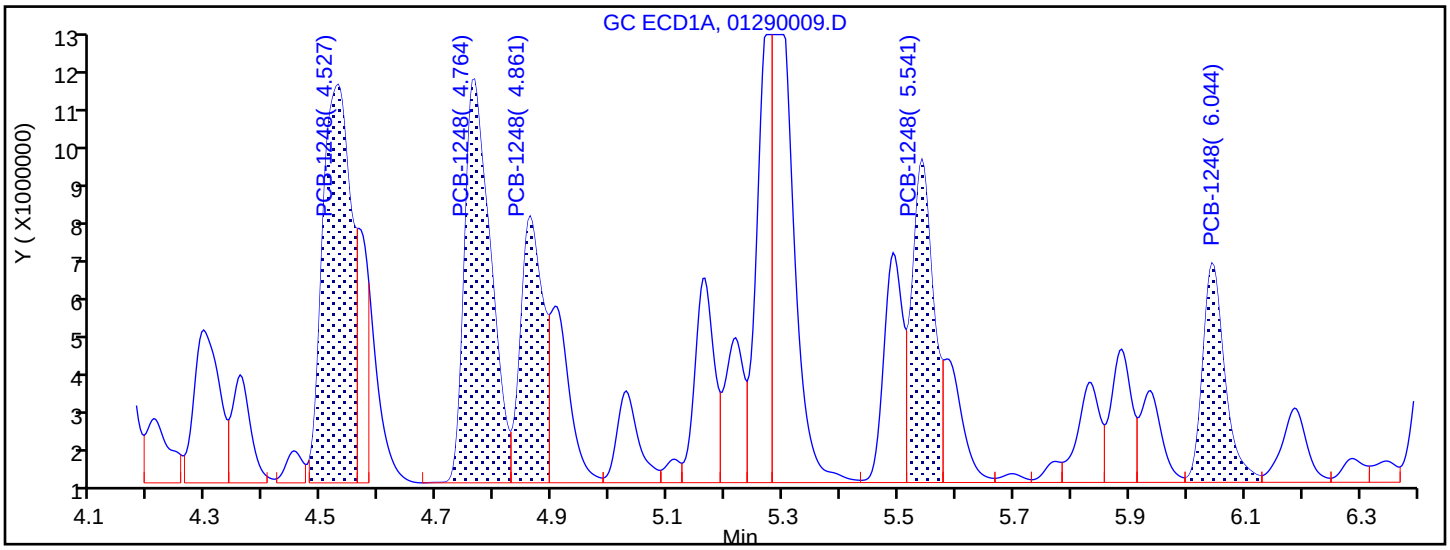
Column: CLP1 Pesticides Column 1 ( 0.32 mm) Detector GC ECD1A

## 4 PCB-1248, CAS: 12672-29-6




Processing Integration Results

| | |
|---|---|
| 4.527 | Response = 25647822 |
| 4.764 | Response = 33304383 |
| 4.861 | Response = 19127578 |
| 5.541 | Response = 21903990 |
| 6.044 | Response = 15423807 |




Manual Integration Results

| | | |
|---|---|---|
| 4.527 | Response = 35853709 | M |
| 4.764 | Response = 33304383 | |
| 4.861 | Response = 19127578 | |
| 5.541 | Response = 21903990 | |
| 6.044 | Response = 15423807 | |

Reviewer: mooret, 30-Jan-2019 12:40:48

Audit Action: Split an Integrated Peak Audit Reason: Baseline Smoothing

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP2  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 14:54  Calibration End Date: 01/29/2019 17:00  Calibration ID: 35084

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/3 | 01290003.D |
| Level 2 | STD2 280-445745/4 | 01290004.D |
| Level 3 | STD3 280-445745/5 | 01290005.D |
| Level 4 | STD4 280-445745/6 | 01290006.D |
| Level 5 | STD5 280-445745/7 | 01290007.D |
| Level 6 | STD6 280-445745/8 | 01290008.D |
| Level 7 | STD7 280-445745/9 | 01290009.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| PCB-1248 Peak 1 | 0.1072<br>0.0702 | 0.0986<br>0.0662 | 0.0882 | 0.0800 | 0.0738 | Lin1 | 1.3539 | 0.0683 | | | | | | | 0.9960 | | 0.9900 |
| PCB-1248 Peak 2 | 0.0646<br>0.0397 | 0.0588<br>0.0370 | 0.0529 | 0.0474 | 0.0424 | Lin1 | 0.9318 | 0.0386 | | | | | | | 0.9930 | | 0.9900 |
| PCB-1248 Peak 3 | 0.0925<br>0.0542 | 0.0845<br>0.0523 | 0.0740 | 0.0649 | 0.0584 | Qua1 | 0.8600 | 0.0642 | -0.000013 | | | | | | 0.9990 | | 0.9900 |
| PCB-1248 Peak 4 | 0.0981<br>0.0608 | 0.0913<br>0.0579 | 0.0802 | 0.0714 | 0.0644 | Lin1 | 1.3792 | 0.0594 | | | | | | | 0.9950 | | 0.9900 |
| PCB-1248 Peak 5 | 0.0606<br>0.0383 | 0.0579<br>0.0367 | 0.0516 | 0.0457 | 0.0415 | Lin1 | 0.8637 | 0.0378 | | | | | | | 0.9940 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP2  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 14:54  Calibration End Date: 01/29/2019 17:00  Calibration ID: 35084

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/3 | 01290003.D |
| Level 2 | STD2 280-445745/4 | 01290004.D |
| Level 3 | STD3 280-445745/5 | 01290005.D |
| Level 4 | STD4 280-445745/6 | 01290006.D |
| Level 5 | STD5 280-445745/7 | 01290007.D |
| Level 6 | STD6 280-445745/8 | 01290008.D |
| Level 7 | STD7 280-445745/9 | 01290009.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1248 Peak 1 | BNB | Lin1 | 2748219<br>56286634 | 4949630<br>71321502 | 8848809 | 20829423 | 38272064 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1248 Peak 2 | BNB | Lin1 | 1657466<br>31814524 | 2949575<br>39804527 | 5311539 | 12340855 | 22021490 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1248 Peak 3 | BNB | Qua1 | 2371071<br>43474403 | 4239416<br>56321052 | 7421848 | 16893460 | 30313300 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1248 Peak 4 | BNB | Lin1 | 2513977<br>48741818 | 4580946<br>62401335 | 8043947 | 18586781 | 33411377 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1248 Peak 5 | BNB | Lin1 | 1553798<br>30729957 | 2907338<br>39545554 | 5181312 | 11892704 | 21533148 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |

Curve Type Legend:

Lin1 = Linear 1/conc ISTD
Qua1 = Quadratic 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290003.D
Lims ID: STDL1 1248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Jan-2019 14:54:21 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL1 1248
Misc. Info.: 280-0078470-003
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:52 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 10:24:44

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.975 | 0.001 | 16982149 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.788 | 0.002 | 102558174 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | |
| 1 | 4.523 | 4.528 | -0.005 | 1163827 | 25.0 | 18.6 | |
| 1 | 4.759 | 4.761 | -0.002 | 981347 | 25.0 | 19.8 | |
| 1 | 4.859 | 4.861 | -0.002 | 487917 | 25.0 | 22.0 | |
| 1 | 5.543 | 5.541 | 0.002 | 629616 | 25.0 | 20.8 | |
| 1 | 6.043 | 6.045 | -0.002 | 401944 | 25.0 | 23.3 | |
| | | Average of Peak Amounts = | | | | 20.9 | |
| 2 | 4.173 | 4.175 | -0.002 | 2748219 | 25.0 | 19.4 | |
| 2 | 4.556 | 4.555 | 0.001 | 1657466 | 25.0 | 17.8 | |
| 2 | 4.850 | 4.851 | -0.001 | 2371071 | 25.0 | 22.7 | |
| 2 | 4.990 | 4.991 | -0.001 | 2513977 | 25.0 | 18.0 | |
| 2 | 6.173 | 6.175 | -0.002 | 1553798 | 25.0 | 17.2 | |
| | | Average of Peak Amounts = | | | | 19.0 | |
| | | | | | | RPD = 9.45 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 20.9 | |
| 2 | | | | | | 19.0 | |
| | | | | | | RPD = 9.45 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 0.03 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

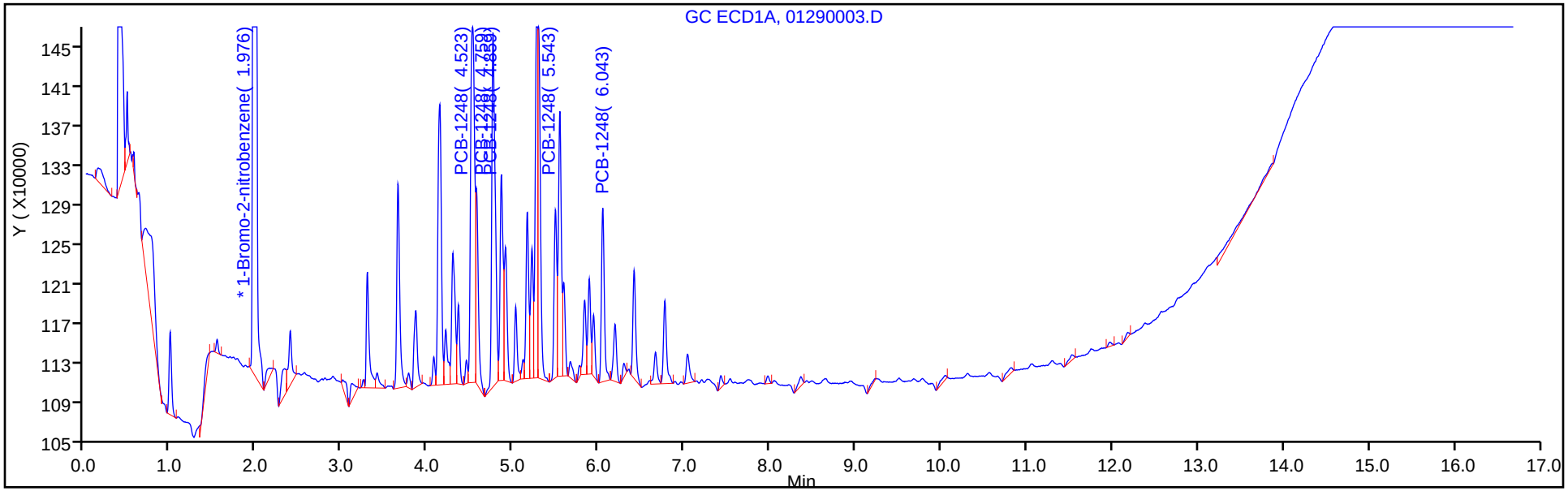
Report Date: 30-Jan-2019 14:59:53 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

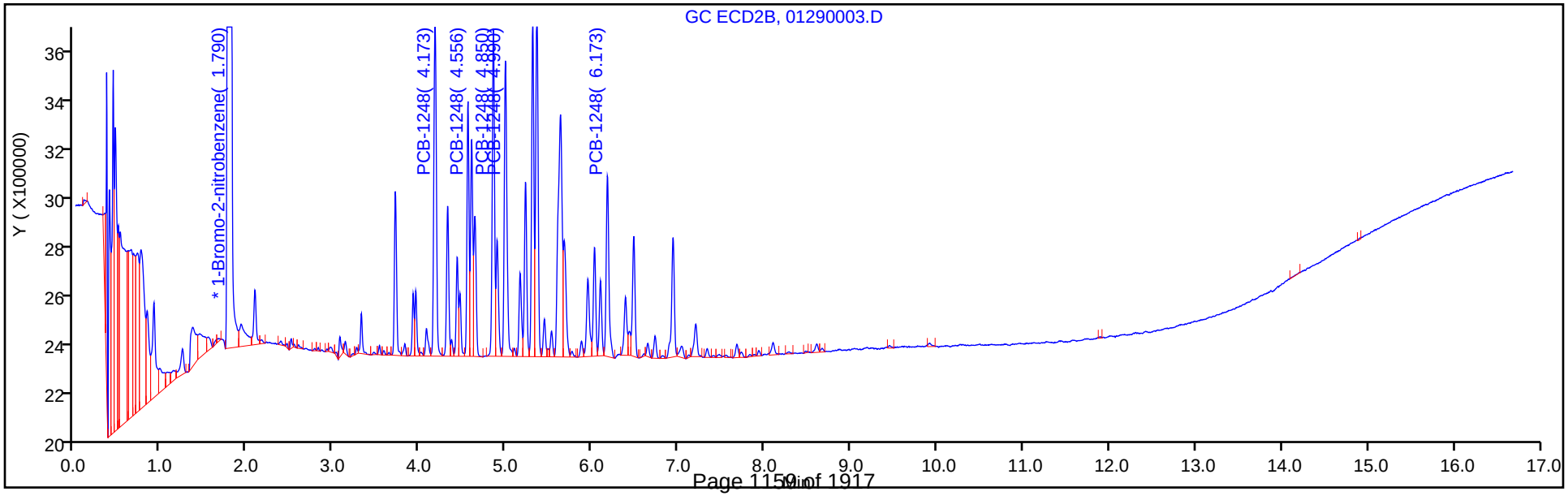
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290003.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 14:54:21 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STDL1 1248 | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 3 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290004.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Jan-2019 15:15:24 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0078470-004
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:50 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:19:15

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.975 | 0.002 | 16736886 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.788 | 0.002 | 100380199 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | |
| 1 | 4.524 | 4.528 | -0.004 | 2266683 | 50.0 | 52.1 | |
| 1 | 4.760 | 4.761 | -0.001 | 1985725 | 50.0 | 52.6 | |
| 1 | 4.857 | 4.861 | -0.004 | 995524 | 50.0 | 51.1 | |
| 1 | 5.540 | 5.541 | -0.001 | 1209560 | 50.0 | 49.0 | |
| 1 | 6.043 | 6.045 | -0.002 | 745755 | 50.0 | 47.7 | |
| | | Average of Peak Amounts = | | | | 50.5 | |
| 2 | 4.174 | 4.175 | -0.001 | 4949630 | 50.0 | 52.4 | |
| 2 | 4.557 | 4.555 | 0.002 | 2949575 | 50.0 | 52.1 | |
| 2 | 4.850 | 4.851 | -0.001 | 4239416 | 50.0 | 53.0 | |
| 2 | 4.990 | 4.991 | -0.001 | 4580946 | 50.0 | 53.6 | |
| 2 | 6.174 | 6.175 | -0.001 | 2907338 | 50.0 | 53.7 | |
| | | Average of Peak Amounts = | | | | 52.9 | |
| | | | | | | RPD = 4.71 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 50.5 | |
| 2 | | | | | | 52.9 | |
| | | | | | | RPD = 4.71 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 0.05 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

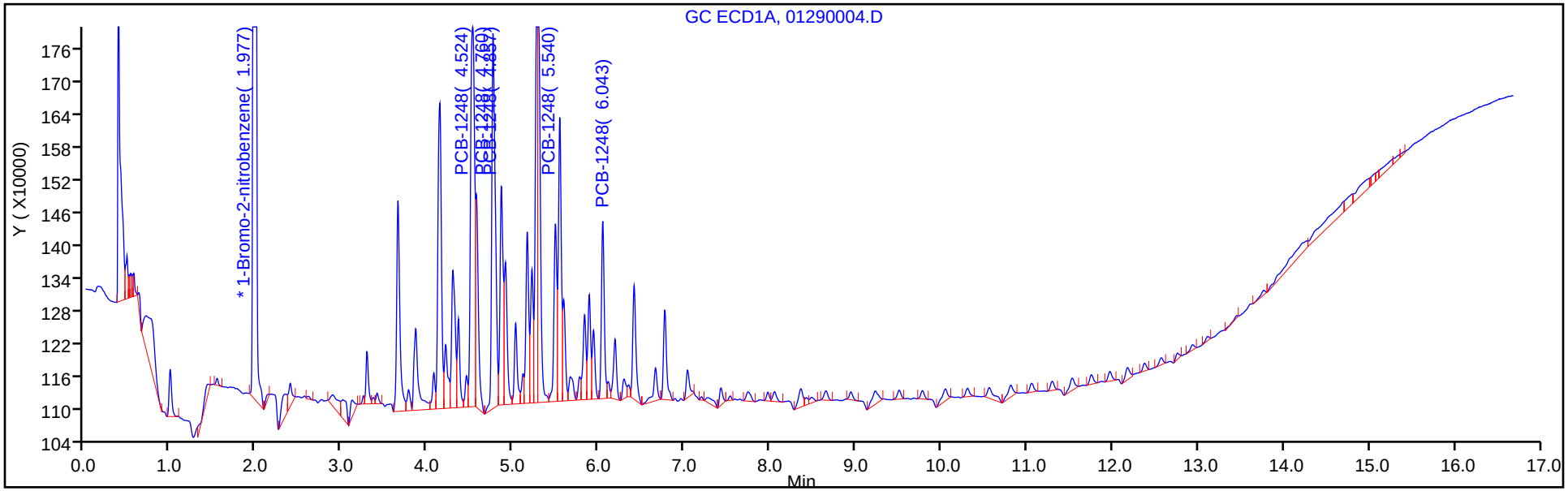
Report Date: 30-Jan-2019 14:59:51 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

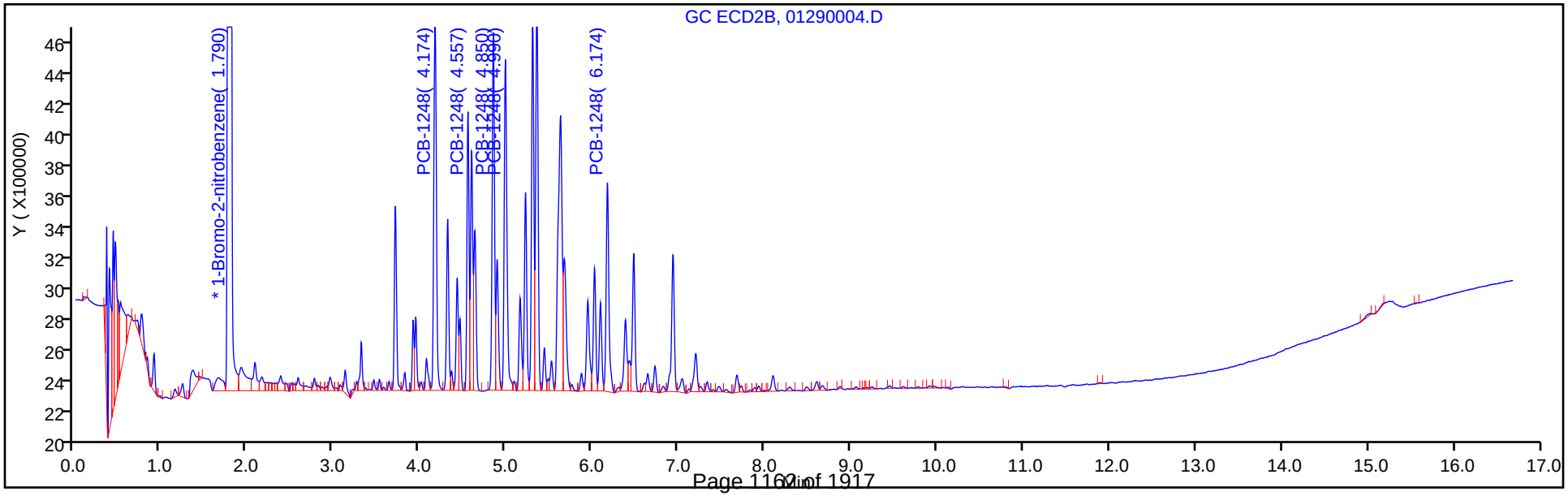
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290004.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 15:15:24 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD2 | | | Worklist Smp#: | 4 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 4 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290005.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Jan-2019 15:36:28 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0078470-005
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:48 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:19:29

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.975 | 0.003 | 16917073 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.788 | 0.000 | 100351458 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | |
| 1 | 4.524 | 4.528 | -0.004 | 4240796 | 100.0 | 109.9 | |
| 1 | 4.761 | 4.761 | 0.000 | 3730445 | 100.0 | 107.4 | |
| 1 | 4.858 | 4.861 | -0.003 | 1949790 | 100.0 | 104.0 | |
| 1 | 5.541 | 5.541 | 0.000 | 2401447 | 100.0 | 104.8 | |
| 1 | 6.044 | 6.045 | -0.001 | 1562529 | 100.0 | 103.5 | |
| | | Average of Peak Amounts = | | | | 105.9 | |
| 2 | 4.174 | 4.175 | -0.001 | 8848809 | 100.0 | 109.3 | |
| 2 | 4.554 | 4.555 | -0.001 | 5311539 | 100.0 | 113.1 | |
| 2 | 4.851 | 4.851 | 0.000 | 7421848 | 100.0 | 104.1 | |
| 2 | 4.991 | 4.991 | 0.000 | 8043947 | 100.0 | 111.7 | |
| 2 | 6.174 | 6.175 | -0.001 | 5181312 | 100.0 | 113.7 | |
| | | Average of Peak Amounts = | | | | 110.4 | |
| | | | | | | RPD = 4.11 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 105.9 | |
| 2 | | | | | | 110.4 | |
| | | | | | | RPD = 4.11 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 0.10 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

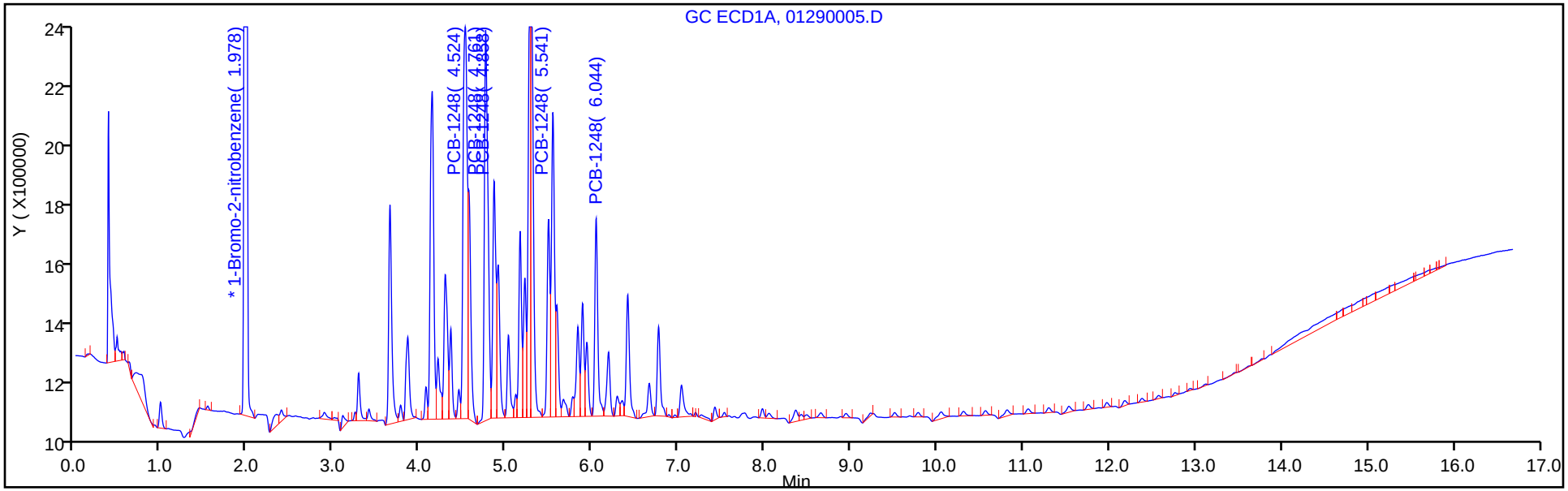
Report Date: 30-Jan-2019 14:59:48 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

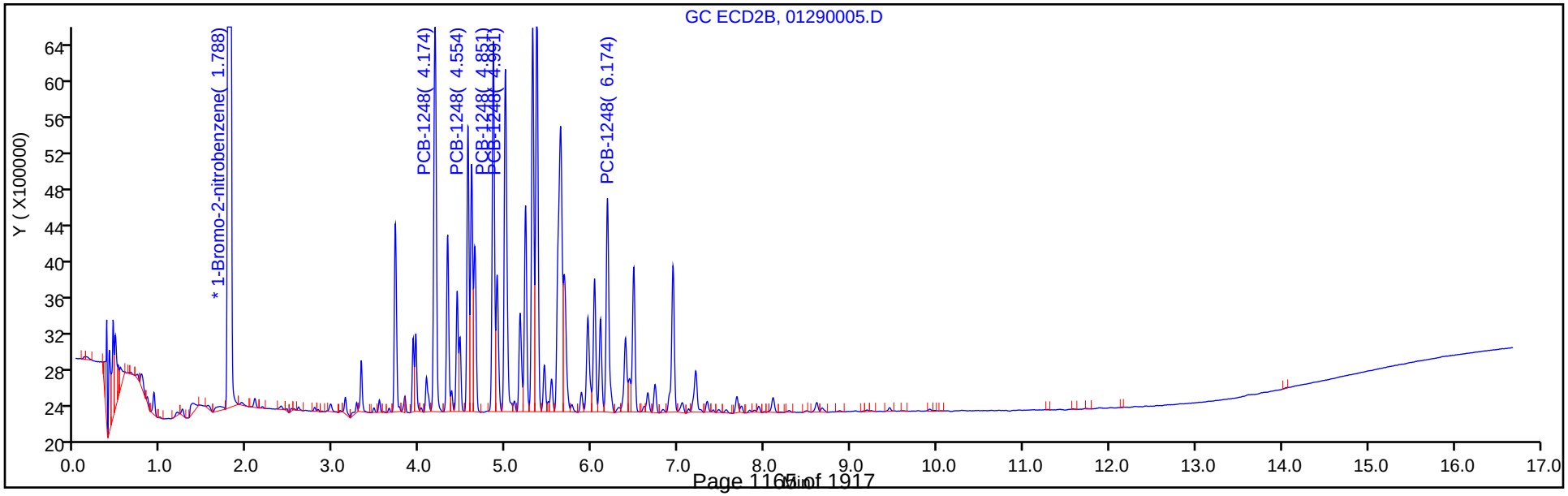
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290005.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 15:36:28 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD3 | | | Worklist Smp#: | 5 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 5 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290006.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Jan-2019 15:57:37 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0078470-006
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:46 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 10:20:52

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.975 | 0.000 | 17656818 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.788 | 0.001 | 104102185 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | M |
| 1 | 4.525 | 4.528 | -0.003 | 10590722 | 250.0 | 284.7 | M |
| 1 | 4.762 | 4.761 | 0.001 | 9286249 | 250.0 | 271.7 | M |
| 1 | 4.859 | 4.861 | -0.002 | 5049650 | 250.0 | 265.9 | |
| 1 | 5.542 | 5.541 | 0.001 | 6522540 | 250.0 | 286.8 | |
| 1 | 6.045 | 6.045 | 0.000 | 4162761 | 250.0 | 271.0 | |
| | | Average of Peak Amounts = | | | | 276.0 | |
| 2 | 4.176 | 4.175 | 0.001 | 20829423 | 250.0 | 273.1 | |
| 2 | 4.556 | 4.555 | 0.001 | 12340855 | 250.0 | 283.3 | |
| 2 | 4.852 | 4.851 | 0.001 | 16893460 | 250.0 | 252.8 | |
| 2 | 4.992 | 4.991 | 0.001 | 18586781 | 250.0 | 277.2 | |
| 2 | 6.176 | 6.175 | 0.001 | 11892704 | 250.0 | 279.2 | |
| | | Average of Peak Amounts = | | | | 273.1 | |
| | | | | | | RPD = 1.06 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 276.0 | |
| 2 | | | | | | 273.1 | |
| | | | | | | RPD = 1.06 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 0.25 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

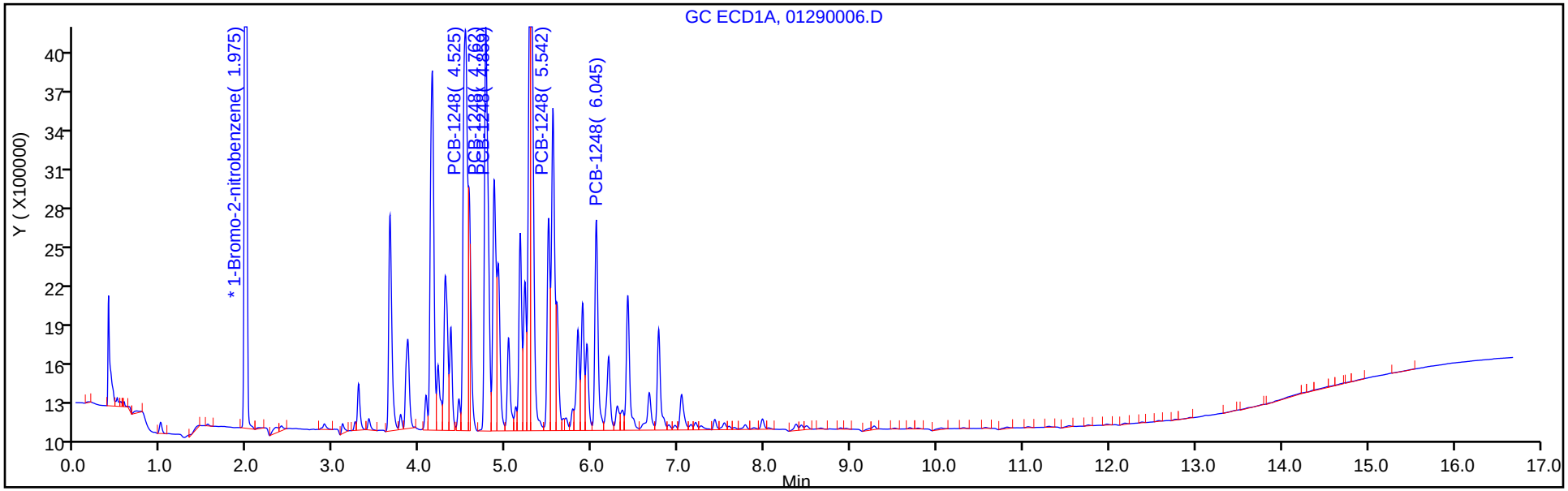
Report Date: 30-Jan-2019 14:59:46 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

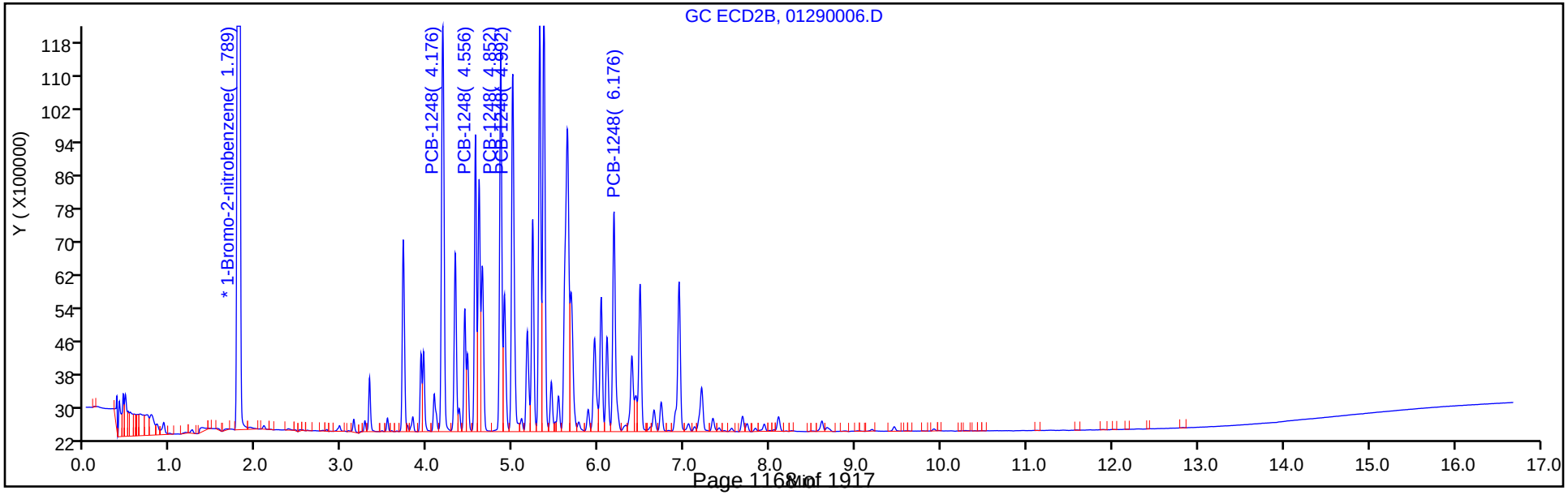
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290006.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 15:57:37 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD4 | | | Worklist Smp#: | 6 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 6 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290007.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 29-Jan-2019 16:18:40 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0078470-007
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:43 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:22:01

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.975 | 0.000 | 17694680 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.788 | 0.000 | 103772524 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | M |
| 1 | 4.528 | 4.528 | 0.000 | 18857597 | 500.0 | 518.0 | M |
| 1 | 4.761 | 4.761 | 0.000 | 17551899 | 500.0 | 522.4 | |
| 1 | 4.861 | 4.861 | 0.000 | 9676529 | 500.0 | 513.1 | |
| 1 | 5.541 | 5.541 | 0.000 | 11855327 | 500.0 | 527.4 | |
| 1 | 6.045 | 6.045 | 0.000 | 7933541 | 500.0 | 519.4 | |
| | | Average of Peak Amounts = | | | | 520.1 | |
| 2 | 4.175 | 4.175 | 0.000 | 38272064 | 500.0 | 520.1 | |
| 2 | 4.555 | 4.555 | 0.000 | 22021490 | 500.0 | 526.3 | |
| 2 | 4.851 | 4.851 | 0.000 | 30313300 | 500.0 | 492.4 | |
| 2 | 4.991 | 4.991 | 0.000 | 33411377 | 500.0 | 518.6 | |
| 2 | 6.175 | 6.175 | 0.000 | 21533148 | 500.0 | 525.8 | |
| | | Average of Peak Amounts = | | | | 516.6 | |
| | | | | | | RPD = 0.67 | |

## QC Flag Legend

Review Flags
M - Manually Integrated

## Reagents:

AR_1248_L7_00018 Amount Added: 0.50 Units: mL
BNB IS_00013 Amount Added: 0.10 Units: mL Run Reagent

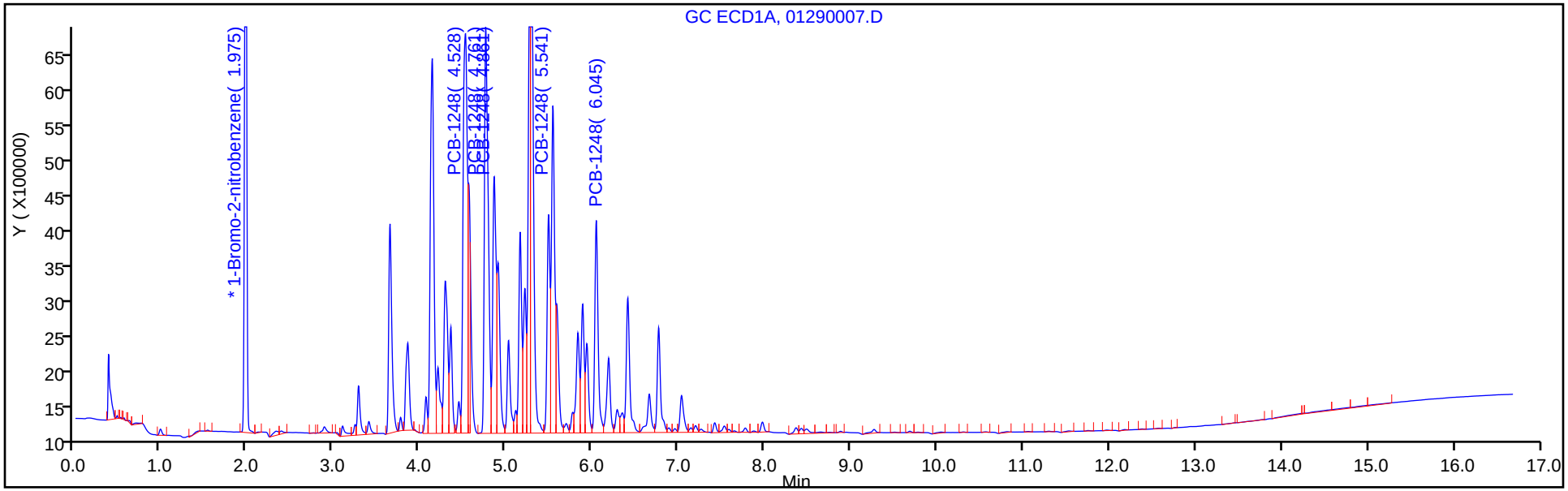
Report Date: 30-Jan-2019 14:59:44 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

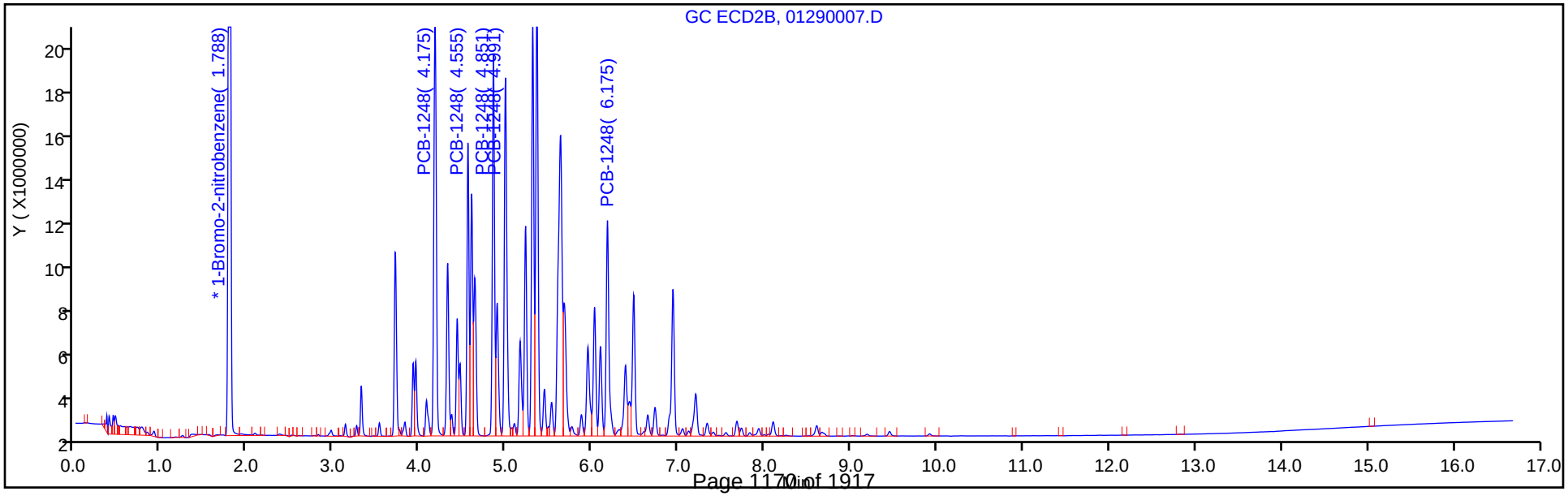
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290007.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 16:18:40 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD5 | | | Worklist Smp#: | 7 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 7 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290008.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 29-Jan-2019 16:39:43 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0078470-008
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:40 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:36:47

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.977 | -0.001 | 18406030 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.791 | -0.002 | 106858223 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | M |
| 1 | 4.526 | 4.528 | -0.002 | 27736945 | 750.0 | 739.0 | M |
| 1 | 4.762 | 4.761 | 0.001 | 25906293 | 750.0 | 746.0 | |
| 1 | 4.859 | 4.861 | -0.002 | 14594133 | 750.0 | 746.4 | |
| 1 | 5.539 | 5.541 | -0.002 | 17442778 | 750.0 | 749.6 | |
| 1 | 6.046 | 6.045 | 0.001 | 11771745 | 750.0 | 742.8 | |
| | | Average of Peak Amounts = | | | | 744.8 | |
| 2 | 4.172 | 4.175 | -0.003 | 56286634 | 750.0 | 751.3 | |
| 2 | 4.556 | 4.555 | 0.001 | 31814524 | 750.0 | 748.1 | |
| 2 | 4.852 | 4.851 | 0.001 | 43474403 | 750.0 | 732.9 | |
| 2 | 4.989 | 4.991 | -0.002 | 48741818 | 750.0 | 744.3 | |
| 2 | 6.172 | 6.175 | -0.003 | 30729957 | 750.0 | 737.5 | |
| | | Average of Peak Amounts = | | | | 742.8 | |
| | | | | | | RPD = 0.26 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 744.8 | |
| 2 | | | | | | 742.8 | |
| | | | | | | RPD = 0.26 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 0.75 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

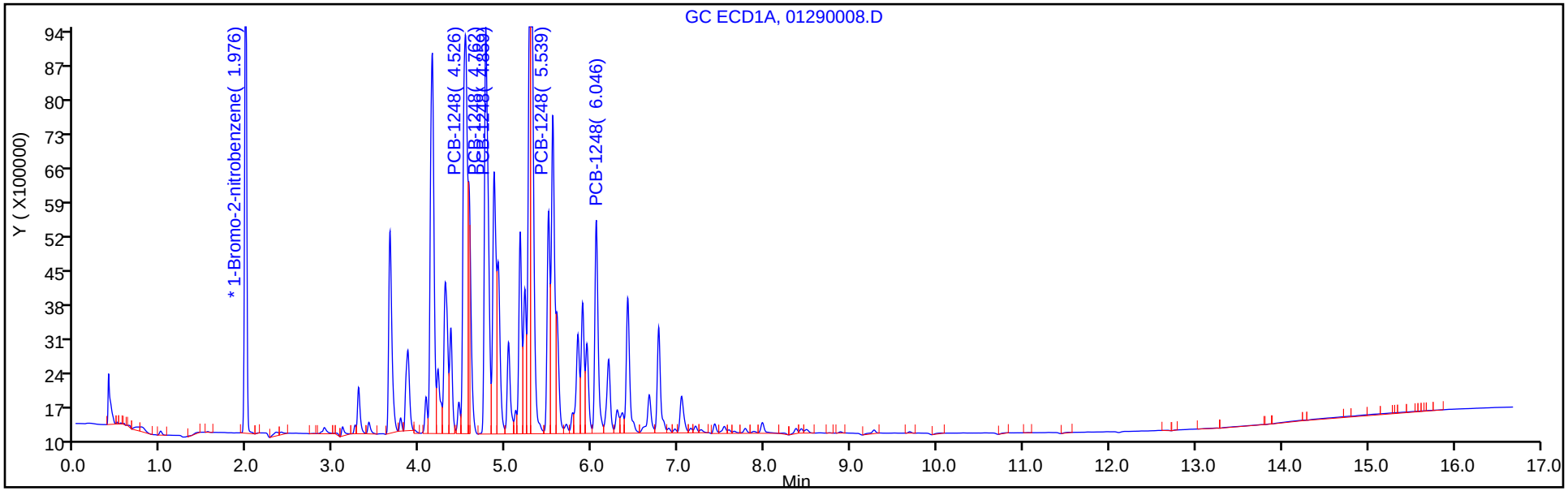
Report Date: 30-Jan-2019 14:59:40 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

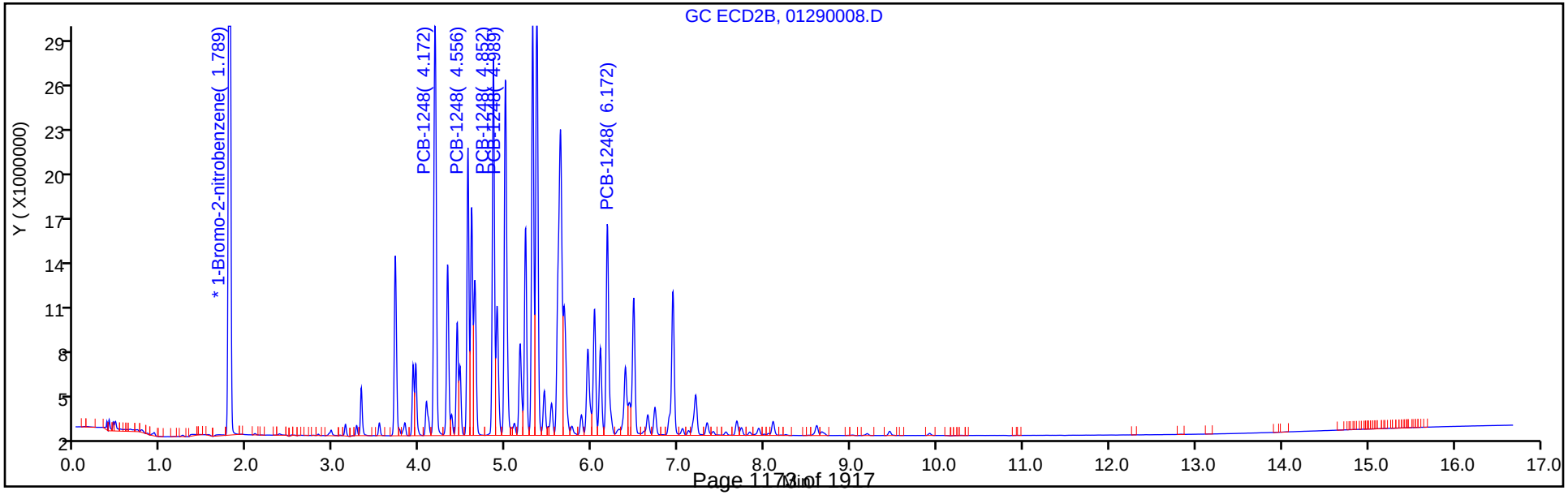
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290008.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 16:39:43 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD6 | | | Worklist Smp#: | 8 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 8 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290009.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Jan-2019 17:00:54 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0078470-009
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:38 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:31:10

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.977 | 0.000 | 18544340 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.791 | -0.003 | 107714909 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | M |
| 1 | 4.527 | 4.528 | -0.001 | 35853709 | 1000.0 | 952.6 | M |
| 1 | 4.764 | 4.761 | 0.003 | 33304383 | 1000.0 | 955.0 | |
| 1 | 4.861 | 4.861 | 0.000 | 19127578 | 1000.0 | 972.5 | |
| 1 | 5.541 | 5.541 | 0.000 | 21903990 | 1000.0 | 936.5 | |
| 1 | 6.044 | 6.045 | -0.001 | 15423807 | 1000.0 | 967.3 | |
| | | Average of Peak Amounts = | | | | 956.8 | |
| 2 | 4.174 | 4.175 | -0.001 | 71321502 | 1000.0 | 949.5 | |
| 2 | 4.554 | 4.555 | -0.001 | 39804527 | 1000.0 | 934.4 | |
| 2 | 4.851 | 4.851 | 0.000 | 56321052 | 1000.0 | 1018.6 | |
| 2 | 4.991 | 4.991 | 0.000 | 62401335 | 1000.0 | 951.6 | |
| 2 | 6.174 | 6.175 | -0.001 | 39545554 | 1000.0 | 947.8 | |
| | | Average of Peak Amounts = | | | | 960.4 | |
| | | | | | | RPD = 0.37 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 956.8 | |
| 2 | | | | | | 960.4 | |
| | | | | | | RPD = 0.37 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1248_L7_00018 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

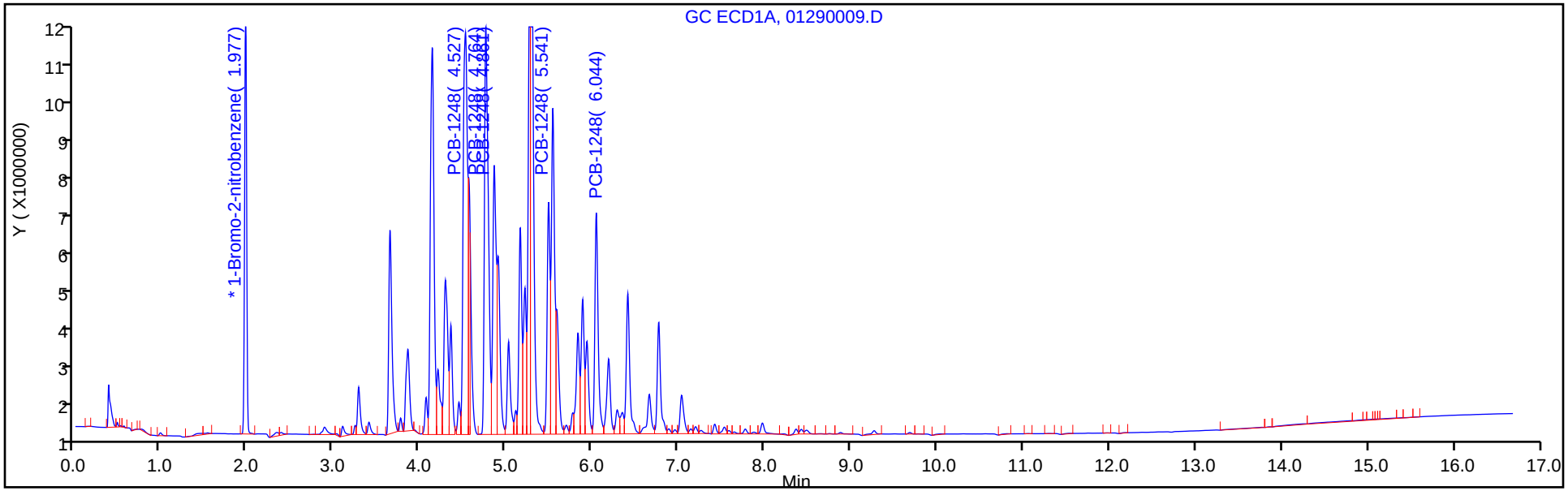
Report Date: 30-Jan-2019 14:59:38 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

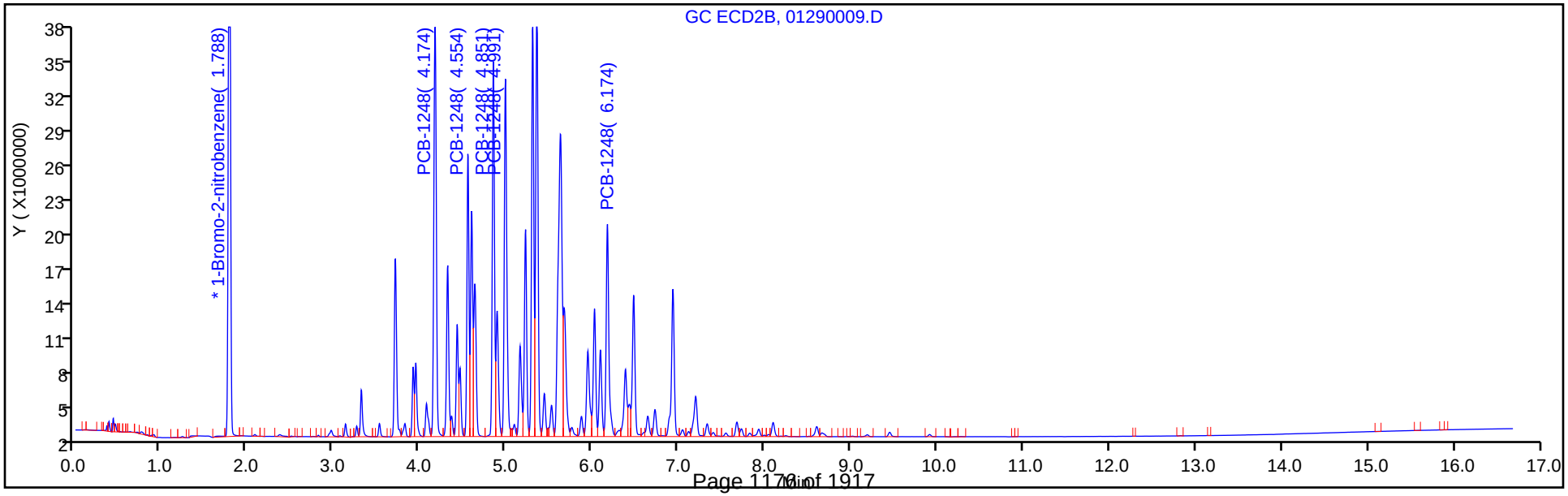
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290009.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 17:00:54 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD7 | | | Worklist Smp#: | 9 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 9 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP1  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 17:42  Calibration End Date: 01/29/2019 19:49  Calibration ID: 35087

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/11 | 01290011.D |
| Level 2 | STD2 280-445745/12 | 01290012.D |
| Level 3 | STD3 280-445745/13 | 01290013.D |
| Level 4 | STD4 280-445745/14 | 01290014.D |
| Level 5 | STD5 280-445745/15 | 01290015.D |
| Level 6 | STD6 280-445745/16 | 01290016.D |
| Level 7 | STD7 280-445745/17 | 01290017.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| PCB-1221 Peak 1 | 0.0584<br>0.0442 | 0.0589<br>0.0414 | 0.0486 | 0.0484 | 0.0467 | Lin1 | 0.5765 | 0.0431 | | | | | | | 0.9970 | | 0.9900 |
| PCB-1221 Peak 2 | 0.0313<br>0.0242 | 0.0337<br>0.0205 | 0.0274 | 0.0265 | 0.0263 | Ave | | 0.0271 | | | | 16.1 | | 20.0 | | | |
| PCB-1221 Peak 3 | 0.1577<br>0.1202 | 0.1719<br>0.1130 | 0.1398 | 0.1360 | 0.1263 | Lin1 | 1.8264 | 0.1174 | | | | | | | 0.9950 | | 0.9900 |
| PCB-1254 Peak 1 | 0.2680<br>0.2095 | 0.2628<br>0.1976 | 0.2368 | 0.2173 | 0.2208 | Lin1 | 2.3262 | 0.2044 | | | | | | | 0.9980 | | 0.9900 |
| PCB-1254 Peak 2 | 0.1713<br>0.1582 | 0.1710<br>0.1506 | 0.1601 | 0.1574 | 0.1636 | Lin1 | 0.5856 | 0.1552 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1254 Peak 3 | 0.2970<br>0.2945 | 0.3260<br>0.2788 | 0.2997 | 0.3004 | 0.3047 | Lin1 | 0.9636 | 0.2894 | | | | | | | 0.9980 | | 0.9900 |
| PCB-1254 Peak 4 | 0.2342<br>0.2041 | 0.2281<br>0.1940 | 0.2115 | 0.2078 | 0.2101 | Lin1 | 1.1687 | 0.1998 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1254 Peak 5 | 0.2850<br>0.2538 | 0.2819<br>0.2419 | 0.2568 | 0.2566 | 0.2607 | Lin1 | 1.2303 | 0.2486 | | | | | | | 0.9990 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP1  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 17:42  Calibration End Date: 01/29/2019 19:49  Calibration ID: 35087

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/11 | 01290011.D |
| Level 2 | STD2 280-445745/12 | 01290012.D |
| Level 3 | STD3 280-445745/13 | 01290013.D |
| Level 4 | STD4 280-445745/14 | 01290014.D |
| Level 5 | STD5 280-445745/15 | 01290015.D |
| Level 6 | STD6 280-445745/16 | 01290016.D |
| Level 7 | STD7 280-445745/17 | 01290017.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1221 Peak 1 | BNB | Lin1 | 271388<br>6278067 | 517623<br>8210089 | 916734 | 2285661 | 4272039 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1221 Peak 2 | BNB | Ave | 145270<br>3444943 | 296349<br>4067237 | 515801 | 1249862 | 2406564 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1221 Peak 3 | BNB | Lin1 | 732373<br>17079944 | 1511237<br>22436428 | 2635112 | 6425270 | 11538084 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1254 Peak 1 | BNB | Lin1 | 1244696<br>29777425 | 2310745<br>39222684 | 4464480 | 10267263 | 20181603 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1254 Peak 2 | BNB | Lin1 | 795719<br>22481604 | 1503421<br>29892070 | 3017451 | 7436629 | 14946862 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1254 Peak 3 | BNB | Lin1 | 1379206<br>41851991 | 2866737<br>55340228 | 5649387 | 14193865 | 27850289 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1254 Peak 4 | BNB | Lin1 | 1087587<br>29009498 | 2005621<br>38512069 | 3986775 | 9819643 | 19201872 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1254 Peak 5 | BNB | Lin1 | 1323649<br>36062168 | 2478744<br>48030061 | 4841126 | 12124818 | 23827137 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |

Curve Type Legend:

| |
|---|
| Ave = Average ISTD |
| Lin1 = Linear 1/conc ISTD |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290011.D
Lims ID: STD1 2154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Jan-2019 17:42:59 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1 2154
Misc. Info.: 280-0078470-011
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:33 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 10:24:54

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | M |
| 1 | 1.976 | 1.977 | -0.001 | 18575299 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.791 | -0.001 | 106959292 | 100.0 | 100.0 | M |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.100 | 3.101 | -0.001 | 271388 | 25.0 | 20.5 | |
| 1 | 3.246 | 3.247 | -0.001 | 145270 | 25.0 | 28.8 | |
| 1 | 3.286 | 3.287 | -0.001 | 732373 | 25.0 | 18.0 | |
| | | Average of Peak Amounts = | | | | 22.5 | |
| 2 | 3.133 | 3.134 | -0.001 | 933825 | 25.0 | 23.3 | |
| 2 | 3.263 | 3.264 | -0.001 | 521534 | 25.0 | 19.5 | |
| 2 | 3.320 | 3.318 | 0.002 | 1938038 | 25.0 | 20.7 | |
| | | Average of Peak Amounts = | | | | 21.2 | |
| | | | | | | RPD = 6.01 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.543 | 5.544 | -0.001 | 1244696 | 25.0 | 21.4 | |
| 1 | 5.883 | 5.887 | -0.004 | 795719 | 25.0 | 23.8 | |
| 1 | 6.043 | 6.044 | -0.001 | 1379206 | 25.0 | 22.3 | |
| 1 | 6.410 | 6.411 | -0.001 | 1087587 | 25.0 | 23.5 | |
| 1 | 7.033 | 7.037 | -0.004 | 1323649 | 25.0 | 23.7 | |
| | | Average of Peak Amounts = | | | | 22.9 | |
| 2 | 5.600 | 5.598 | 0.002 | 3175288 | 25.0 | 20.1 | |
| 2 | 6.023 | 6.024 | -0.001 | 2350402 | 25.0 | 20.1 | |
| 2 | 6.173 | 6.174 | -0.001 | 4341968 | 25.0 | 21.3 | |
| 2 | 6.727 | 6.724 | 0.003 | 1881749 | 25.0 | 18.7 | |
| 2 | 7.200 | 7.198 | 0.002 | 4441497 | 25.0 | 20.6 | |
| | | Average of Peak Amounts = | | | | 20.2 | |
| | | | | | | RPD = 12.94 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 45.4 | |
| 2 | | | | | | 41.3 | |
| | | | | | | RPD = 9.46 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.03 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

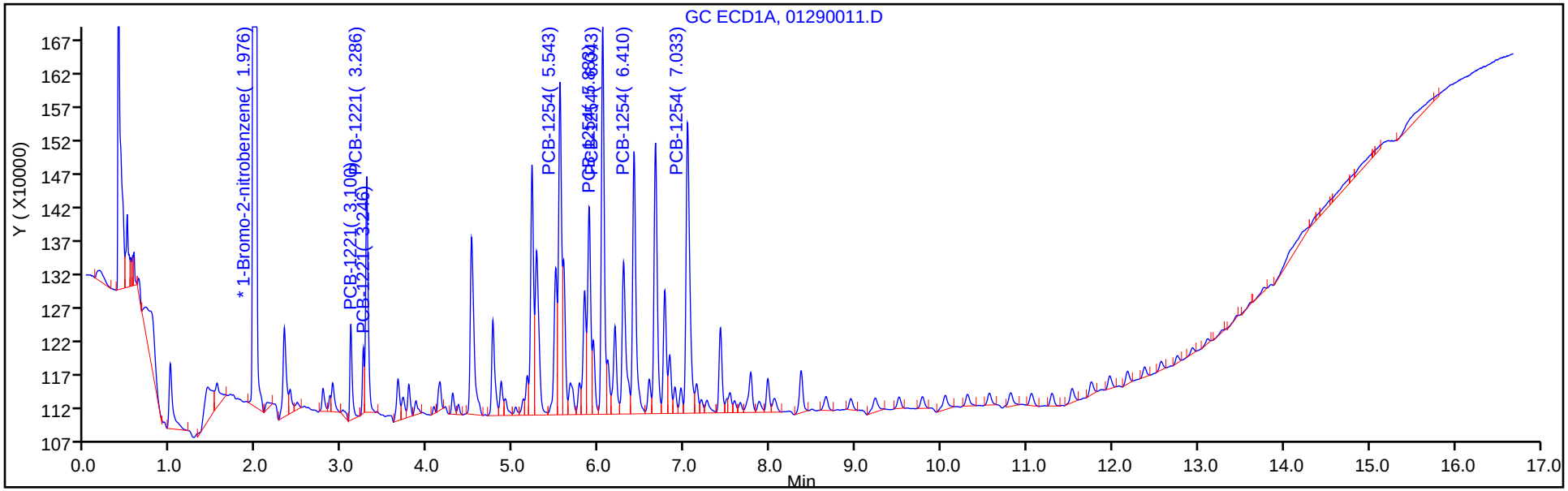
Report Date: 30-Jan-2019 14:59:34 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

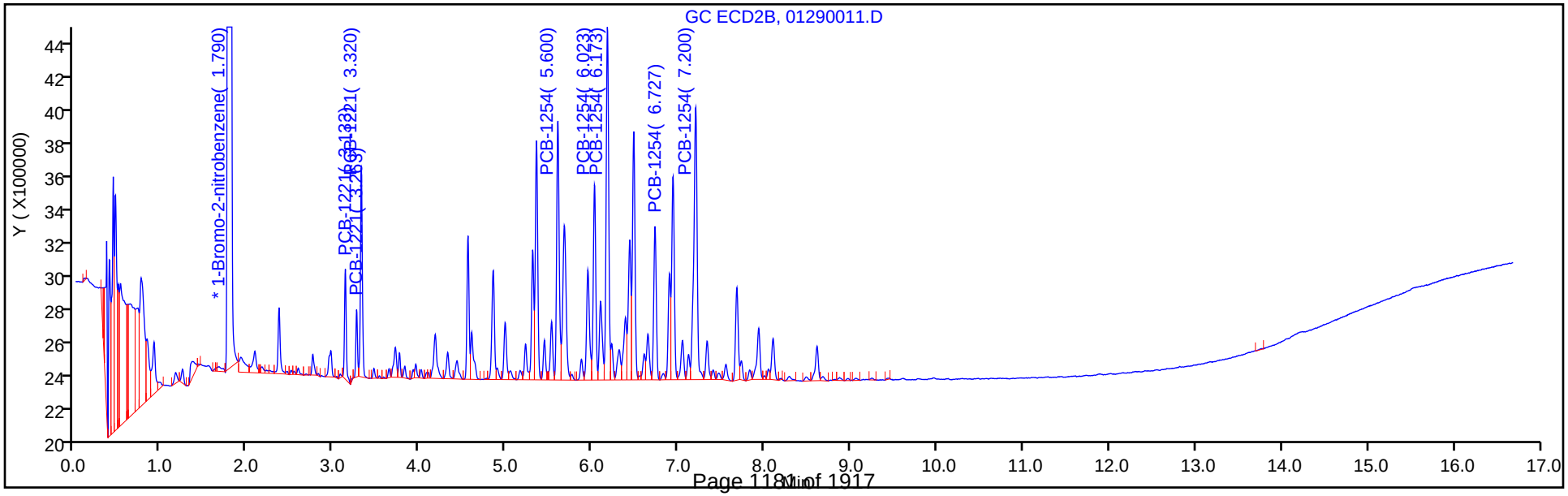
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290011.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 17:42:59 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD1 2154 | | | Worklist Smp#: | 11 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 11 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290012.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Jan-2019 18:04:08 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0078470-012
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:31 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 10:25:13

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.977 | -0.001 | 17586845 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.791 | -0.002 | 100750684 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.099 | 3.101 | -0.002 | 517623 | 50.0 | 55.0 | |
| 1 | 3.246 | 3.247 | -0.001 | 296349 | 50.0 | 62.1 | |
| 1 | 3.286 | 3.287 | -0.001 | 1511237 | 50.0 | 57.6 | |
| | | Average of Peak Amounts = | | | | 58.2 | |
| 2 | 3.133 | 3.134 | -0.001 | 1509377 | 50.0 | 54.3 | |
| 2 | 3.263 | 3.264 | -0.001 | 859909 | 50.0 | 48.8 | |
| 2 | 3.319 | 3.318 | 0.001 | 3151722 | 50.0 | 50.4 | |
| | | Average of Peak Amounts = | | | | 51.2 | |
| | | | | | | RPD = 12.89 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.542 | 5.544 | -0.002 | 2310745 | 50.0 | 52.9 | |
| 1 | 5.886 | 5.887 | -0.001 | 1503421 | 50.0 | 51.3 | |
| 1 | 6.042 | 6.044 | -0.002 | 2866737 | 50.0 | 53.0 | |
| 1 | 6.409 | 6.411 | -0.002 | 2005621 | 50.0 | 51.2 | |
| 1 | 7.036 | 7.037 | -0.001 | 2478744 | 50.0 | 51.7 | |
| | | Average of Peak Amounts = | | | | 52.0 | |
| 2 | 5.599 | 5.598 | 0.001 | 5581046 | 50.0 | 53.8 | |
| 2 | 6.026 | 6.024 | 0.002 | 4183934 | 50.0 | 53.9 | |
| 2 | 6.176 | 6.174 | 0.002 | 7601087 | 50.0 | 53.2 | |
| 2 | 6.726 | 6.724 | 0.002 | 3407544 | 50.0 | 54.8 | |
| 2 | 7.199 | 7.198 | 0.001 | 7834897 | 50.0 | 53.7 | |
| | | Average of Peak Amounts = | | | | 53.9 | |
| | | | | | | RPD = 3.45 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 110.3 | |
| 2 | | | | | | 105.1 | |
| | | | | | | RPD = 4.85 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.05 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

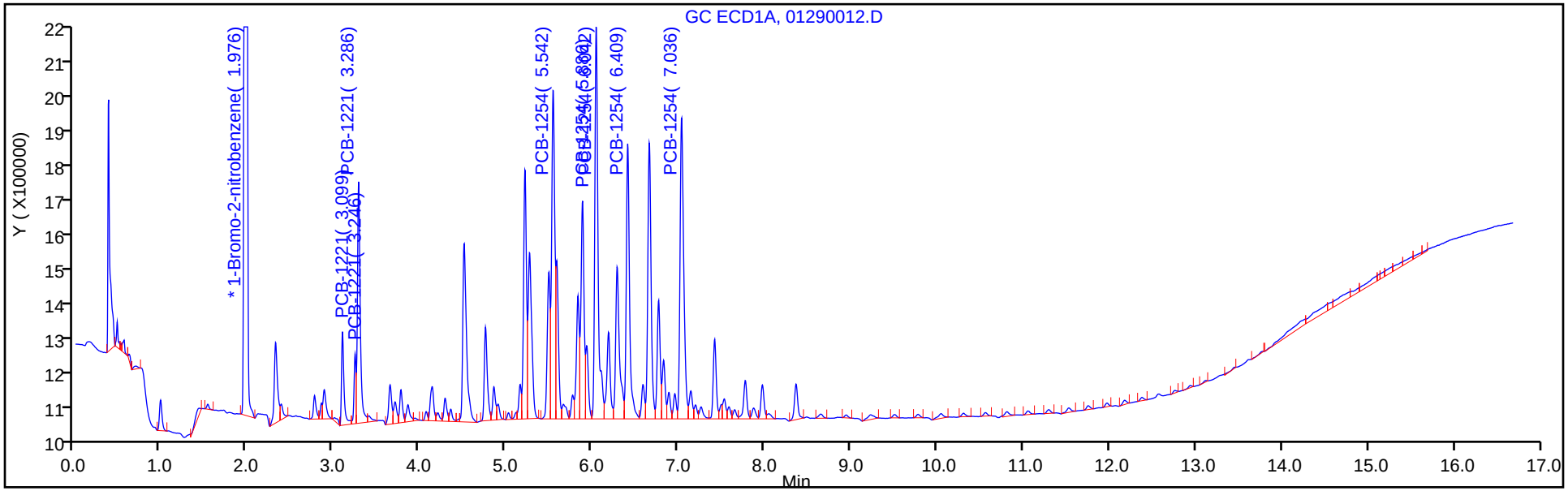
Report Date: 30-Jan-2019 14:59:31 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

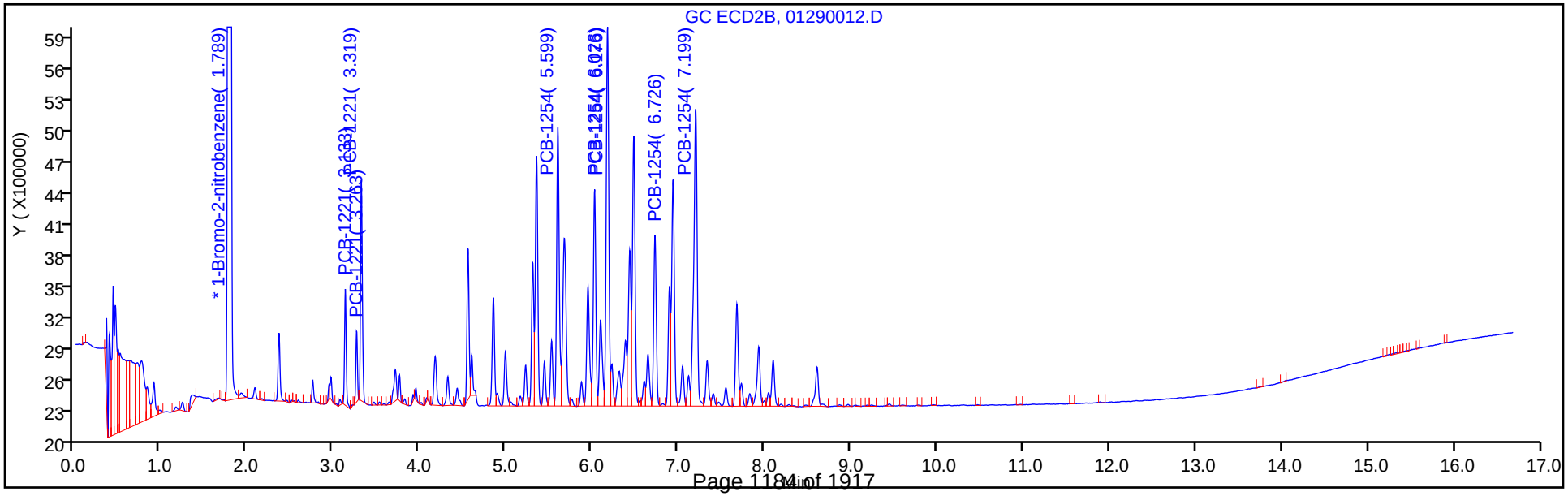
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290012.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 18:04:08 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD2 | | | Worklist Smp#: | 12 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 12 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290013.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Jan-2019 18:25:10 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0078470-013
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:29 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:11:02

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.977 | -0.002 | 18852776 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.791 | -0.002 | 107171763 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.099 | 3.101 | -0.002 | 916734 | 100.0 | 99.5 | |
| 1 | 3.245 | 3.247 | -0.002 | 515801 | 100.0 | 100.9 | |
| 1 | 3.285 | 3.287 | -0.002 | 2635112 | 100.0 | 103.5 | |
| | | Average of Peak Amounts = | | | | 101.3 | |
| 2 | 3.132 | 3.134 | -0.002 | 2788840 | 100.0 | 109.1 | |
| 2 | 3.265 | 3.264 | 0.001 | 1758737 | 100.0 | 112.0 | |
| 2 | 3.319 | 3.318 | 0.001 | 6011586 | 100.0 | 106.4 | |
| | | Average of Peak Amounts = | | | | 109.2 | |
| | | | | | | RPD = 7.49 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.545 | 5.544 | 0.001 | 4464480 | 100.0 | 104.5 | |
| 1 | 5.885 | 5.887 | -0.002 | 3017451 | 100.0 | 99.4 | |
| 1 | 6.045 | 6.044 | 0.001 | 5649387 | 100.0 | 100.2 | |
| 1 | 6.409 | 6.411 | -0.002 | 3986775 | 100.0 | 100.0 | |
| 1 | 7.035 | 7.037 | -0.002 | 4841126 | 100.0 | 98.3 | |
| | | Average of Peak Amounts = | | | | 100.5 | |
| 2 | 5.599 | 5.598 | 0.001 | 10043995 | 100.0 | 104.0 | |
| 2 | 6.025 | 6.024 | 0.001 | 7543706 | 100.0 | 103.8 | |
| 2 | 6.175 | 6.174 | 0.001 | 13724956 | 100.0 | 101.4 | |
| 2 | 6.725 | 6.724 | 0.001 | 6080405 | 100.0 | 105.7 | |
| 2 | 7.199 | 7.198 | 0.001 | 14072003 | 100.0 | 102.6 | |
| | | Average of Peak Amounts = | | | | 103.5 | |
| | | | | | | RPD = 2.95 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 201.8 | |
| 2 | | | | | | 212.7 | |
| | | | | | | RPD = 5.26 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.10 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

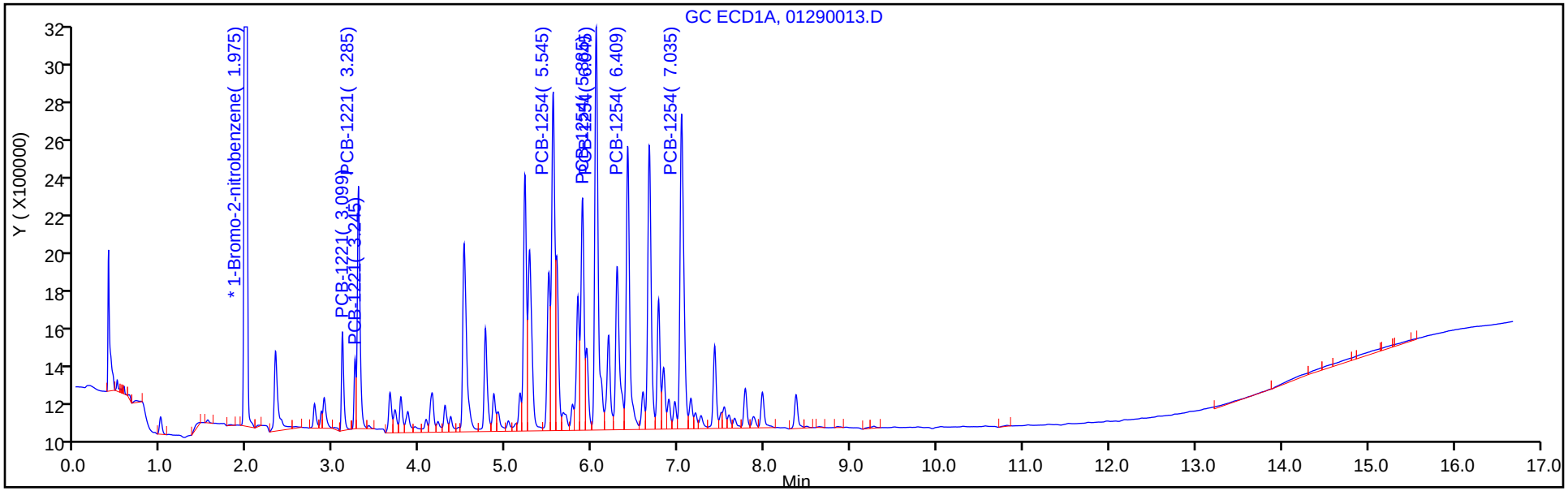
Report Date: 30-Jan-2019 14:59:29 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

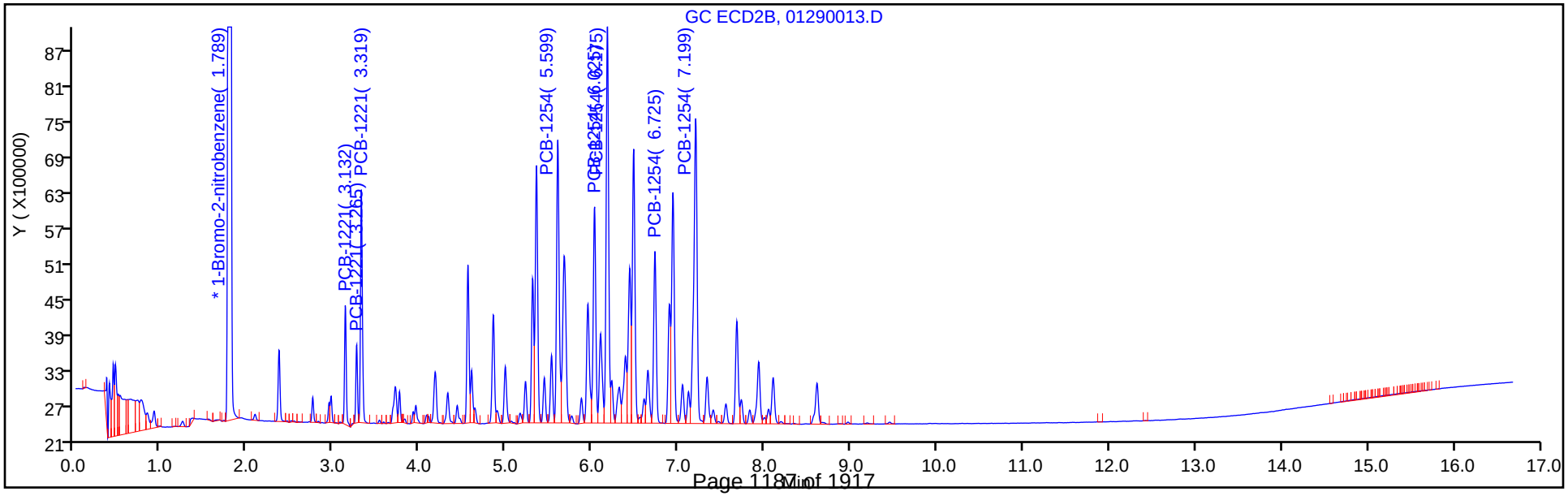
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290013.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 18:25:10 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD3 | | | Worklist Smp#: | 13 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 13 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290014.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Jan-2019 18:46:13 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0078470-014
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:27 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.977 | 0.001 | 18900475 | 100.0 | 100.0 | |
| 2 | 1.792 | 1.791 | 0.001 | 107254921 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.102 | 3.101 | 0.001 | 2285661 | 250.0 | 267.4 | |
| 1 | 3.245 | 3.247 | -0.002 | 1249862 | 250.0 | 243.8 | |
| 1 | 3.285 | 3.287 | -0.002 | 6425270 | 250.0 | 274.0 | |
| | | Average of Peak Amounts = | | | | 261.8 | |
| 2 | 3.132 | 3.134 | -0.002 | 6160075 | 250.0 | 265.0 | |
| 2 | 3.265 | 3.264 | 0.001 | 4019733 | 250.0 | 281.1 | |
| 2 | 3.318 | 3.318 | 0.000 | 13912643 | 250.0 | 272.6 | |
| | | Average of Peak Amounts = | | | | 272.9 | |
| | | | | | | RPD = 4.17 | |
| 9 PCB-1254 | | | | | | | |
| 1 | 5.545 | 5.544 | 0.001 | 10267263 | 250.0 | 254.4 | |
| 1 | 5.885 | 5.887 | -0.002 | 7436629 | 250.0 | 249.8 | |
| 1 | 6.045 | 6.044 | 0.001 | 14193865 | 250.0 | 256.2 | |
| 1 | 6.412 | 6.411 | 0.001 | 9819643 | 250.0 | 254.2 | |
| 1 | 7.035 | 7.037 | -0.002 | 12124818 | 250.0 | 253.1 | |
| | | Average of Peak Amounts = | | | | 253.5 | |
| 2 | 5.598 | 5.598 | 0.000 | 23360585 | 250.0 | 266.5 | |
| 2 | 6.025 | 6.024 | 0.001 | 17638723 | 250.0 | 266.4 | |
| 2 | 6.175 | 6.174 | 0.001 | 32639179 | 250.0 | 262.9 | |
| 2 | 6.725 | 6.724 | 0.001 | 14070462 | 250.0 | 271.0 | |
| 2 | 7.198 | 7.198 | 0.000 | 33156680 | 250.0 | 265.0 | |
| | | Average of Peak Amounts = | | | | 266.4 | |
| | | | | | | RPD = 4.94 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 515.3 | |
| 2 | | | | | | 539.3 | |
| | | | | | | RPD = 4.55 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.25 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

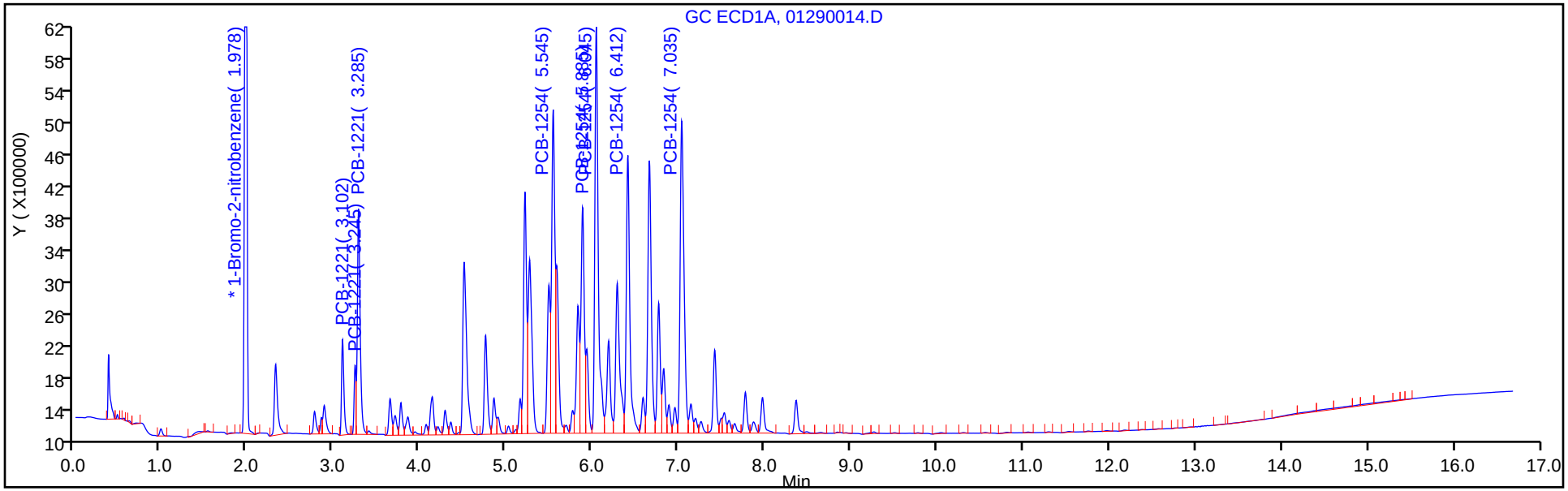
Report Date: 30-Jan-2019 14:59:28 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

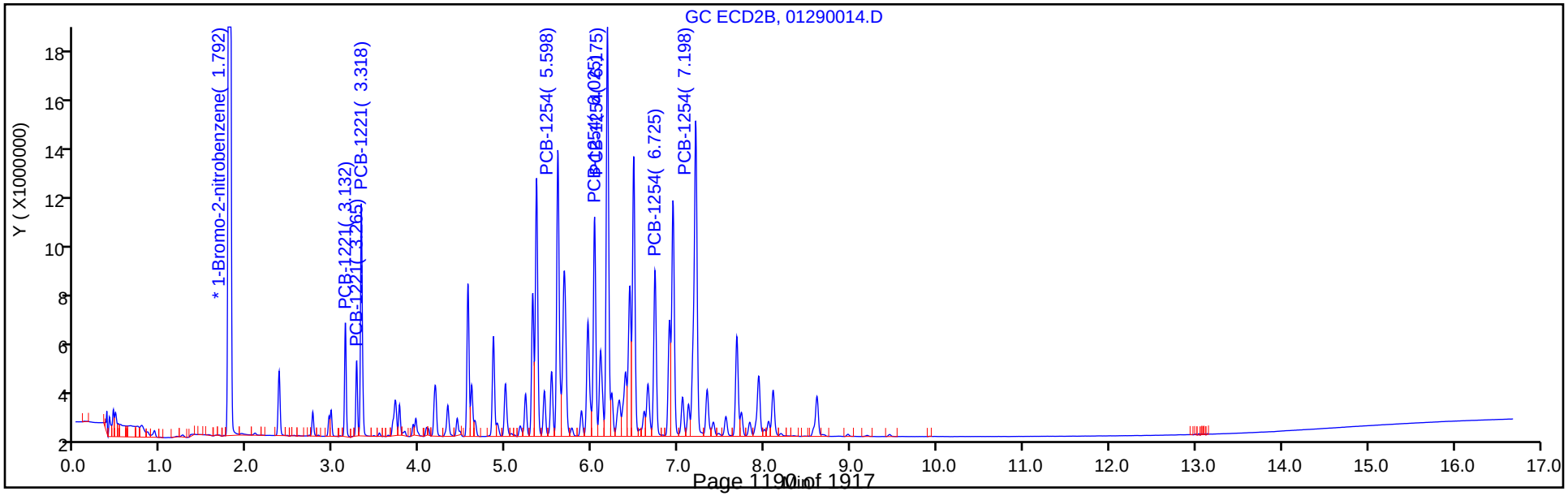
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290014.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 18:46:13 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD4 | | | Worklist Smp#: | 14 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 14 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290015.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 29-Jan-2019 19:07:23 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0078470-015
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:25 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:44:01

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.977 | 0.000 | 18277877 | 100.0 | 100.0 | |
| 2 | 1.791 | 1.791 | 0.000 | 103309156 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.101 | 3.101 | 0.000 | 4272039 | 500.0 | 529.4 | |
| 1 | 3.247 | 3.247 | 0.000 | 2406564 | 500.0 | 485.4 | |
| 1 | 3.287 | 3.287 | 0.000 | 11538084 | 500.0 | 522.2 | |
| | | Average of Peak Amounts = | | | | 512.3 | |
| 2 | 3.134 | 3.134 | 0.000 | 10921675 | 500.0 | 504.7 | |
| 2 | 3.264 | 3.264 | 0.000 | 7137136 | 500.0 | 534.8 | |
| 2 | 3.318 | 3.318 | 0.000 | 25213380 | 500.0 | 530.7 | |
| | | Average of Peak Amounts = | | | | 523.4 | |
| | | | | | | RPD = 2.13 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.544 | 5.544 | 0.000 | 20181603 | 500.0 | 528.9 | |
| 1 | 5.887 | 5.887 | 0.000 | 14946862 | 500.0 | 523.2 | |
| 1 | 6.044 | 6.044 | 0.000 | 27850289 | 500.0 | 523.2 | |
| 1 | 6.411 | 6.411 | 0.000 | 19201872 | 500.0 | 520.1 | |
| 1 | 7.037 | 7.037 | 0.000 | 23827137 | 500.0 | 519.4 | |
| | | Average of Peak Amounts = | | | | 523.0 | |
| 2 | 5.598 | 5.598 | 0.000 | 43434124 | 500.0 | 531.9 | |
| 2 | 6.024 | 6.024 | 0.000 | 32807117 | 500.0 | 531.0 | |
| 2 | 6.174 | 6.174 | 0.000 | 61775552 | 500.0 | 532.0 | |
| 2 | 6.724 | 6.724 | 0.000 | 25966972 | 500.0 | 537.9 | |
| 2 | 7.198 | 7.198 | 0.000 | 62140948 | 500.0 | 532.1 | |
| | | Average of Peak Amounts = | | | | 533.0 | |
| | | | | | | RPD = 1.91 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.50 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

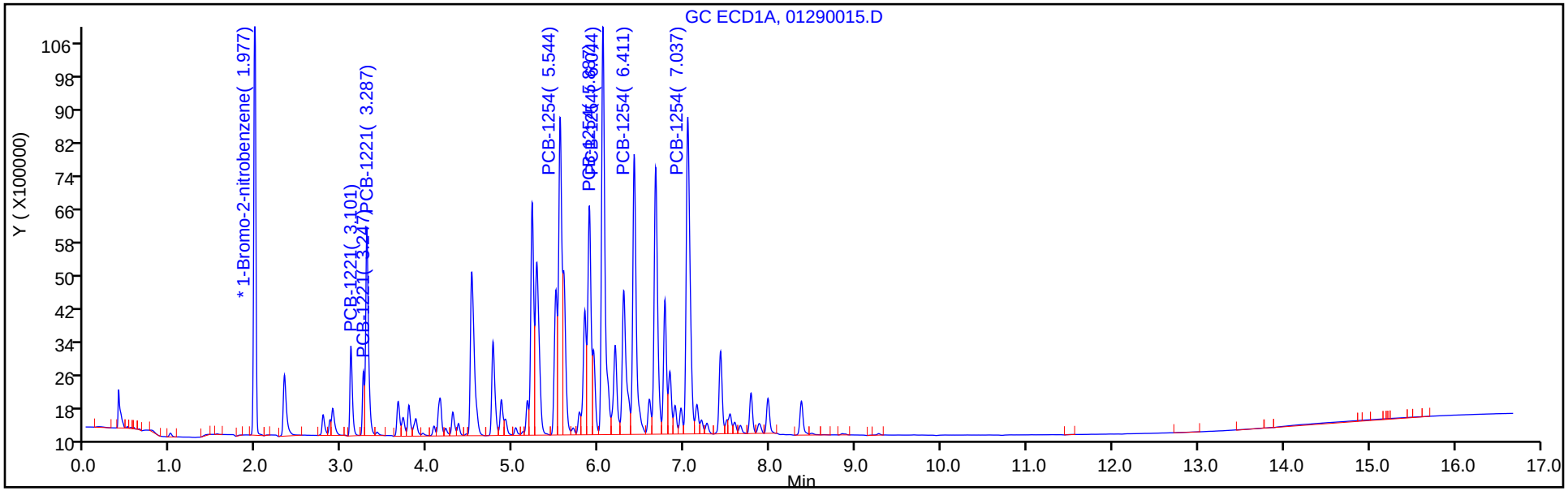
Report Date: 30-Jan-2019 14:59:25 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

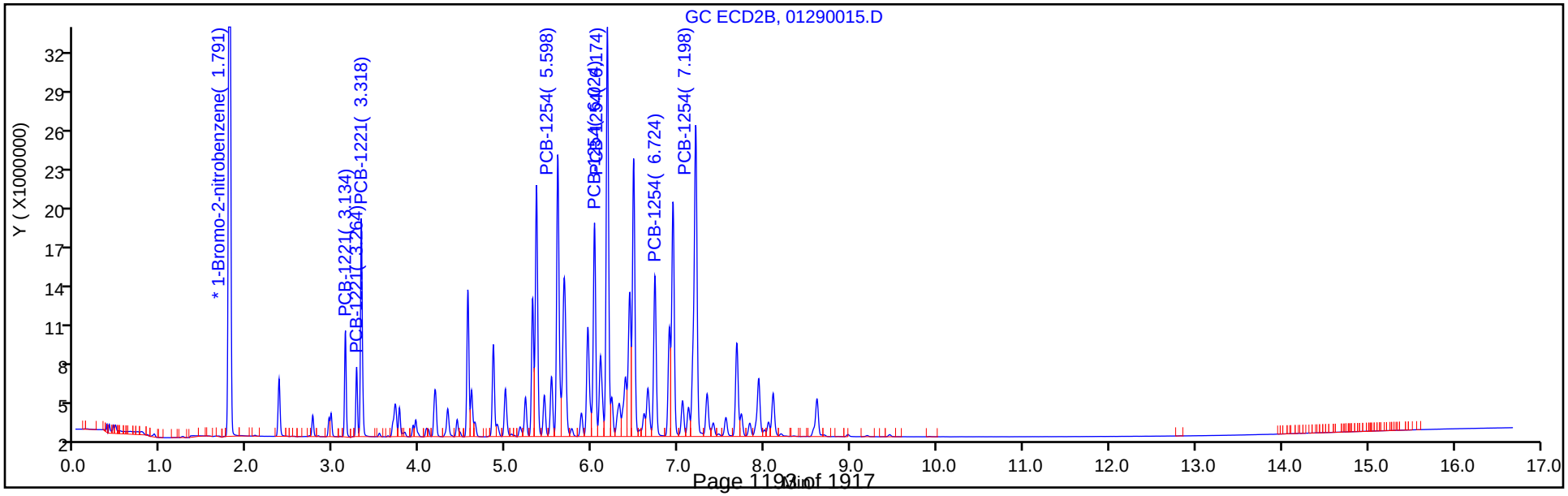
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290015.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 19:07:23 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD5 | | | Worklist Smp#: | 15 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 15 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290016.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 29-Jan-2019 19:28:26 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0078470-016
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:23 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 18947639 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 107224784 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.100 | 3.101 | -0.001 | 6278067 | 750.0 | 756.1 | |
| 1 | 3.246 | 3.247 | -0.001 | 3444943 | 750.0 | 670.3 | |
| 1 | 3.286 | 3.287 | -0.001 | 17079944 | 750.0 | 752.3 | |
| | | Average of Peak Amounts = | | | | 726.3 | |
| 2 | 3.133 | 3.134 | -0.001 | 15773177 | 750.0 | 710.1 | |
| 2 | 3.263 | 3.264 | -0.001 | 10378441 | 750.0 | 757.2 | |
| 2 | 3.320 | 3.318 | 0.002 | 36996950 | 750.0 | 758.6 | |
| | | Average of Peak Amounts = | | | | 742.0 | |
| | | | | | | RPD = 2.14 | |
| 9 PCB-1254 | | | | | | | |
| 1 | 5.543 | 5.544 | -0.001 | 29777425 | 750.0 | 757.6 | |
| 1 | 5.886 | 5.887 | -0.001 | 22481604 | 750.0 | 760.9 | |
| 1 | 6.043 | 6.044 | -0.001 | 41851991 | 750.0 | 760.0 | |
| 1 | 6.410 | 6.411 | -0.001 | 29009498 | 750.0 | 760.6 | |
| 1 | 7.036 | 7.037 | -0.001 | 36062168 | 750.0 | 760.6 | |
| | | Average of Peak Amounts = | | | | 759.9 | |
| 2 | 5.600 | 5.598 | 0.002 | 63195207 | 750.0 | 753.2 | |
| 2 | 6.023 | 6.024 | -0.001 | 47912197 | 750.0 | 754.5 | |
| 2 | 6.173 | 6.174 | -0.001 | 90177116 | 750.0 | 754.8 | |
| 2 | 6.727 | 6.724 | 0.003 | 37439825 | 750.0 | 755.2 | |
| 2 | 7.200 | 7.198 | 0.002 | 91035999 | 750.0 | 758.2 | |
| | | Average of Peak Amounts = | | | | 755.2 | |
| | | | | | | RPD = 0.62 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| S | 8 Polychlorinated biphenyls, Total | | | | | | |
| 1 | | | | | | 1486.2 | |
| 2 | | | | | | 1497.1 | |
| | | | | | | RPD = 0.74 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.75 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

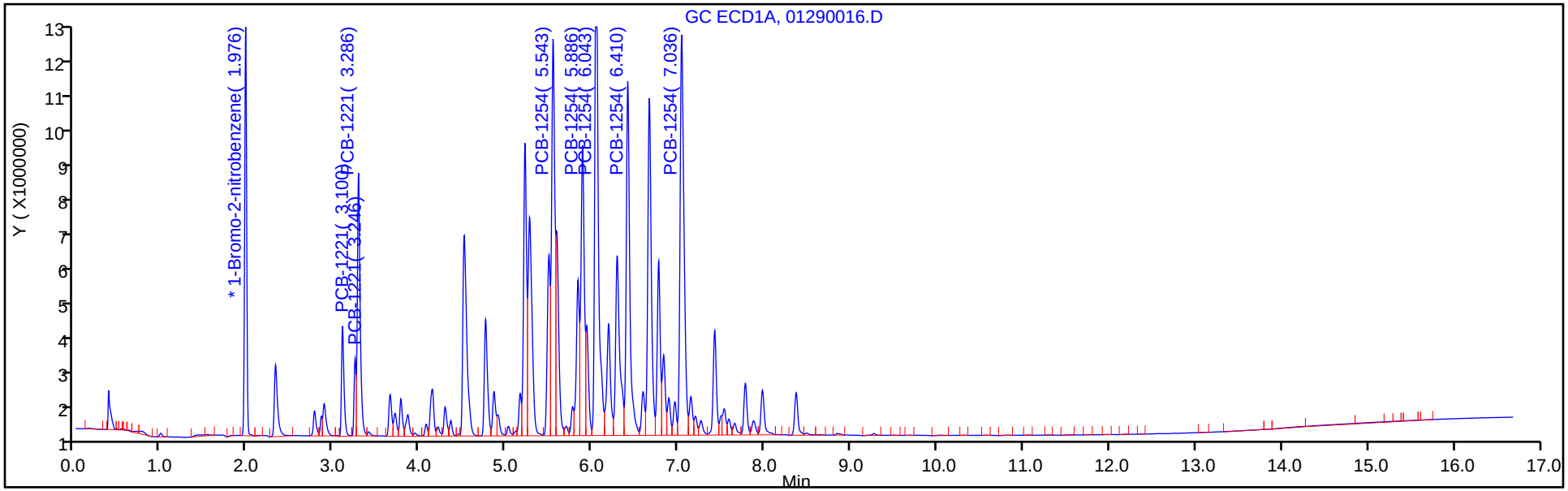
Report Date: 30-Jan-2019 14:59:23 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

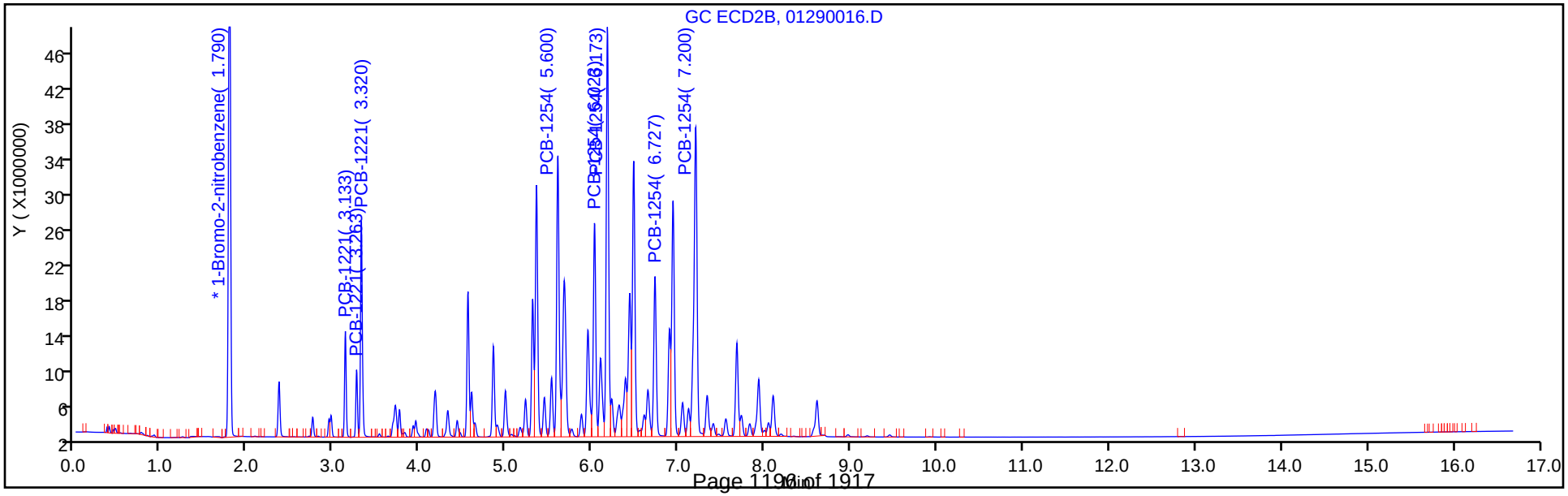
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290016.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 19:28:26 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD6 | | | Worklist Smp#: | 16 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 16 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290017.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Jan-2019 19:49:27 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0078470-017
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:21 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:41:20

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.979 | -0.002 | 19851473 | 100.0 | 100.0 | |
| 2 | 1.787 | 1.789 | -0.002 | 112694816 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.100 | 3.101 | -0.001 | 8210089 | 1000.0 | 947.0 | |
| 1 | 3.247 | 3.247 | 0.000 | 4067237 | 1000.0 | 755.4 | |
| 1 | 3.287 | 3.287 | 0.000 | 22436428 | 1000.0 | 947.2 | |
| | | Average of Peak Amounts = | | | | 883.2 | |
| 2 | 3.134 | 3.134 | 0.000 | 20283315 | 1000.0 | 873.3 | |
| 2 | 3.264 | 3.264 | 0.000 | 13216442 | 1000.0 | 921.6 | |
| 2 | 3.317 | 3.318 | -0.001 | 47720495 | 1000.0 | 935.6 | |
| | | Average of Peak Amounts = | | | | 910.2 | |
| | | | | | | RPD = 3.00 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.544 | 5.544 | 0.000 | 39222684 | 1000.0 | 955.4 | |
| 1 | 5.887 | 5.887 | 0.000 | 29892070 | 1000.0 | 966.6 | |
| 1 | 6.044 | 6.044 | 0.000 | 55340228 | 1000.0 | 960.0 | |
| 1 | 6.410 | 6.411 | -0.001 | 38512069 | 1000.0 | 965.4 | |
| 1 | 7.037 | 7.037 | 0.000 | 48030061 | 1000.0 | 968.2 | |
| | | Average of Peak Amounts = | | | | 963.1 | |
| 2 | 5.597 | 5.598 | -0.001 | 82953892 | 1000.0 | 945.4 | |
| 2 | 6.024 | 6.024 | 0.000 | 62789497 | 1000.0 | 945.2 | |
| 2 | 6.174 | 6.174 | 0.000 | 118710548 | 1000.0 | 949.4 | |
| 2 | 6.724 | 6.724 | 0.000 | 48305997 | 1000.0 | 931.7 | |
| 2 | 7.197 | 7.198 | -0.001 | 118446332 | 1000.0 | 942.8 | |
| | | Average of Peak Amounts = | | | | 942.9 | |
| | | | | | | RPD = 2.12 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 1846.3 | |
| 2 | | | | | | 1853.1 | |
| | | | | | | RPD = 0.36 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

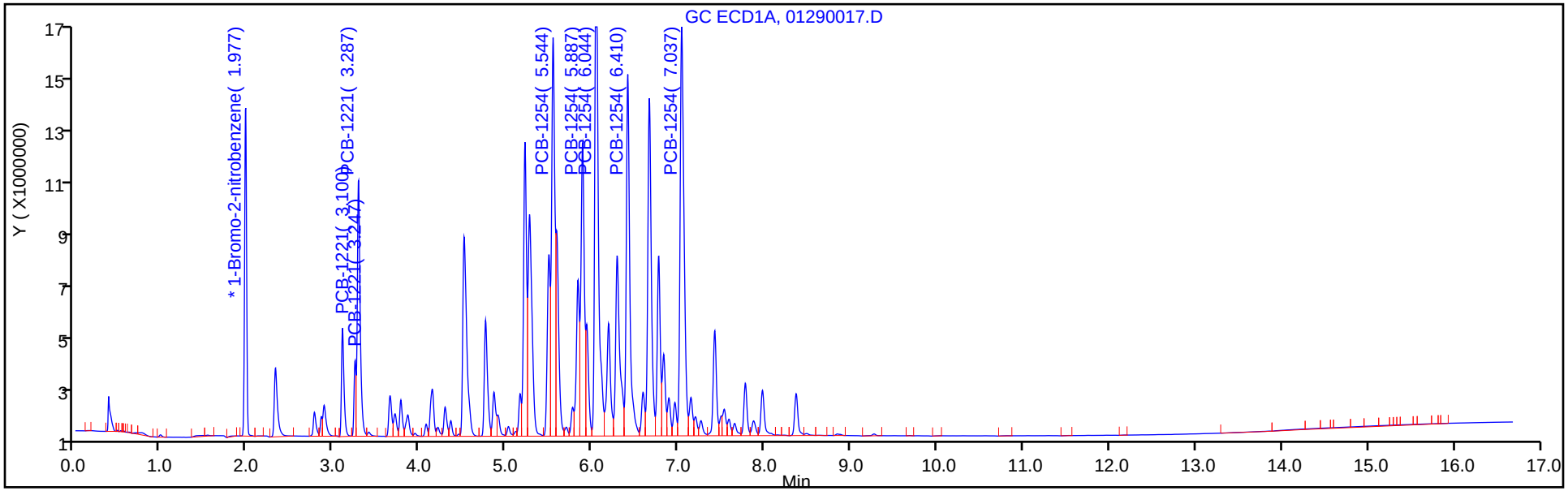
Report Date: 30-Jan-2019 14:59:21 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

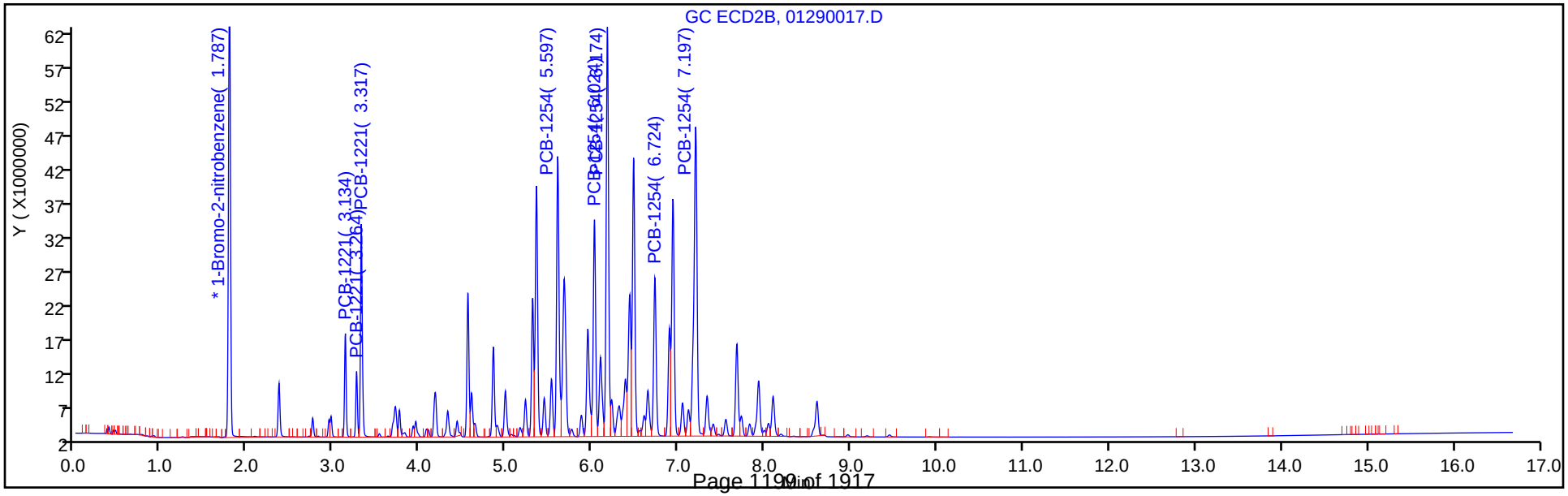
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290017.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 19:49:27 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD7 | | | Worklist Smp#: | 17 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 17 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 17:42 Calibration End Date: 01/29/2019 19:49 Calibration ID: 35088

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/11 | 01290011.D |
| Level 2 | STD2 280-445745/12 | 01290012.D |
| Level 3 | STD3 280-445745/13 | 01290013.D |
| Level 4 | STD4 280-445745/14 | 01290014.D |
| Level 5 | STD5 280-445745/15 | 01290015.D |
| Level 6 | STD6 280-445745/16 | 01290016.D |
| Level 7 | STD7 280-445745/17 | 01290017.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| PCB-1221 Peak 1 | 0.0349 0.0196 | 0.0300 0.0180 | 0.0260 | 0.0230 | 0.0211 | Lin2 | 0.4035 | 0.0201 | | | | | | | 0.9900 | | 0.9900 |
| PCB-1221 Peak 2 | 0.0195 0.0129 | 0.0171 0.0117 | 0.0164 | 0.0150 | 0.0138 | Lin1 | 0.2452 | 0.0125 | | | | | | | 0.9930 | | 0.9900 |
| PCB-1221 Peak 3 | 0.0725 0.0460 | 0.0626 0.0423 | 0.0561 | 0.0519 | 0.0488 | Lin1 | 0.8942 | 0.0443 | | | | | | | 0.9950 | | 0.9900 |
| PCB-1254 Peak 1 | 0.1187 0.0786 | 0.1108 0.0736 | 0.0937 | 0.0871 | 0.0841 | Lin1 | 1.4330 | 0.0763 | | | | | | | 0.9960 | | 0.9900 |
| PCB-1254 Peak 2 | 0.0879 0.0596 | 0.0831 0.0557 | 0.0704 | 0.0658 | 0.0635 | Lin1 | 1.0336 | 0.0579 | | | | | | | 0.9960 | | 0.9900 |
| PCB-1254 Peak 3 | 0.1624 0.1121 | 0.1509 0.1053 | 0.1281 | 0.1217 | 0.1196 | Lin1 | 1.7397 | 0.1091 | | | | | | | 0.9970 | | 0.9900 |
| PCB-1254 Peak 4 | 0.0704 0.0466 | 0.0676 0.0429 | 0.0567 | 0.0525 | 0.0503 | Lin1 | 0.9160 | 0.0450 | | | | | | | 0.9940 | | 0.9900 |
| PCB-1254 Peak 5 | 0.1661 0.1132 | 0.1555 0.1051 | 0.1313 | 0.1237 | 0.1203 | Lin1 | 1.9014 | 0.1095 | | | | | | | 0.9960 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP2  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 17:42  Calibration End Date: 01/29/2019 19:49  Calibration ID: 35088

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/11 | 01290011.D |
| Level 2 | STD2 280-445745/12 | 01290012.D |
| Level 3 | STD3 280-445745/13 | 01290013.D |
| Level 4 | STD4 280-445745/14 | 01290014.D |
| Level 5 | STD5 280-445745/15 | 01290015.D |
| Level 6 | STD6 280-445745/16 | 01290016.D |
| Level 7 | STD7 280-445745/17 | 01290017.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1221 Peak 1 | BNB | Lin2 | 933825<br>15773177 | 1509377<br>20283315 | 2788840 | 6160075 | 10921675 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1221 Peak 2 | BNB | Lin1 | 521534<br>10378441 | 859909<br>13216442 | 1758737 | 4019733 | 7137136 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1221 Peak 3 | BNB | Lin1 | 1938038<br>36996950 | 3151722<br>47720495 | 6011586 | 13912643 | 25213380 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1254 Peak 1 | BNB | Lin1 | 3175288<br>63195207 | 5581046<br>82953892 | 10043995 | 23360585 | 43434124 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1254 Peak 2 | BNB | Lin1 | 2350402<br>47912197 | 4183934<br>62789497 | 7543706 | 17638723 | 32807117 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1254 Peak 3 | BNB | Lin1 | 4341968<br>90177116 | 7601087<br>118710548 | 13724956 | 32639179 | 61775552 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1254 Peak 4 | BNB | Lin1 | 1881749<br>37439825 | 3407544<br>48305997 | 6080405 | 14070462 | 25966972 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1254 Peak 5 | BNB | Lin1 | 4441497<br>91035999 | 7834897<br>118446332 | 14072003 | 33156680 | 62140948 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |

Curve Type Legend:

Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290011.D
Lims ID: STD1 2154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Jan-2019 17:42:59 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1 2154
Misc. Info.: 280-0078470-011
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:33 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 10:24:54

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | M |
| 1 | 1.976 | 1.977 | -0.001 | 18575299 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.791 | -0.001 | 106959292 | 100.0 | 100.0 | M |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.100 | 3.101 | -0.001 | 271388 | 25.0 | 20.5 | |
| 1 | 3.246 | 3.247 | -0.001 | 145270 | 25.0 | 28.8 | |
| 1 | 3.286 | 3.287 | -0.001 | 732373 | 25.0 | 18.0 | |
| | | Average of Peak Amounts = | | | | 22.5 | |
| 2 | 3.133 | 3.134 | -0.001 | 933825 | 25.0 | 23.3 | |
| 2 | 3.263 | 3.264 | -0.001 | 521534 | 25.0 | 19.5 | |
| 2 | 3.320 | 3.318 | 0.002 | 1938038 | 25.0 | 20.7 | |
| | | Average of Peak Amounts = | | | | 21.2 | |
| | | | | | | RPD = 6.01 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.543 | 5.544 | -0.001 | 1244696 | 25.0 | 21.4 | |
| 1 | 5.883 | 5.887 | -0.004 | 795719 | 25.0 | 23.8 | |
| 1 | 6.043 | 6.044 | -0.001 | 1379206 | 25.0 | 22.3 | |
| 1 | 6.410 | 6.411 | -0.001 | 1087587 | 25.0 | 23.5 | |
| 1 | 7.033 | 7.037 | -0.004 | 1323649 | 25.0 | 23.7 | |
| | | Average of Peak Amounts = | | | | 22.9 | |
| 2 | 5.600 | 5.598 | 0.002 | 3175288 | 25.0 | 20.1 | |
| 2 | 6.023 | 6.024 | -0.001 | 2350402 | 25.0 | 20.1 | |
| 2 | 6.173 | 6.174 | -0.001 | 4341968 | 25.0 | 21.3 | |
| 2 | 6.727 | 6.724 | 0.003 | 1881749 | 25.0 | 18.7 | |
| 2 | 7.200 | 7.198 | 0.002 | 4441497 | 25.0 | 20.6 | |
| | | Average of Peak Amounts = | | | | 20.2 | |
| | | | | | | RPD = 12.94 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 45.4 | |
| 2 | | | | | | 41.3 | |
| | | | | | | RPD = 9.46 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.03 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

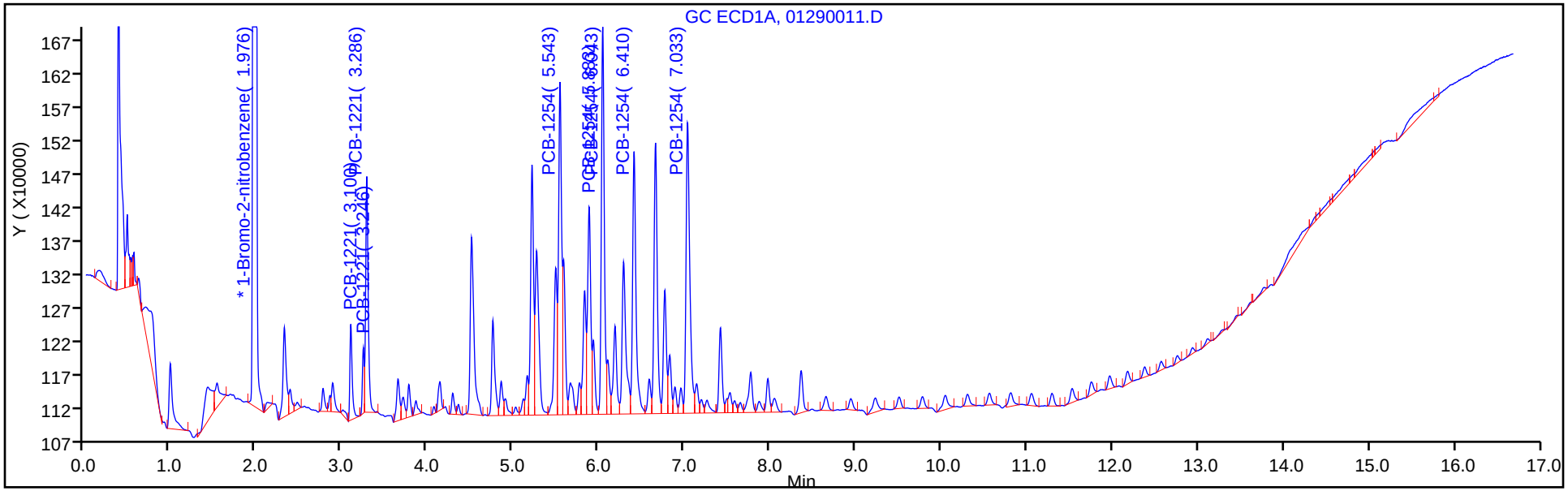
Report Date: 30-Jan-2019 14:59:34 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

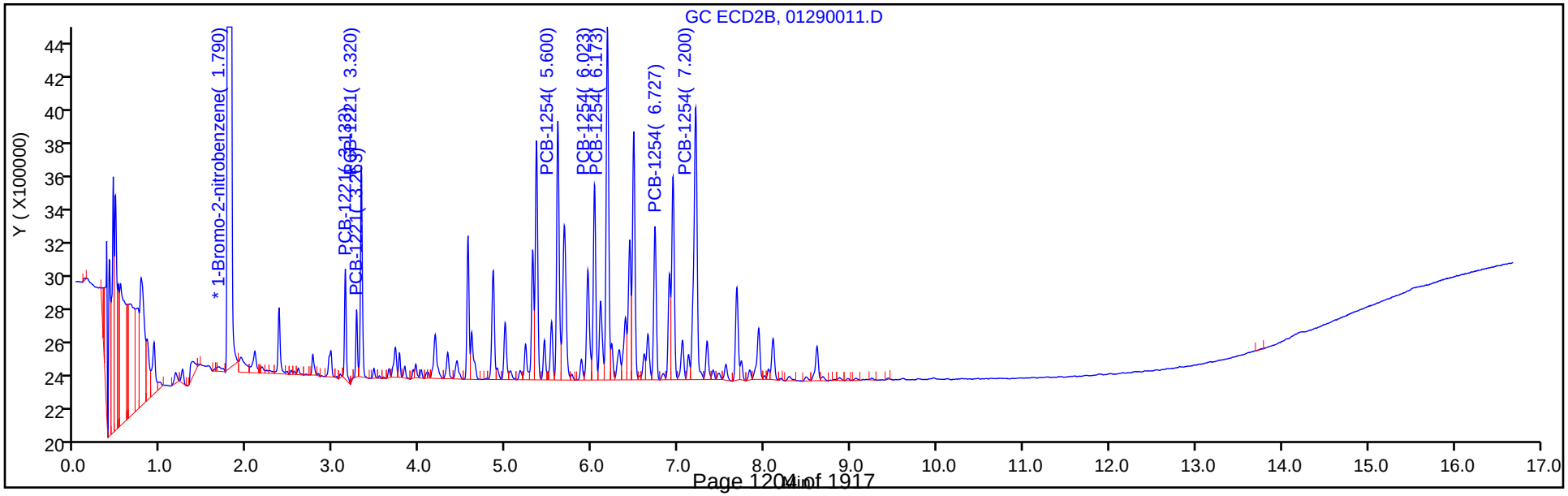
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290011.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 17:42:59 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD1 2154 | | | Worklist Smp#: | 11 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 11 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

TestAmerica Denver

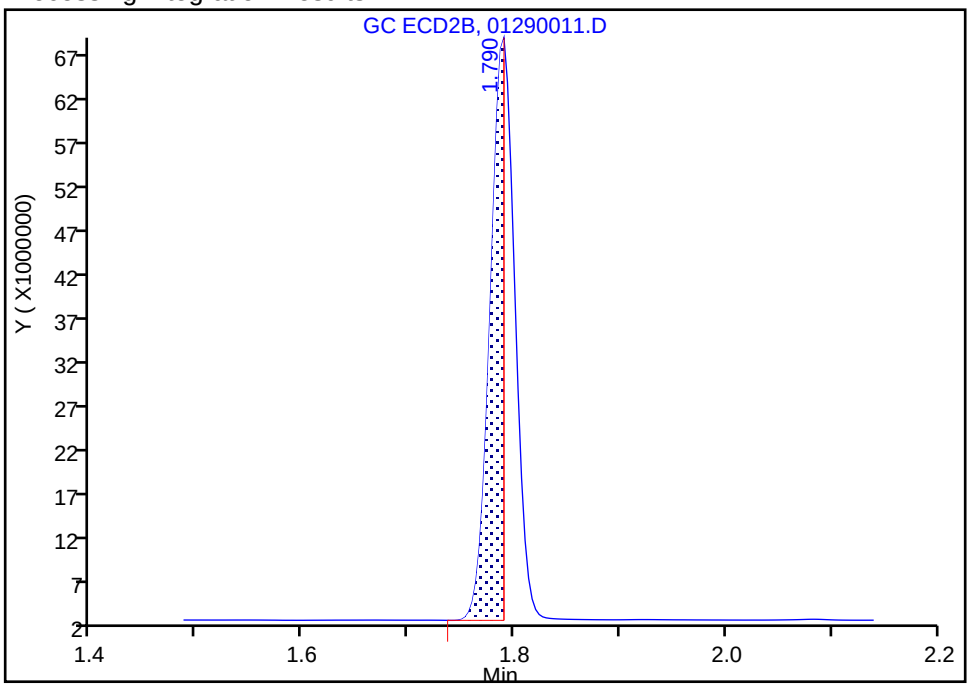
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290011.D
Injection Date: 29-Jan-2019 17:42:59 Instrument ID: SGC_J
Lims ID: STD1 2154
Client ID:
Operator ID: TEM ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8082_J Limit Group: GCSV - 8082 - IS
Column: CLP2 Pesticides Column 2 ( 0.32 mm) Detector GC ECD2B

## * 17 1-Bromo-2-nitrobenzene, CAS: 577-19-5

Signal: 2

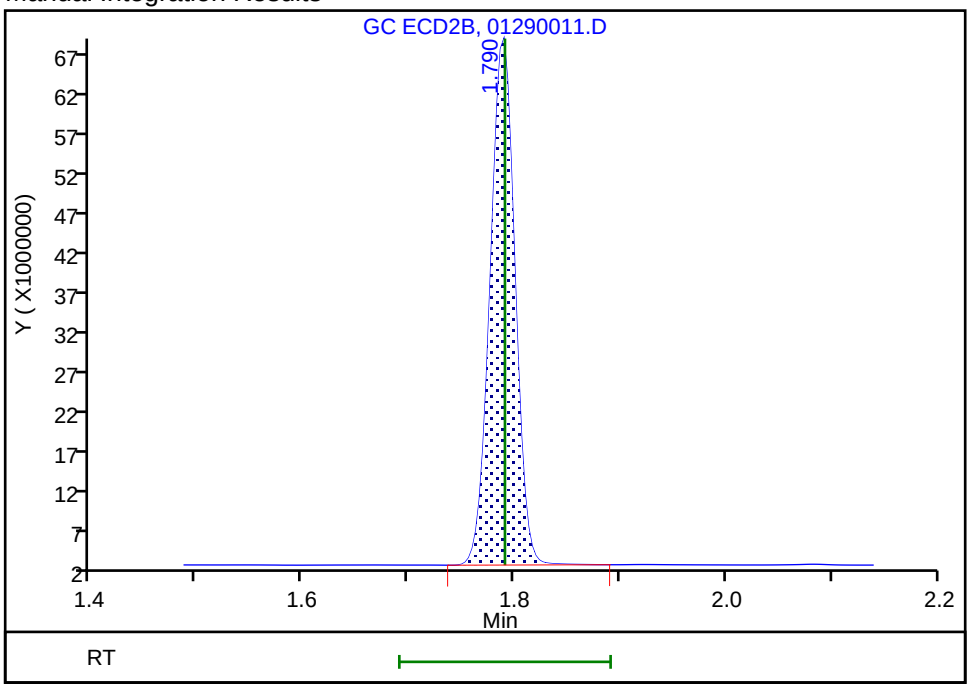
Processing Integration Results

RT: 1.79
Area: 58050339
Amount: 100.0000
Amount Units: ng/ml




Manual Integration Results

RT: 1.79
Area: 106959292
Amount: 100.0000
Amount Units: ng/ml




Reviewer: mooret, 30-Jan-2019 12:58:45
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290012.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Jan-2019 18:04:08 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0078470-012
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:31 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 10:25:13

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.977 | -0.001 | 17586845 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.791 | -0.002 | 100750684 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.099 | 3.101 | -0.002 | 517623 | 50.0 | 55.0 | |
| 1 | 3.246 | 3.247 | -0.001 | 296349 | 50.0 | 62.1 | |
| 1 | 3.286 | 3.287 | -0.001 | 1511237 | 50.0 | 57.6 | |
| | | Average of Peak Amounts = | | | | 58.2 | |
| 2 | 3.133 | 3.134 | -0.001 | 1509377 | 50.0 | 54.3 | |
| 2 | 3.263 | 3.264 | -0.001 | 859909 | 50.0 | 48.8 | |
| 2 | 3.319 | 3.318 | 0.001 | 3151722 | 50.0 | 50.4 | |
| | | Average of Peak Amounts = | | | | 51.2 | |
| | | | | | | RPD = 12.89 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.542 | 5.544 | -0.002 | 2310745 | 50.0 | 52.9 | |
| 1 | 5.886 | 5.887 | -0.001 | 1503421 | 50.0 | 51.3 | |
| 1 | 6.042 | 6.044 | -0.002 | 2866737 | 50.0 | 53.0 | |
| 1 | 6.409 | 6.411 | -0.002 | 2005621 | 50.0 | 51.2 | |
| 1 | 7.036 | 7.037 | -0.001 | 2478744 | 50.0 | 51.7 | |
| | | Average of Peak Amounts = | | | | 52.0 | |
| 2 | 5.599 | 5.598 | 0.001 | 5581046 | 50.0 | 53.8 | |
| 2 | 6.026 | 6.024 | 0.002 | 4183934 | 50.0 | 53.9 | |
| 2 | 6.176 | 6.174 | 0.002 | 7601087 | 50.0 | 53.2 | |
| 2 | 6.726 | 6.724 | 0.002 | 3407544 | 50.0 | 54.8 | |
| 2 | 7.199 | 7.198 | 0.001 | 7834897 | 50.0 | 53.7 | |
| | | Average of Peak Amounts = | | | | 53.9 | |
| | | | | | | RPD = 3.45 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 110.3 | |
| 2 | | | | | | 105.1 | |
| | | | | | | RPD = 4.85 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.05 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

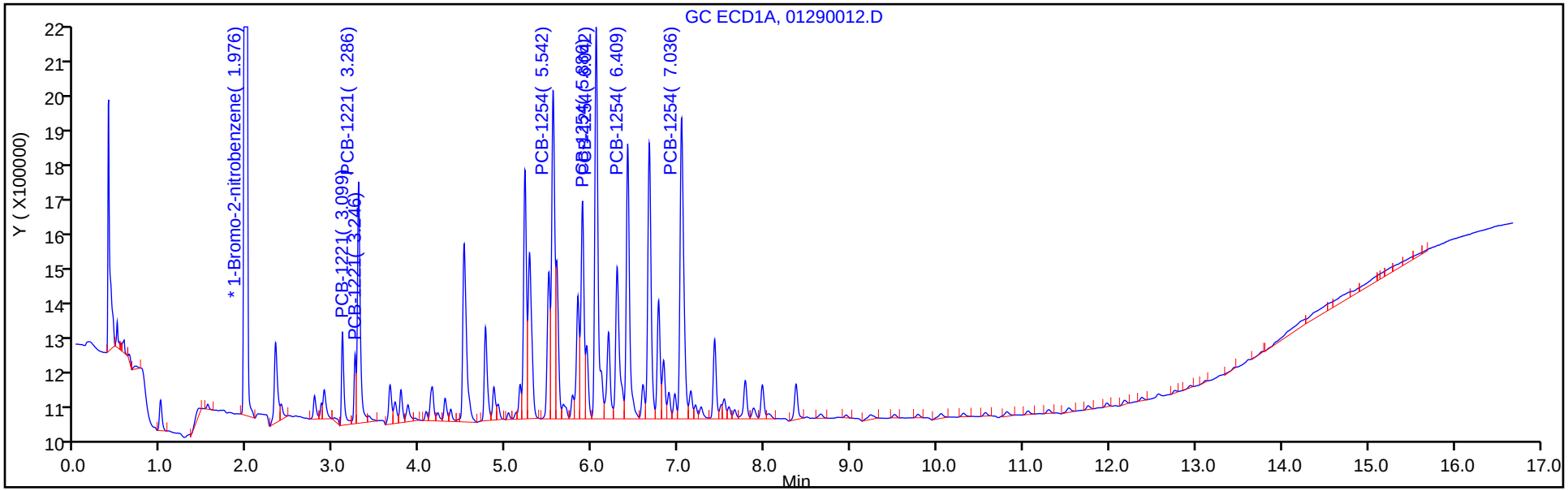
Report Date: 30-Jan-2019 14:59:32 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

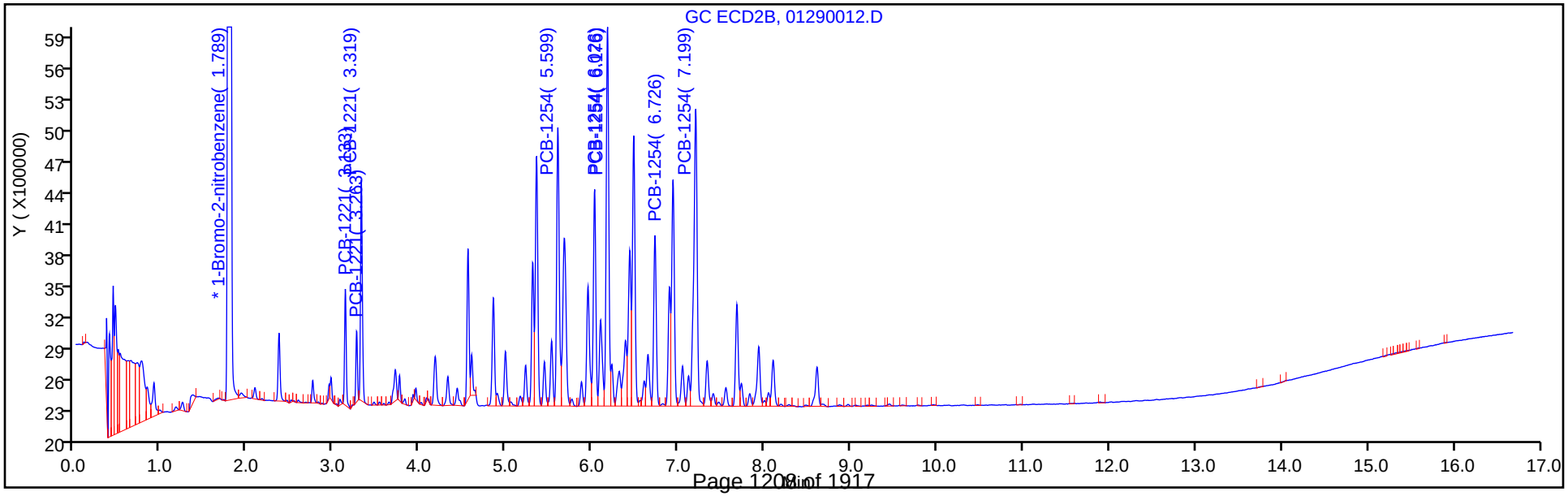
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290012.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 18:04:08 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD2 | | | Worklist Smp#: | 12 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 12 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290013.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Jan-2019 18:25:10 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0078470-013
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:29 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:11:02

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.977 | -0.002 | 18852776 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.791 | -0.002 | 107171763 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.099 | 3.101 | -0.002 | 916734 | 100.0 | 99.5 | |
| 1 | 3.245 | 3.247 | -0.002 | 515801 | 100.0 | 100.9 | |
| 1 | 3.285 | 3.287 | -0.002 | 2635112 | 100.0 | 103.5 | |
| | | Average of Peak Amounts = | | | | 101.3 | |
| 2 | 3.132 | 3.134 | -0.002 | 2788840 | 100.0 | 109.1 | |
| 2 | 3.265 | 3.264 | 0.001 | 1758737 | 100.0 | 112.0 | |
| 2 | 3.319 | 3.318 | 0.001 | 6011586 | 100.0 | 106.4 | |
| | | Average of Peak Amounts = | | | | 109.2 | |
| | | | | | | RPD = 7.49 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.545 | 5.544 | 0.001 | 4464480 | 100.0 | 104.5 | |
| 1 | 5.885 | 5.887 | -0.002 | 3017451 | 100.0 | 99.4 | |
| 1 | 6.045 | 6.044 | 0.001 | 5649387 | 100.0 | 100.2 | |
| 1 | 6.409 | 6.411 | -0.002 | 3986775 | 100.0 | 100.0 | |
| 1 | 7.035 | 7.037 | -0.002 | 4841126 | 100.0 | 98.3 | |
| | | Average of Peak Amounts = | | | | 100.5 | |
| 2 | 5.599 | 5.598 | 0.001 | 10043995 | 100.0 | 104.0 | |
| 2 | 6.025 | 6.024 | 0.001 | 7543706 | 100.0 | 103.8 | |
| 2 | 6.175 | 6.174 | 0.001 | 13724956 | 100.0 | 101.4 | |
| 2 | 6.725 | 6.724 | 0.001 | 6080405 | 100.0 | 105.7 | |
| 2 | 7.199 | 7.198 | 0.001 | 14072003 | 100.0 | 102.6 | |
| | | Average of Peak Amounts = | | | | 103.5 | |
| | | | | | | RPD = 2.95 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 201.8 | |
| 2 | | | | | | 212.7 | |
| | | | | | | RPD = 5.26 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.10 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

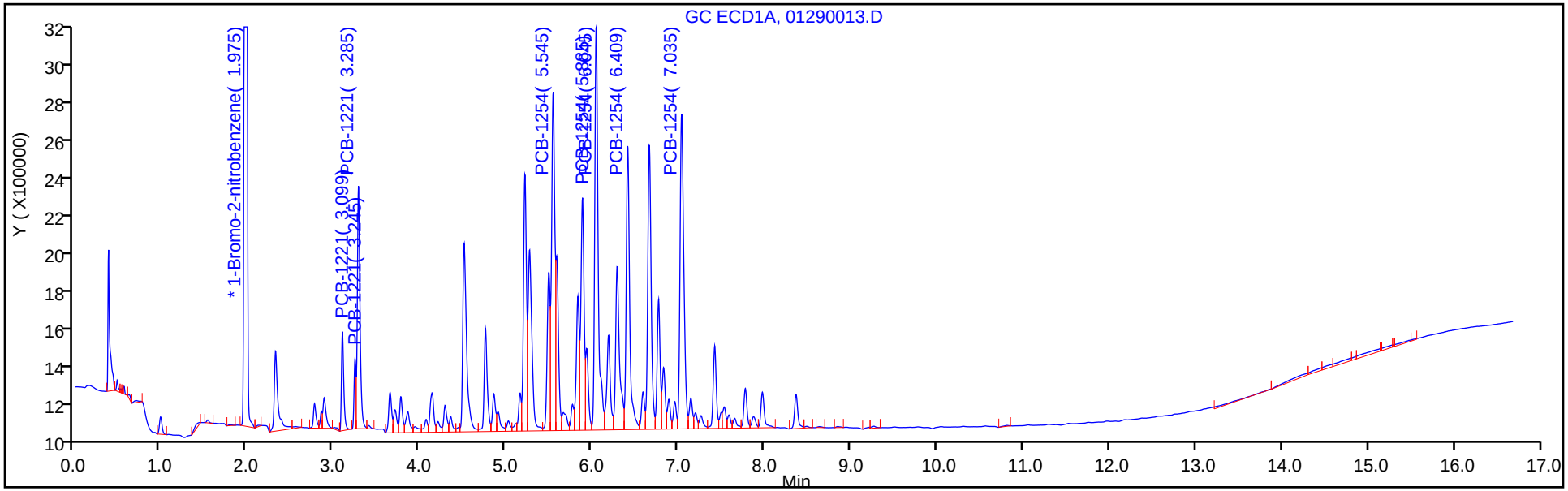
Report Date: 30-Jan-2019 14:59:30 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

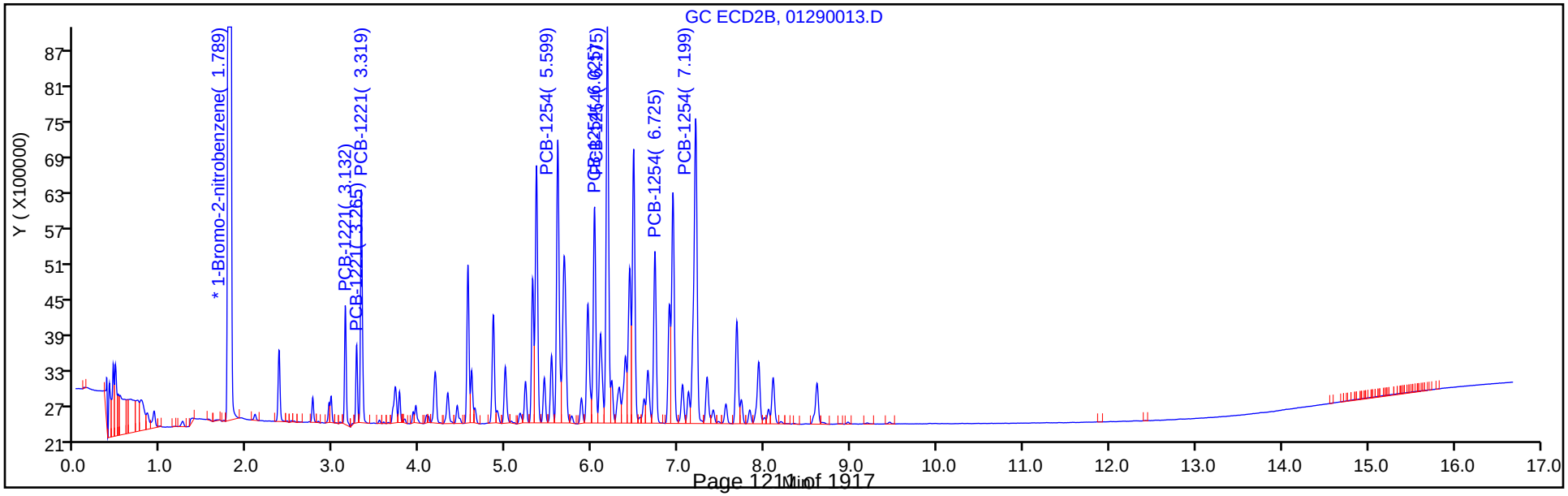
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290013.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 18:25:10 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD3 | | | Worklist Smp#: | 13 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 13 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290014.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Jan-2019 18:46:13 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0078470-014
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:27 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.977 | 0.001 | 18900475 | 100.0 | 100.0 | |
| 2 | 1.792 | 1.791 | 0.001 | 107254921 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.102 | 3.101 | 0.001 | 2285661 | 250.0 | 267.4 | |
| 1 | 3.245 | 3.247 | -0.002 | 1249862 | 250.0 | 243.8 | |
| 1 | 3.285 | 3.287 | -0.002 | 6425270 | 250.0 | 274.0 | |
| | | Average of Peak Amounts = | | | | 261.8 | |
| 2 | 3.132 | 3.134 | -0.002 | 6160075 | 250.0 | 265.0 | |
| 2 | 3.265 | 3.264 | 0.001 | 4019733 | 250.0 | 281.1 | |
| 2 | 3.318 | 3.318 | 0.000 | 13912643 | 250.0 | 272.6 | |
| | | Average of Peak Amounts = | | | | 272.9 | |
| | | | | | | RPD = 4.17 | |
| 9 PCB-1254 | | | | | | | |
| 1 | 5.545 | 5.544 | 0.001 | 10267263 | 250.0 | 254.4 | |
| 1 | 5.885 | 5.887 | -0.002 | 7436629 | 250.0 | 249.8 | |
| 1 | 6.045 | 6.044 | 0.001 | 14193865 | 250.0 | 256.2 | |
| 1 | 6.412 | 6.411 | 0.001 | 9819643 | 250.0 | 254.2 | |
| 1 | 7.035 | 7.037 | -0.002 | 12124818 | 250.0 | 253.1 | |
| | | Average of Peak Amounts = | | | | 253.5 | |
| 2 | 5.598 | 5.598 | 0.000 | 23360585 | 250.0 | 266.5 | |
| 2 | 6.025 | 6.024 | 0.001 | 17638723 | 250.0 | 266.4 | |
| 2 | 6.175 | 6.174 | 0.001 | 32639179 | 250.0 | 262.9 | |
| 2 | 6.725 | 6.724 | 0.001 | 14070462 | 250.0 | 271.0 | |
| 2 | 7.198 | 7.198 | 0.000 | 33156680 | 250.0 | 265.0 | |
| | | Average of Peak Amounts = | | | | 266.4 | |
| | | | | | | RPD = 4.94 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| S | 8 Polychlorinated biphenyls, Total | | | | | | |
| 1 | | | | | | 515.3 | |
| 2 | | | | | | 539.3 | |
| | | | | | | RPD = 4.55 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.25 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

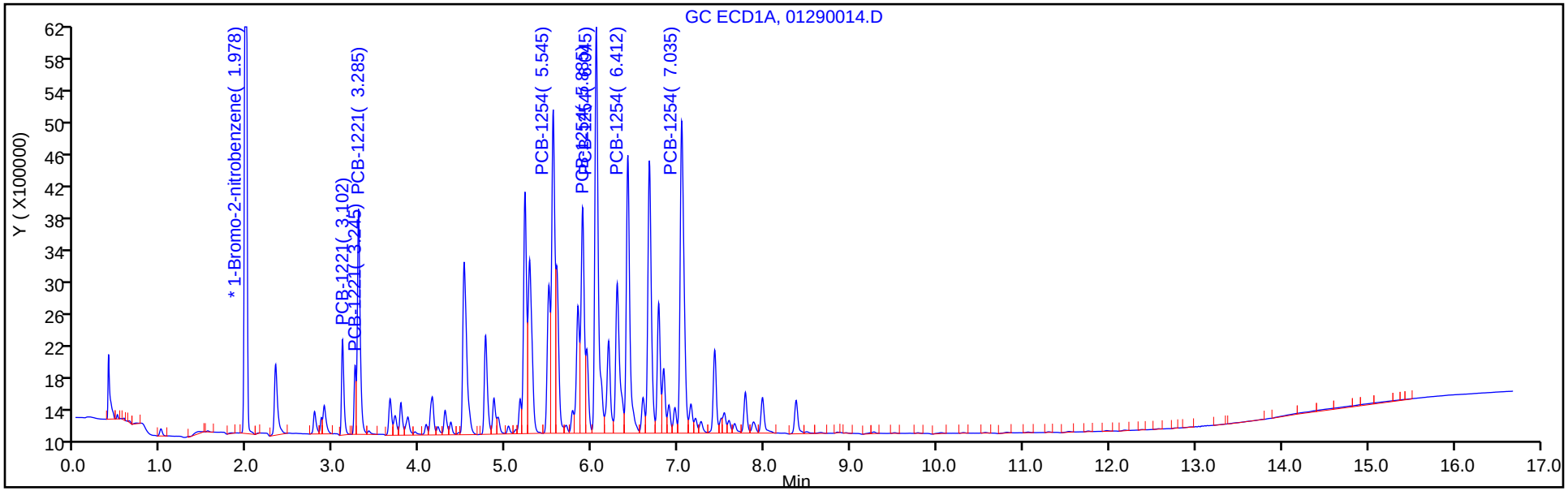
Report Date: 30-Jan-2019 14:59:28 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

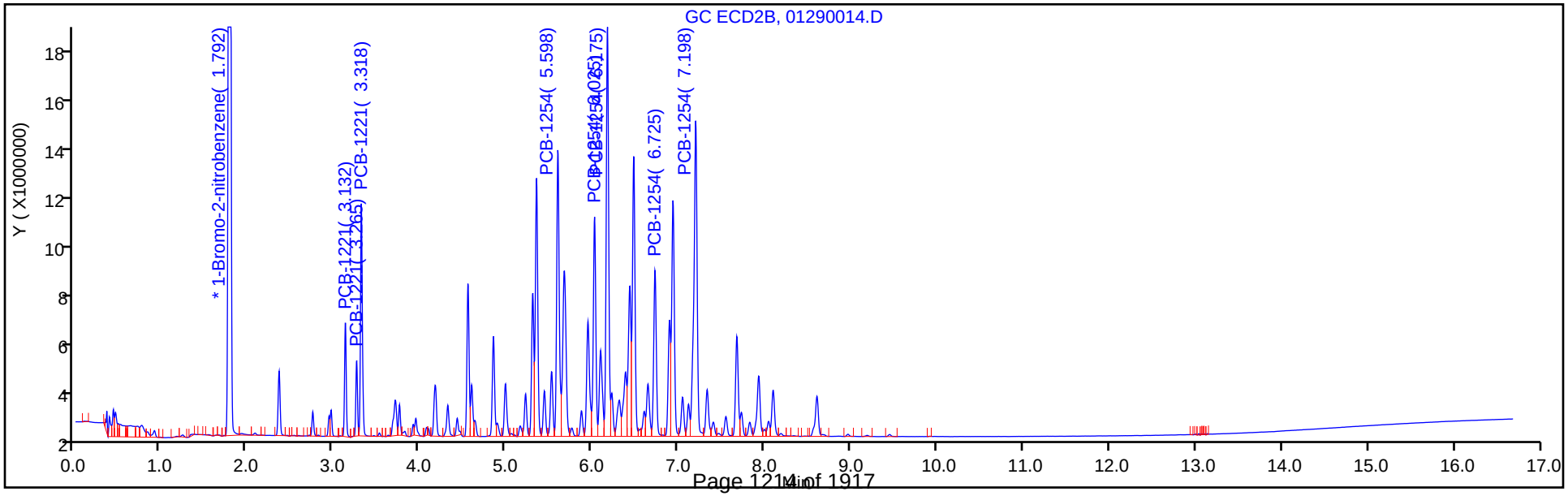
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290014.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 18:46:13 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD4 | | | Worklist Smp#: | 14 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 14 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290015.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 29-Jan-2019 19:07:23 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0078470-015
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:25 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:44:01

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.977 | 0.000 | 18277877 | 100.0 | 100.0 | |
| 2 | 1.791 | 1.791 | 0.000 | 103309156 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.101 | 3.101 | 0.000 | 4272039 | 500.0 | 529.4 | |
| 1 | 3.247 | 3.247 | 0.000 | 2406564 | 500.0 | 485.4 | |
| 1 | 3.287 | 3.287 | 0.000 | 11538084 | 500.0 | 522.2 | |
| | | Average of Peak Amounts = | | | | 512.3 | |
| 2 | 3.134 | 3.134 | 0.000 | 10921675 | 500.0 | 504.7 | |
| 2 | 3.264 | 3.264 | 0.000 | 7137136 | 500.0 | 534.8 | |
| 2 | 3.318 | 3.318 | 0.000 | 25213380 | 500.0 | 530.7 | |
| | | Average of Peak Amounts = | | | | 523.4 | |
| | | | | | | RPD = 2.13 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.544 | 5.544 | 0.000 | 20181603 | 500.0 | 528.9 | |
| 1 | 5.887 | 5.887 | 0.000 | 14946862 | 500.0 | 523.2 | |
| 1 | 6.044 | 6.044 | 0.000 | 27850289 | 500.0 | 523.2 | |
| 1 | 6.411 | 6.411 | 0.000 | 19201872 | 500.0 | 520.1 | |
| 1 | 7.037 | 7.037 | 0.000 | 23827137 | 500.0 | 519.4 | |
| | | Average of Peak Amounts = | | | | 523.0 | |
| 2 | 5.598 | 5.598 | 0.000 | 43434124 | 500.0 | 531.9 | |
| 2 | 6.024 | 6.024 | 0.000 | 32807117 | 500.0 | 531.0 | |
| 2 | 6.174 | 6.174 | 0.000 | 61775552 | 500.0 | 532.0 | |
| 2 | 6.724 | 6.724 | 0.000 | 25966972 | 500.0 | 537.9 | |
| 2 | 7.198 | 7.198 | 0.000 | 62140948 | 500.0 | 532.1 | |
| | | Average of Peak Amounts = | | | | 533.0 | |
| | | | | | | RPD = 1.91 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.50 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

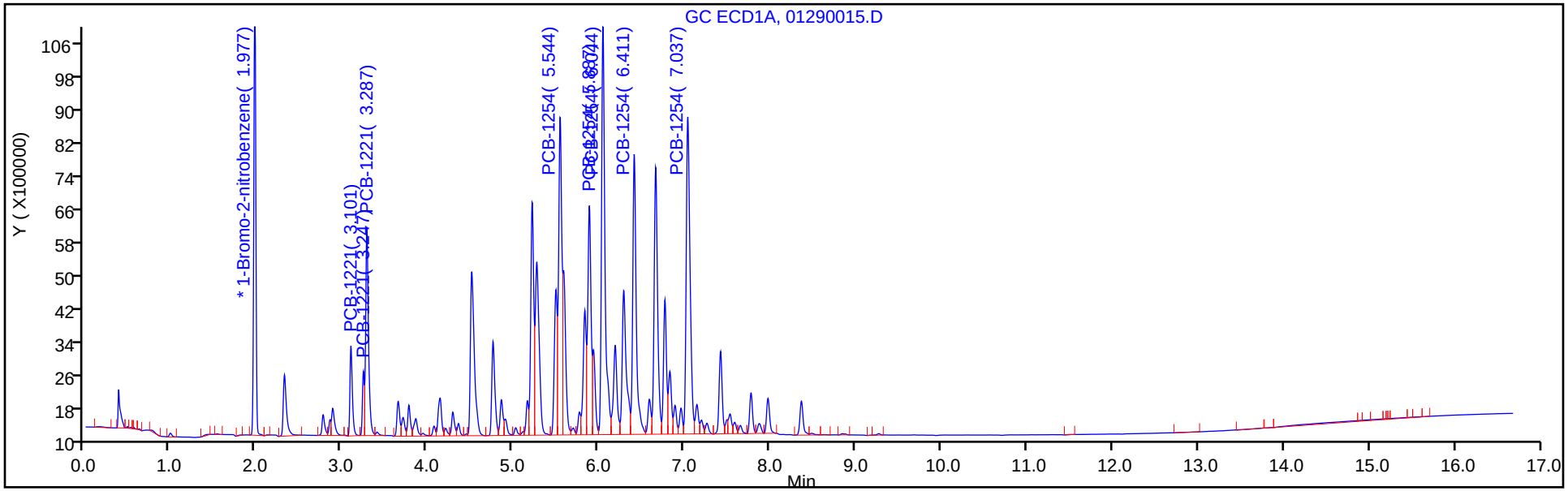
Report Date: 30-Jan-2019 14:59:25 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

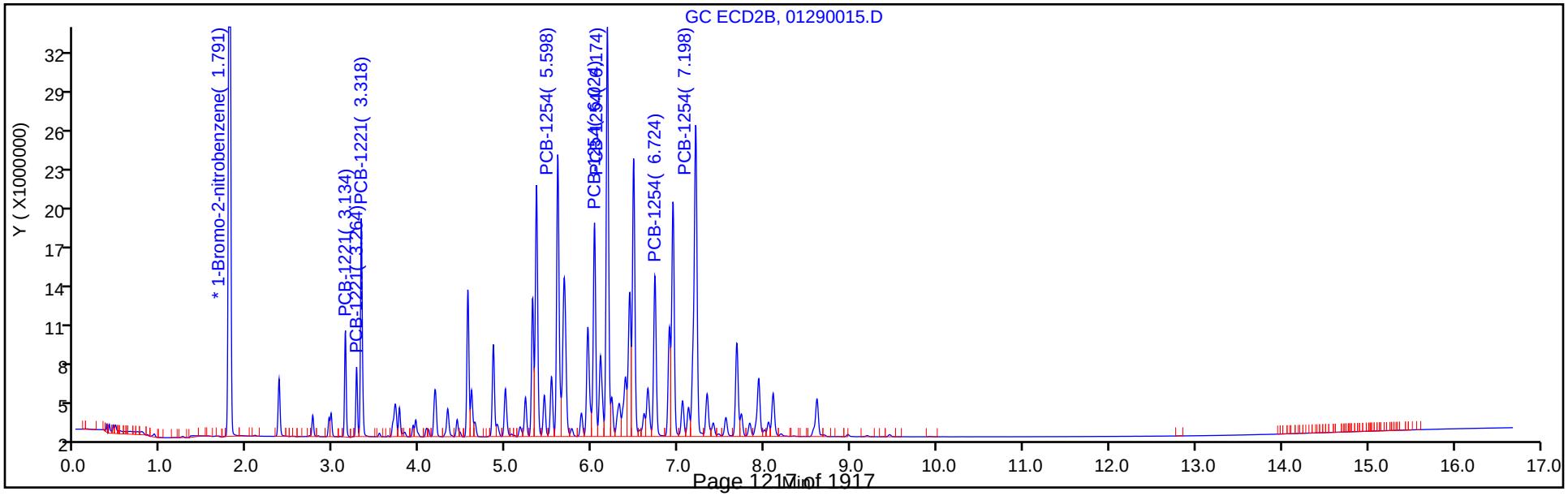
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290015.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 19:07:23 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD5 | | | Worklist Smp#: | 15 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 15 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290016.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 29-Jan-2019 19:28:26 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0078470-016
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:23 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 18947639 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 107224784 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.100 | 3.101 | -0.001 | 6278067 | 750.0 | 756.1 | |
| 1 | 3.246 | 3.247 | -0.001 | 3444943 | 750.0 | 670.3 | |
| 1 | 3.286 | 3.287 | -0.001 | 17079944 | 750.0 | 752.3 | |
| | | Average of Peak Amounts = | | | | 726.3 | |
| 2 | 3.133 | 3.134 | -0.001 | 15773177 | 750.0 | 710.1 | |
| 2 | 3.263 | 3.264 | -0.001 | 10378441 | 750.0 | 757.2 | |
| 2 | 3.320 | 3.318 | 0.002 | 36996950 | 750.0 | 758.6 | |
| | | Average of Peak Amounts = | | | | 742.0 | |
| | | | | | | RPD = 2.14 | |
| 9 PCB-1254 | | | | | | | |
| 1 | 5.543 | 5.544 | -0.001 | 29777425 | 750.0 | 757.6 | |
| 1 | 5.886 | 5.887 | -0.001 | 22481604 | 750.0 | 760.9 | |
| 1 | 6.043 | 6.044 | -0.001 | 41851991 | 750.0 | 760.0 | |
| 1 | 6.410 | 6.411 | -0.001 | 29009498 | 750.0 | 760.6 | |
| 1 | 7.036 | 7.037 | -0.001 | 36062168 | 750.0 | 760.6 | |
| | | Average of Peak Amounts = | | | | 759.9 | |
| 2 | 5.600 | 5.598 | 0.002 | 63195207 | 750.0 | 753.2 | |
| 2 | 6.023 | 6.024 | -0.001 | 47912197 | 750.0 | 754.5 | |
| 2 | 6.173 | 6.174 | -0.001 | 90177116 | 750.0 | 754.8 | |
| 2 | 6.727 | 6.724 | 0.003 | 37439825 | 750.0 | 755.2 | |
| 2 | 7.200 | 7.198 | 0.002 | 91035999 | 750.0 | 758.2 | |
| | | Average of Peak Amounts = | | | | 755.2 | |
| | | | | | | RPD = 0.62 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| S | 8 Polychlorinated biphenyls, Total | | | | | | |
| 1 | | | | | | 1486.2 | |
| 2 | | | | | | 1497.1 | |
| | | | | | | RPD = 0.74 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 0.75 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

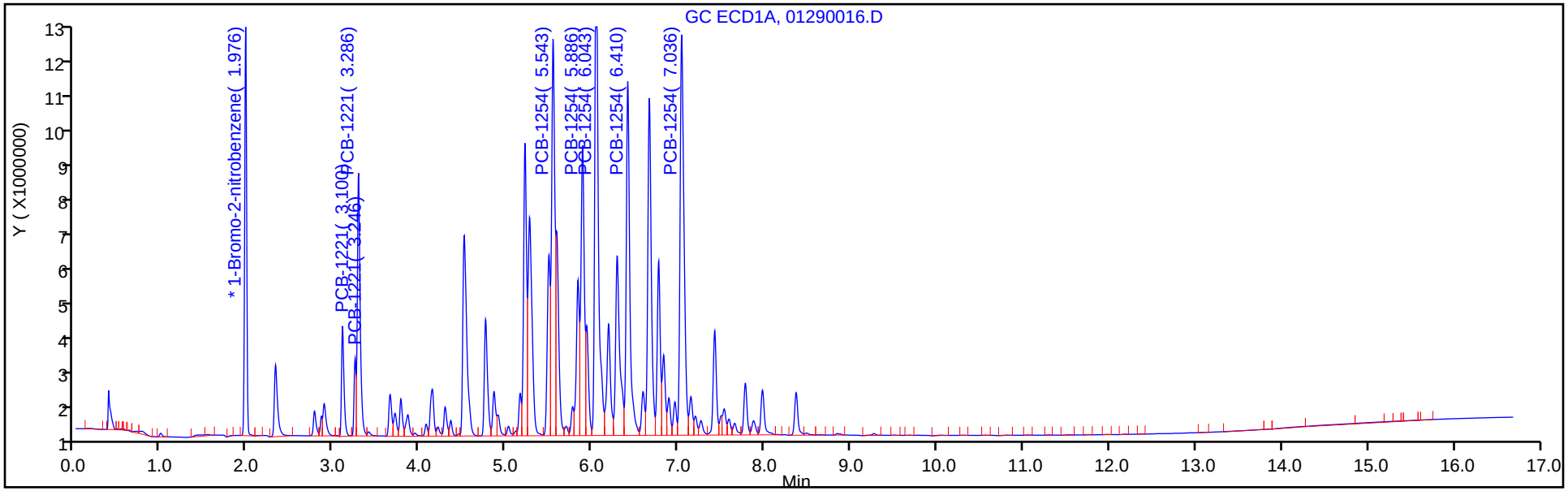
Report Date: 30-Jan-2019 14:59:24 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

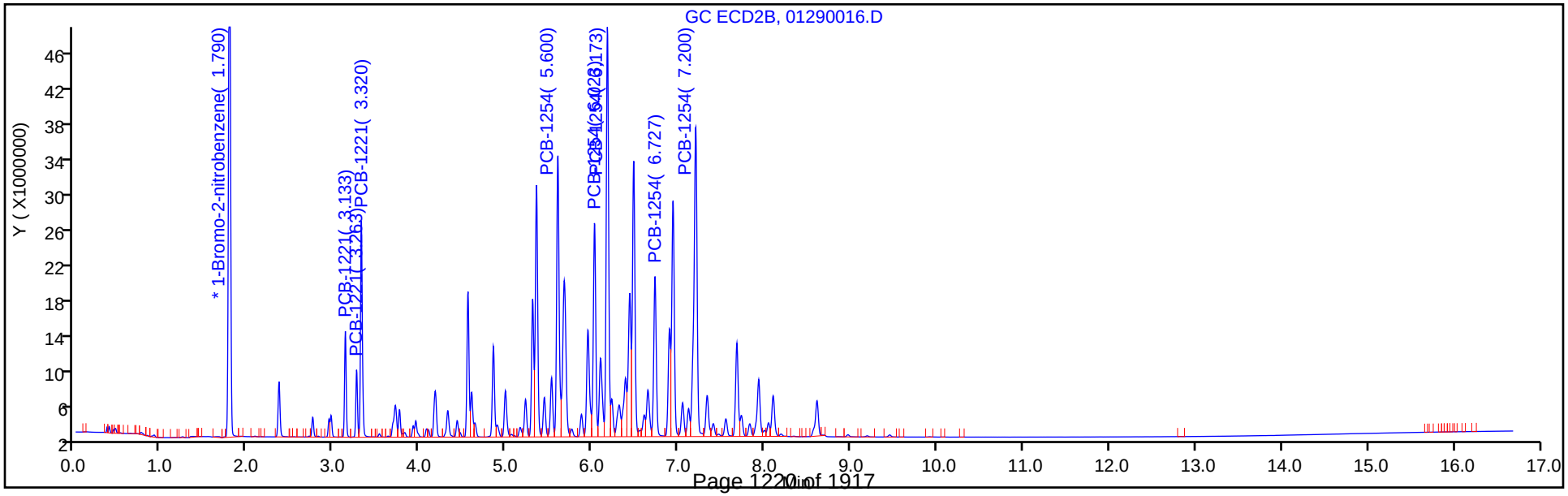
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290016.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 19:28:26 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD6 | | | Worklist Smp#: | 16 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 16 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290017.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Jan-2019 19:49:27 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0078470-017
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:21 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:41:20

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.979 | -0.002 | 19851473 | 100.0 | 100.0 | |
| 2 | 1.787 | 1.789 | -0.002 | 112694816 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.100 | 3.101 | -0.001 | 8210089 | 1000.0 | 947.0 | |
| 1 | 3.247 | 3.247 | 0.000 | 4067237 | 1000.0 | 755.4 | |
| 1 | 3.287 | 3.287 | 0.000 | 22436428 | 1000.0 | 947.2 | |
| | | Average of Peak Amounts = | | | | 883.2 | |
| 2 | 3.134 | 3.134 | 0.000 | 20283315 | 1000.0 | 873.3 | |
| 2 | 3.264 | 3.264 | 0.000 | 13216442 | 1000.0 | 921.6 | |
| 2 | 3.317 | 3.318 | -0.001 | 47720495 | 1000.0 | 935.6 | |
| | | Average of Peak Amounts = | | | | 910.2 | |
| | | | | | | RPD = 3.00 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.544 | 5.544 | 0.000 | 39222684 | 1000.0 | 955.4 | |
| 1 | 5.887 | 5.887 | 0.000 | 29892070 | 1000.0 | 966.6 | |
| 1 | 6.044 | 6.044 | 0.000 | 55340228 | 1000.0 | 960.0 | |
| 1 | 6.410 | 6.411 | -0.001 | 38512069 | 1000.0 | 965.4 | |
| 1 | 7.037 | 7.037 | 0.000 | 48030061 | 1000.0 | 968.2 | |
| | | Average of Peak Amounts = | | | | 963.1 | |
| 2 | 5.597 | 5.598 | -0.001 | 82953892 | 1000.0 | 945.4 | |
| 2 | 6.024 | 6.024 | 0.000 | 62789497 | 1000.0 | 945.2 | |
| 2 | 6.174 | 6.174 | 0.000 | 118710548 | 1000.0 | 949.4 | |
| 2 | 6.724 | 6.724 | 0.000 | 48305997 | 1000.0 | 931.7 | |
| 2 | 7.197 | 7.198 | -0.001 | 118446332 | 1000.0 | 942.8 | |
| | | Average of Peak Amounts = | | | | 942.9 | |
| | | | | | | RPD = 2.12 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 1846.3 | |
| 2 | | | | | | 1853.1 | |
| | | | | | | RPD = 0.36 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_L7_00022 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

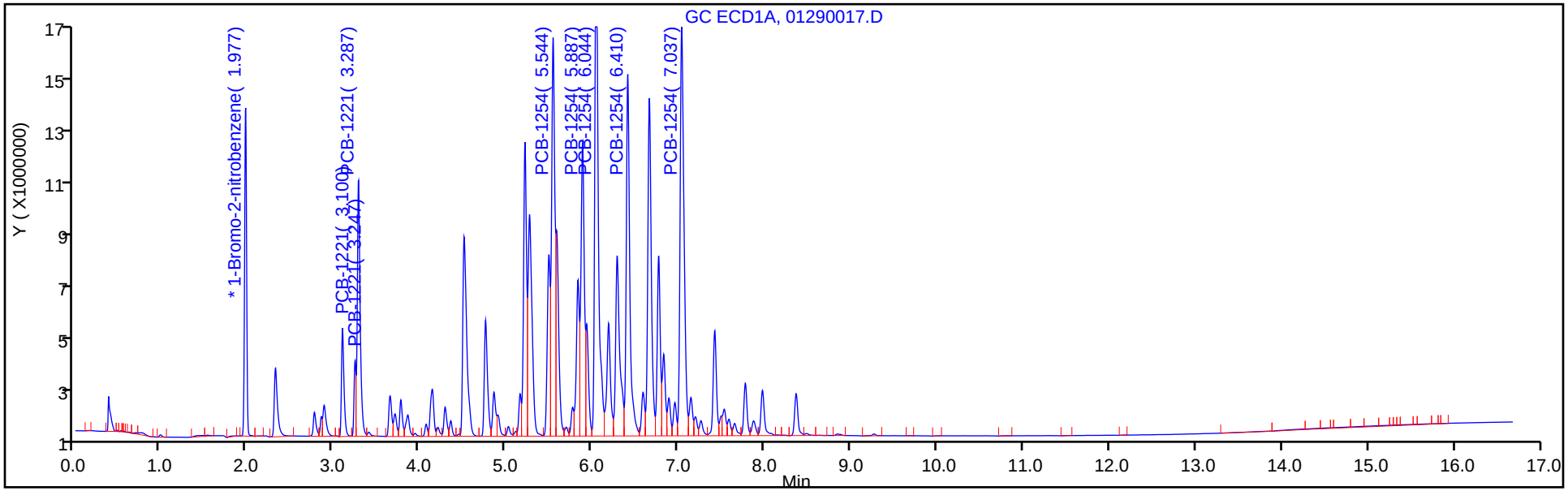
Report Date: 30-Jan-2019 14:59:21 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

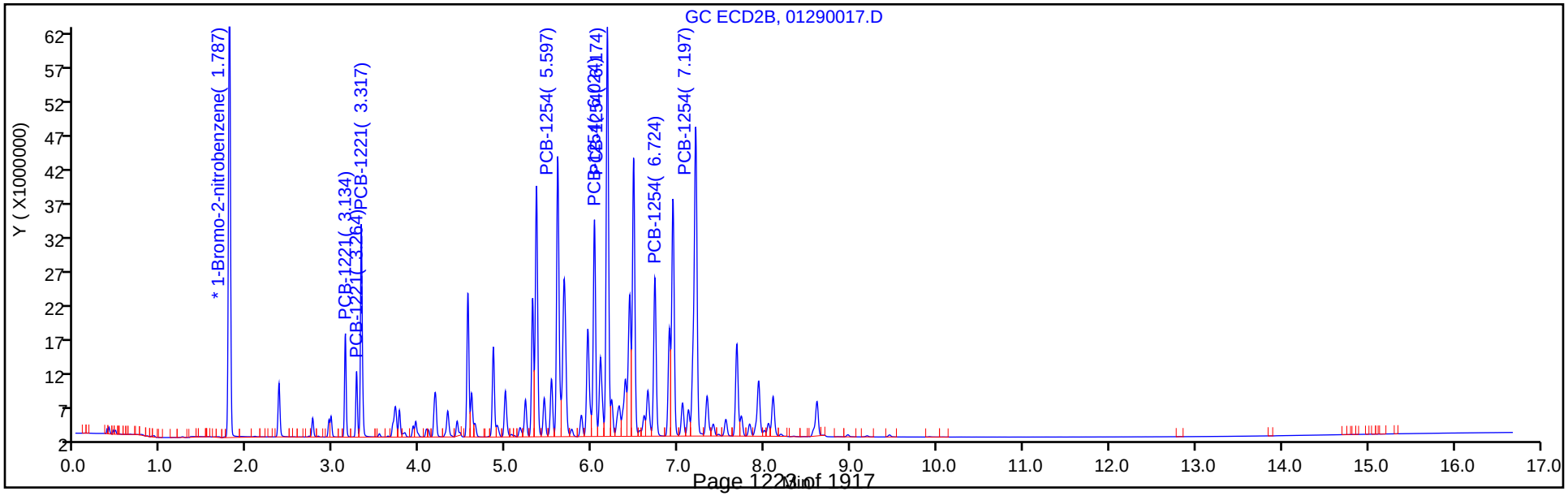
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290017.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 19:49:27 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD7 | | | Worklist Smp#: | 17 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 17 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP1  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 20:31  Calibration End Date: 01/29/2019 22:38  Calibration ID: 35091

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/19 | 01290019.D |
| Level 2 | STD2 280-445745/20 | 01290020.D |
| Level 3 | STD3 280-445745/21 | 01290021.D |
| Level 4 | STD4 280-445745/22 | 01290022.D |
| Level 5 | STD5 280-445745/23 | 01290023.D |
| Level 6 | STD6 280-445745/24 | 01290024.D |
| Level 7 | STD7 280-445745/25 | 01290025.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| PCB-1016 Peak 1 | 0.1196<br>0.0767 | 0.1060<br>0.0775 | 0.0976 | 0.0880 | 0.0776 | Lin1 | 1.3891 | 0.0763 | | | | | | | 0.9980 | | 0.9900 |
| PCB-1016 Peak 2 | 0.2583<br>0.1714 | 0.2383<br>0.1726 | 0.2215 | 0.1978 | 0.1730 | Lin1 | 3.0509 | 0.1706 | | | | | | | 0.9980 | | 0.9900 |
| PCB-1016 Peak 3 | 0.3439<br>0.3426 | 0.3419<br>0.3545 | 0.3313 | 0.3283 | 0.3116 | Lin1 | -0.371 | 0.3404 | | | | | | | 0.9970 | | 0.9900 |
| PCB-1016 Peak 4 | 0.1651<br>0.1306 | 0.1625<br>0.1340 | 0.1547 | 0.1442 | 0.1294 | Lin1 | 1.2883 | 0.1314 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1016 Peak 5 | 0.1701<br>0.1409 | 0.1676<br>0.1445 | 0.1612 | 0.1526 | 0.1394 | Lin1 | 1.0695 | 0.1418 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1260 Peak 1 | 0.2539<br>0.1968 | 0.2501<br>0.2026 | 0.2356 | 0.2163 | 0.1964 | Lin1 | 2.0959 | 0.1982 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1260 Peak 2 | 0.1288<br>0.1125 | 0.1240<br>0.1176 | 0.1228 | 0.1163 | 0.1095 | Lin1 | 0.4461 | 0.1138 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1260 Peak 3 | 0.2108<br>0.1724 | 0.2080<br>0.1789 | 0.1962 | 0.1883 | 0.1708 | Lin1 | 1.3330 | 0.1744 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1260 Peak 4 | 0.4322<br>0.3894 | 0.4281<br>0.4079 | 0.4152 | 0.4041 | 0.3841 | Lin1 | 1.1576 | 0.3958 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1260 Peak 5 | 0.1870<br>0.1627 | 0.1850<br>0.1705 | 0.1756 | 0.1710 | 0.1609 | Lin1 | 0.7084 | 0.1653 | | | | | | | 0.9990 | | 0.9900 |
| Tetrachloro-m-xylene | 3.9062<br>4.1507 | 4.0008<br>4.3462 | 3.9478 | 4.0947 | 4.0308 | Lin1 | -0.672 | 4.2187 | | | | | | | 0.9990 | | 0.9900 |
| DCB Decachlorobiphenyl | 3.7196<br>3.0165 | 3.8070<br>3.0860 | 3.6412 | 3.3171 | 3.0423 | Lin1 | 1.4906 | 3.0421 | | | | | | | 0.9990 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP1  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 20:31  Calibration End Date: 01/29/2019 22:38  Calibration ID: 35091

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/19 | 01290019.D |
| Level 2 | STD2 280-445745/20 | 01290020.D |
| Level 3 | STD3 280-445745/21 | 01290021.D |
| Level 4 | STD4 280-445745/22 | 01290022.D |
| Level 5 | STD5 280-445745/23 | 01290023.D |
| Level 6 | STD6 280-445745/24 | 01290024.D |
| Level 7 | STD7 280-445745/25 | 01290025.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1016 Peak 1 | BNB | Lin1 | 559860<br>11548704 | 965503<br>15000661 | 1792682 | 4226504 | 7952245 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1016 Peak 2 | BNB | Lin1 | 1209479<br>25823234 | 2171469<br>33410558 | 4067241 | 9498775 | 17733988 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1016 Peak 3 | BNB | Lin1 | 1610058<br>51613620 | 3115498<br>68613189 | 6083533 | 15763921 | 31945318 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1016 Peak 4 | BNB | Lin1 | 773065<br>19679998 | 1480509<br>25930063 | 2839877 | 6921564 | 13273314 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1016 Peak 5 | BNB | Lin1 | 796349<br>21228575 | 1527261<br>27973098 | 2960668 | 7327932 | 14291318 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1260 Peak 1 | BNB | Lin1 | 1188688<br>29648276 | 2279107<br>39224988 | 4326070 | 10387117 | 20138087 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1260 Peak 2 | BNB | Lin1 | 603264<br>16947271 | 1129457<br>22769035 | 2254364 | 5585726 | 11232542 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1260 Peak 3 | BNB | Lin1 | 987009<br>25970807 | 1895416<br>34623161 | 3603564 | 9041388 | 17517262 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1260 Peak 4 | BNB | Lin1 | 2023732<br>58668909 | 3900466<br>78962273 | 7624671 | 19402857 | 39380635 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1260 Peak 5 | BNB | Lin1 | 875716<br>24515178 | 1685702<br>32994132 | 3223947 | 8209562 | 16493612 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| Tetrachloro-m-xylene | BNB | Lin1 | 914469<br>31266518 | 1822602<br>42063367 | 3624536 | 9829518 | 20664986 | 1.25<br>37.5 | 2.50<br>50.0 | 5.00 | 12.5 | 25.0 |
| DCB Decachlorobiphenyl | BNB | Lin1 | 870801<br>22722769 | 1734330<br>29866597 | 3343034 | 7962949 | 15597466 | 1.25<br>37.5 | 2.50<br>50.0 | 5.00 | 12.5 | 25.0 |

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290019.D
Lims ID: STD1 1660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Jan-2019 20:31:38 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1 1660
Misc. Info.: 280-0078470-019
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:16 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:31:19

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.979 | -0.004 | 18728713 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.789 | -0.001 | 104727389 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.891 | 2.892 | -0.001 | 914469 | 1.25 | 1.32 | |
| 2 | 2.818 | 2.819 | -0.001 | 1471633 | 1.25 | 0.7573 | |
| | | | | | | RPD = 53.95 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.288 | 3.286 | 0.002 | 559860 | 25.0 | 21.0 | |
| 1 | 3.651 | 3.652 | -0.001 | 1209479 | 25.0 | 20.0 | |
| 1 | 4.141 | 4.142 | -0.001 | 1610058 | 25.0 | 26.3 | |
| 1 | 4.291 | 4.292 | -0.001 | 773065 | 25.0 | 21.6 | |
| 1 | 4.761 | 4.762 | -0.001 | 796349 | 25.0 | 22.4 | |
| | | Average of Peak Amounts = | | | | 22.3 | |
| 2 | 3.715 | 3.712 | 0.003 | 2627578 | 25.0 | 23.2 | |
| 2 | 4.175 | 4.176 | -0.001 | 5204108 | 25.0 | 24.0 | |
| 2 | 4.322 | 4.322 | 0.000 | 2375701 | 25.0 | 23.3 | |
| 2 | 4.558 | 4.556 | 0.002 | 1320720 | 25.0 | 20.8 | |
| 2 | 4.852 | 4.852 | 0.000 | 2068748 | 25.0 | 20.7 | |
| | | Average of Peak Amounts = | | | | 22.4 | |
| | | | | | | RPD = 0.57 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.288 | 6.289 | -0.001 | 1188688 | 25.0 | 21.4 | |
| 1 | 6.825 | 6.829 | -0.004 | 603264 | 25.0 | 24.4 | |
| 1 | 7.531 | 7.532 | -0.001 | 987009 | 25.0 | 22.6 | |
| 1 | 7.971 | 7.976 | -0.005 | 2023732 | 25.0 | 24.4 | |
| 1 | 8.361 | 8.366 | -0.005 | 875716 | 25.0 | 24.0 | |
| | | Average of Peak Amounts = | | | | 23.4 | |
| 2 | 6.725 | 6.726 | -0.001 | 3698458 | 25.0 | 23.4 | |
| 2 | 7.195 | 7.196 | -0.001 | 5216162 | 25.0 | 23.5 | |
| 2 | 7.328 | 7.332 | -0.004 | 2963336 | 25.0 | 23.2 | |
| 2 | 8.098 | 8.099 | -0.001 | 6339377 | 25.0 | 23.9 | |
| 2 | 8.605 | 8.606 | -0.001 | 4773952 | 25.0 | 23.4 | |
| | | Average of Peak Amounts = | | | | 23.5 | |
| | | | | | | RPD = 0.57 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.955 | 9.956 | -0.001 | 870801 | 1.25 | 1.04 | |
| 2 | 10.278 | 10.279 | -0.001 | 3010343 | 1.25 | 1.16 | |
| | | | | | | RPD = 10.80 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 45.6 | |
| 2 | | | | | | 45.9 | |
| | | | | | | RPD = 0.57 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.03 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

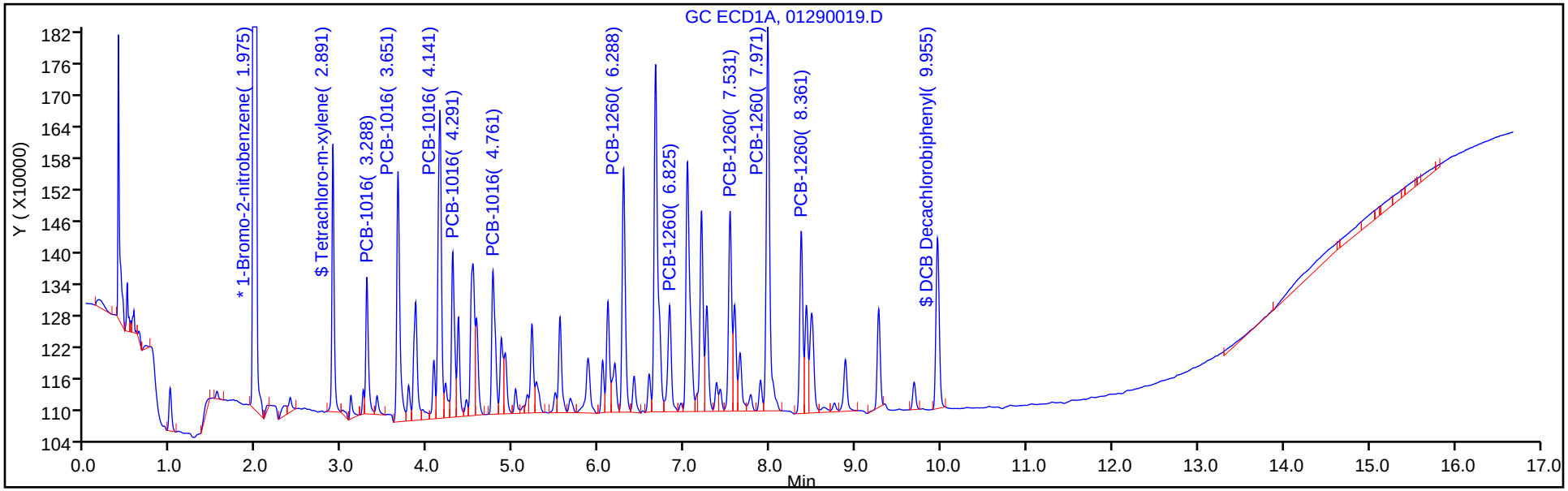
Report Date: 30-Jan-2019 14:59:17 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

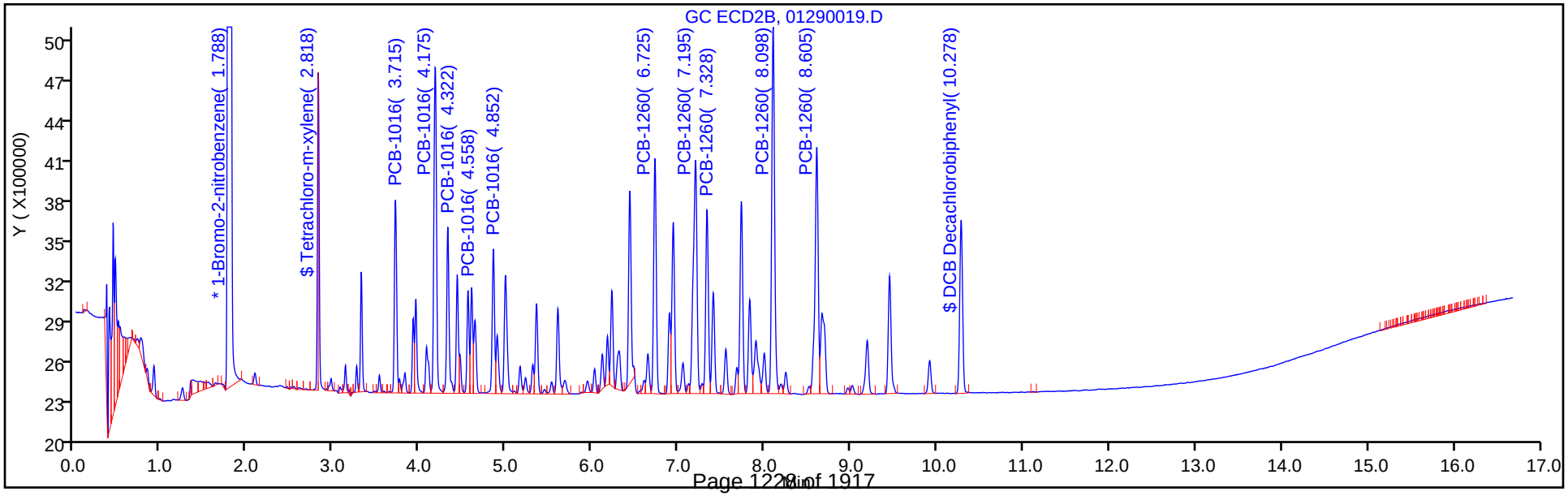
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290019.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 20:31:38 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD1 1660 | | | Worklist Smp#: | 19 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 19 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290020.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Jan-2019 20:52:40 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0078470-020
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:15 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.979 | -0.002 | 18222309 | 100.0 | 100.0 | |
| 2 | 1.791 | 1.789 | 0.002 | 101690991 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.891 | 2.892 | -0.001 | 1822602 | 2.50 | 2.53 | |
| 2 | 2.821 | 2.819 | 0.002 | 5982700 | 2.50 | 3.11 | |
| | | | | | | RPD = 20.52 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.287 | 3.286 | 0.001 | 965503 | 50.0 | 51.2 | |
| 1 | 3.651 | 3.652 | -0.001 | 2171469 | 50.0 | 52.0 | |
| 1 | 4.141 | 4.142 | -0.001 | 3115498 | 50.0 | 51.3 | |
| 1 | 4.291 | 4.292 | -0.001 | 1480509 | 50.0 | 52.0 | |
| 1 | 4.761 | 4.762 | -0.001 | 1527261 | 50.0 | 51.6 | |
| | | Average of Peak Amounts = | | | | 51.6 | |
| 2 | 3.714 | 3.712 | 0.002 | 4577403 | 50.0 | 54.7 | |
| 2 | 4.177 | 4.176 | 0.001 | 9101267 | 50.0 | 52.6 | |
| 2 | 4.321 | 4.322 | -0.001 | 4153755 | 50.0 | 54.4 | |
| 2 | 4.557 | 4.556 | 0.001 | 2340987 | 50.0 | 54.0 | |
| 2 | 4.851 | 4.852 | -0.001 | 3559060 | 50.0 | 55.3 | |
| | | Average of Peak Amounts = | | | | 54.2 | |
| | | | | | | RPD = 4.84 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.287 | 6.289 | -0.002 | 2279107 | 50.0 | 52.5 | |
| 1 | 6.824 | 6.829 | -0.005 | 1129457 | 50.0 | 50.5 | |
| 1 | 7.531 | 7.532 | -0.001 | 1895416 | 50.0 | 52.0 | |
| 1 | 7.974 | 7.976 | -0.002 | 3900466 | 50.0 | 51.2 | |
| 1 | 8.364 | 8.366 | -0.002 | 1685702 | 50.0 | 51.7 | |
| | | Average of Peak Amounts = | | | | 51.6 | |
| 2 | 6.724 | 6.726 | -0.002 | 6505968 | 50.0 | 54.3 | |
| 2 | 7.197 | 7.196 | 0.001 | 9249707 | 50.0 | 54.2 | |
| 2 | 7.331 | 7.332 | -0.001 | 5272800 | 50.0 | 55.0 | |
| 2 | 8.097 | 8.099 | -0.002 | 11393234 | 50.0 | 53.3 | |
| 2 | 8.604 | 8.606 | -0.002 | 8594861 | 50.0 | 54.5 | |
| | | Average of Peak Amounts = | | | | 54.3 | |
| | | | | | | RPD = 5.07 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.954 | 9.956 | -0.002 | 1734330 | 2.50 | 2.64 | |
| 2 | 10.277 | 10.279 | -0.002 | 5392068 | 2.50 | 2.77 | |
| | | | | | | RPD = 4.87 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 103.2 | |
| 2 | | | | | | 108.4 | |
| | | | | | | RPD = 4.96 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.05 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

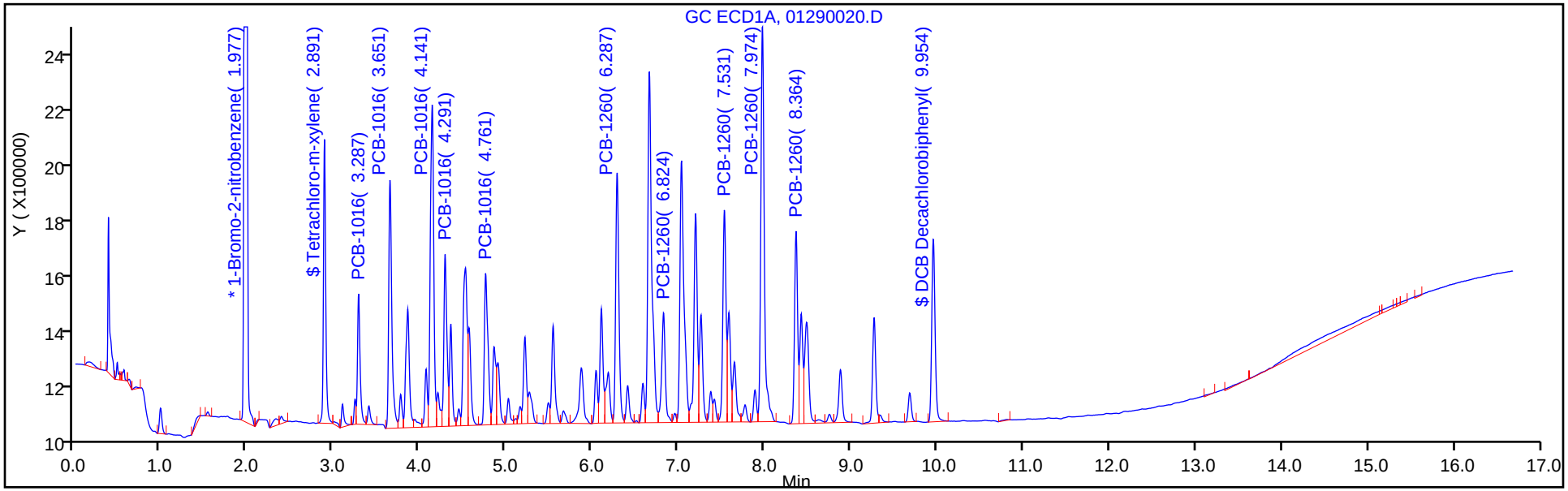
Report Date: 30-Jan-2019 14:59:15 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

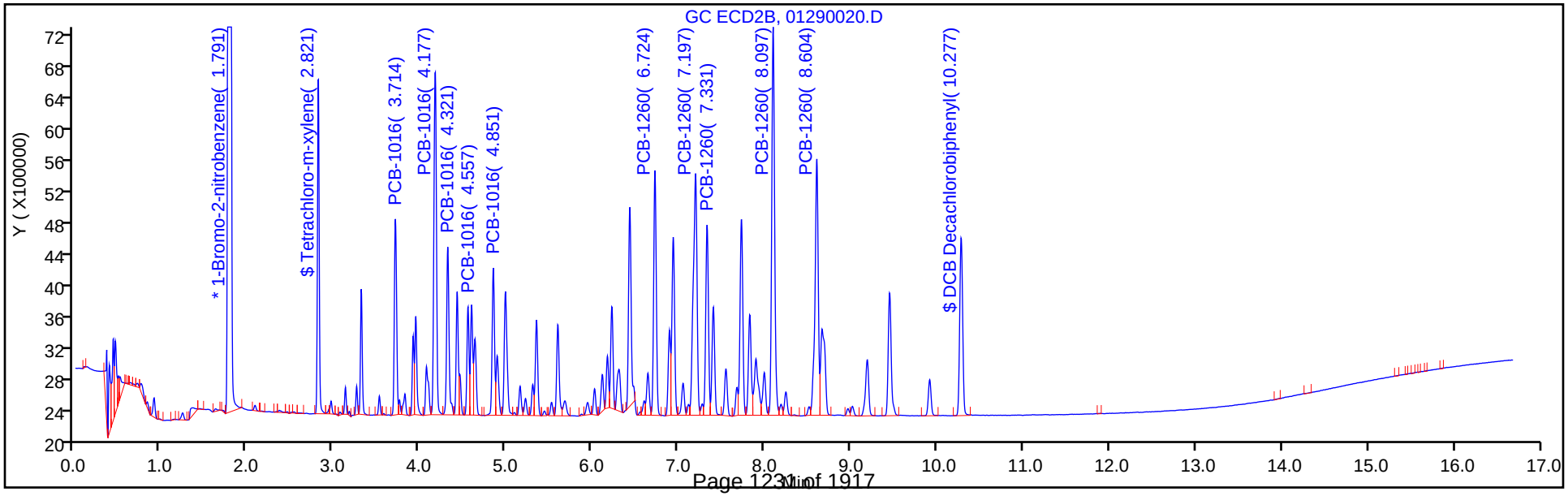
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290020.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 20:52:40 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD2 | | | Worklist Smp#: | 20 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 20 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290021.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Jan-2019 21:13:50 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0078470-021
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:13 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.979 | -0.002 | 18362303 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 102438475 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.894 | 2.892 | 0.002 | 3624536 | 5.00 | 4.84 | |
| 2 | 2.820 | 2.819 | 0.001 | 11113729 | 5.00 | 5.72 | |
| | | | | | | RPD = 16.64 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.287 | 3.286 | 0.001 | 1792682 | 100.0 | 109.7 | |
| 1 | 3.650 | 3.652 | -0.002 | 4067241 | 100.0 | 112.0 | |
| 1 | 4.144 | 4.142 | 0.002 | 6083533 | 100.0 | 98.4 | |
| 1 | 4.290 | 4.292 | -0.002 | 2839877 | 100.0 | 107.9 | |
| 1 | 4.760 | 4.762 | -0.002 | 2960668 | 100.0 | 106.2 | |
| | | Average of Peak Amounts = | | | | 106.8 | |
| 2 | 3.714 | 3.712 | 0.002 | 8229745 | 100.0 | 110.6 | |
| 2 | 4.177 | 4.176 | 0.001 | 16770420 | 100.0 | 105.8 | |
| 2 | 4.320 | 4.322 | -0.002 | 7524499 | 100.0 | 110.1 | |
| 2 | 4.557 | 4.556 | 0.001 | 4120556 | 100.0 | 109.4 | |
| 2 | 4.850 | 4.852 | -0.002 | 5895931 | 100.0 | 106.9 | |
| | | Average of Peak Amounts = | | | | 108.6 | |
| | | | | | | RPD = 1.60 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.287 | 6.289 | -0.002 | 4326070 | 100.0 | 108.3 | |
| 1 | 6.827 | 6.829 | -0.002 | 2254364 | 100.0 | 104.0 | |
| 1 | 7.534 | 7.532 | 0.002 | 3603564 | 100.0 | 104.9 | |
| 1 | 7.974 | 7.976 | -0.002 | 7624671 | 100.0 | 102.0 | |
| 1 | 8.364 | 8.366 | -0.002 | 3223947 | 100.0 | 101.9 | |
| | | Average of Peak Amounts = | | | | 104.2 | |
| 2 | 6.727 | 6.726 | 0.001 | 11751902 | 100.0 | 108.9 | |
| 2 | 7.197 | 7.196 | 0.001 | 16730388 | 100.0 | 108.2 | |
| 2 | 7.330 | 7.332 | -0.002 | 9497849 | 100.0 | 110.1 | |
| 2 | 8.097 | 8.099 | -0.002 | 20878089 | 100.0 | 105.8 | |
| 2 | 8.604 | 8.606 | -0.002 | 15503715 | 100.0 | 107.9 | |
| | | Average of Peak Amounts = | | | | 108.2 | |
| | | | | | | RPD = 3.74 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.957 | 9.956 | 0.001 | 3343034 | 5.00 | 5.49 | |
| 2 | 10.277 | 10.279 | -0.002 | 9597384 | 5.00 | 5.47 | |
| | | | | | | RPD = 0.40 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 211.0 | |
| 2 | | | | | | 216.7 | |
| | | | | | | RPD = 2.66 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.10 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

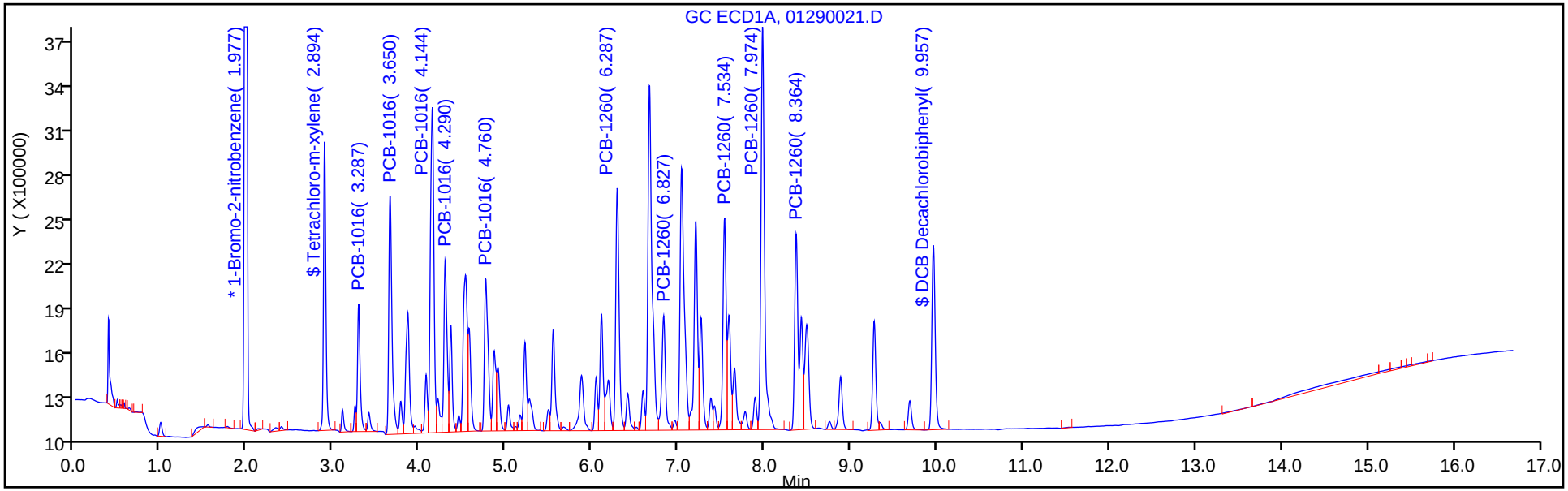
Report Date: 30-Jan-2019 14:59:13 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

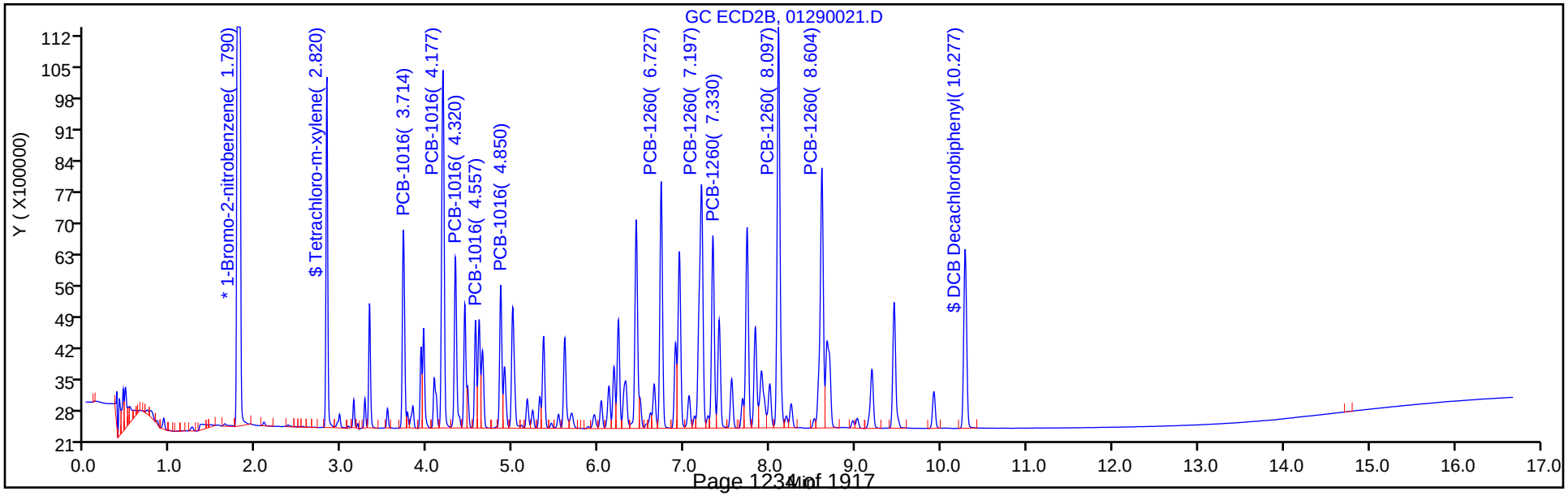
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290021.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 21:13:50 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD3 | | | Worklist Smp#: | 21 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 21 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290022.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Jan-2019 21:34:52 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0078470-022
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:11 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:28:15

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 19204388 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 106896067 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.893 | 2.892 | 0.001 | 9829518 | 12.5 | 12.3 | |
| 2 | 2.820 | 2.819 | 0.001 | 27059584 | 12.5 | 13.3 | |
| | | | | | | RPD = 7.97 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.286 | 3.286 | 0.000 | 4226504 | 250.0 | 270.2 | |
| 1 | 3.653 | 3.652 | 0.001 | 9498775 | 250.0 | 272.1 | |
| 1 | 4.143 | 4.142 | 0.001 | 15763921 | 250.0 | 242.2 | |
| 1 | 4.290 | 4.292 | -0.002 | 6921564 | 250.0 | 264.6 | |
| 1 | 4.763 | 4.762 | 0.001 | 7327932 | 250.0 | 261.6 | |
| | | Average of Peak Amounts = | | | | 262.1 | |
| 2 | 3.713 | 3.712 | 0.001 | 18866059 | 250.0 | 262.8 | |
| 2 | 4.176 | 4.176 | 0.000 | 40287772 | 250.0 | 258.7 | |
| 2 | 4.320 | 4.322 | -0.002 | 17287413 | 250.0 | 260.9 | |
| 2 | 4.556 | 4.556 | 0.000 | 9287733 | 250.0 | 263.5 | |
| 2 | 4.850 | 4.852 | -0.002 | 13302362 | 250.0 | 262.3 | |
| | | Average of Peak Amounts = | | | | 261.7 | |
| | | | | | | RPD = 0.18 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.286 | 6.289 | -0.003 | 10387117 | 250.0 | 262.3 | |
| 1 | 6.826 | 6.829 | -0.003 | 5585726 | 250.0 | 251.7 | |
| 1 | 7.533 | 7.532 | 0.001 | 9041388 | 250.0 | 262.3 | |
| 1 | 7.973 | 7.976 | -0.003 | 19402857 | 250.0 | 252.4 | |
| 1 | 8.363 | 8.366 | -0.003 | 8209562 | 250.0 | 254.3 | |
| | | Average of Peak Amounts = | | | | 256.6 | |
| 2 | 6.726 | 6.726 | 0.000 | 27060107 | 250.0 | 257.9 | |
| 2 | 7.196 | 7.196 | 0.000 | 38721098 | 250.0 | 256.6 | |
| 2 | 7.330 | 7.332 | -0.002 | 21659841 | 250.0 | 258.3 | |
| 2 | 8.096 | 8.099 | -0.003 | 49828439 | 250.0 | 255.8 | |
| 2 | 8.603 | 8.606 | -0.003 | 35981937 | 250.0 | 255.8 | |
| | | Average of Peak Amounts = | | | | 256.9 | |
| | | | | | | RPD = 0.12 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.956 | 9.956 | 0.000 | 7962949 | 12.5 | 13.1 | |
| 2 | 10.280 | 10.279 | 0.001 | 21805920 | 12.5 | 12.8 | |
| | | | | | | RPD = 2.61 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 518.7 | |
| 2 | | | | | | 518.5 | |
| | | | | | | RPD = 0.03 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.25 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

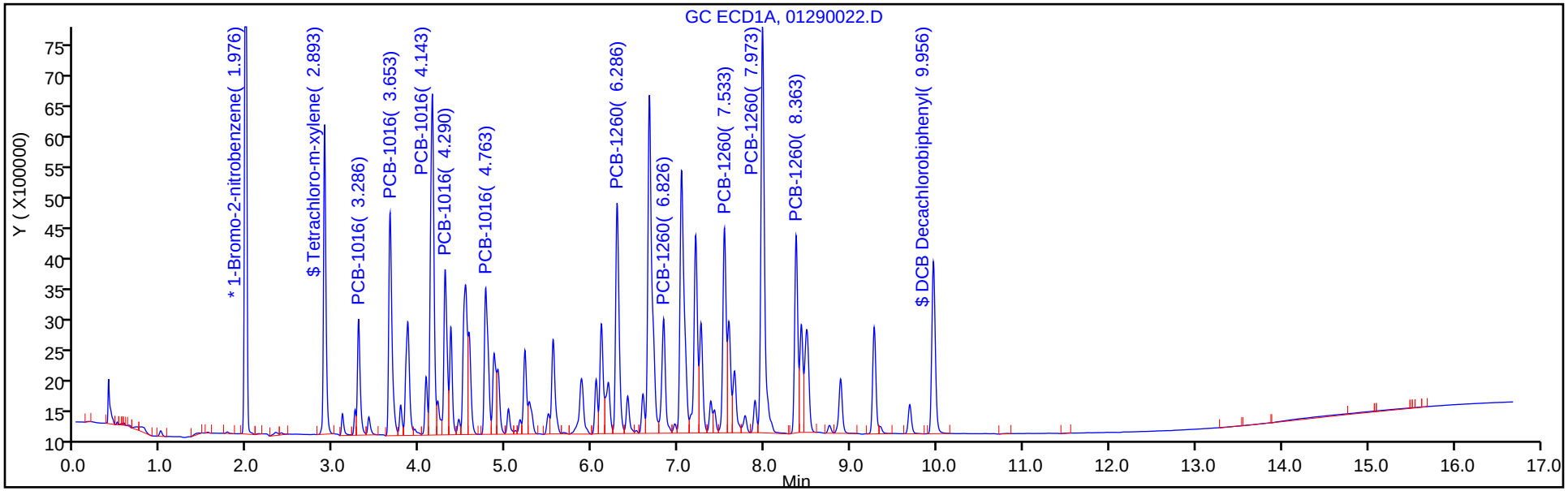
Report Date: 30-Jan-2019 14:59:11 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

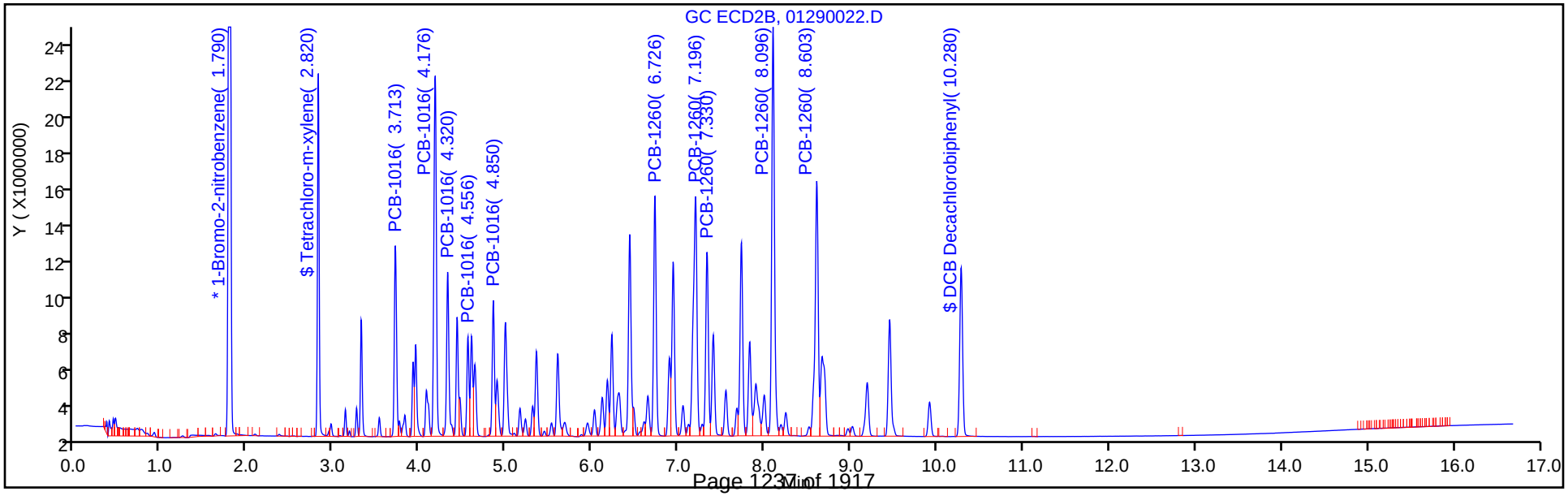
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290022.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 21:34:52 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD4 | | | Worklist Smp#: | 22 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 22 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290023.D
Lims ID: STD5
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 29-Jan-2019 21:55:55 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0078470-023
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:09 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:30:04

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.979 | 1.979 | 0.000 | 20507310 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 113907969 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.892 | 2.892 | 0.000 | 20664986 | 25.0 | 24.0 | |
| 2 | 2.819 | 2.819 | 0.000 | 52211718 | 25.0 | 24.1 | |
| | | | | | | RPD = 0.18 | |
| 1 PCB-1016 | | | | | | | M |
| 1 | 3.286 | 3.286 | 0.000 | 7952245 | 500.0 | 490.0 | |
| 1 | 3.652 | 3.652 | 0.000 | 17733988 | 500.0 | 489.1 | |
| 1 | 4.142 | 4.142 | 0.000 | 31945318 | 500.0 | 458.6 | |
| 1 | 4.292 | 4.292 | 0.000 | 13273314 | 500.0 | 482.9 | |
| 1 | 4.762 | 4.762 | 0.000 | 14291318 | 500.0 | 483.9 | |
| | | Average of Peak Amounts = | | | | 480.9 | |
| 2 | 3.712 | 3.712 | 0.000 | 34998168 | 500.0 | 469.8 | M |
| 2 | 4.176 | 4.176 | 0.000 | 77642819 | 500.0 | 477.4 | M |
| 2 | 4.322 | 4.322 | 0.000 | 32426114 | 500.0 | 471.0 | M |
| 2 | 4.556 | 4.556 | 0.000 | 16726012 | 500.0 | 470.6 | M |
| 2 | 4.852 | 4.852 | 0.000 | 24328109 | 500.0 | 475.3 | M |
| | | Average of Peak Amounts = | | | | 472.8 | |
| | | | | | | RPD = 1.70 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.289 | 6.289 | 0.000 | 20138087 | 500.0 | 484.8 | |
| 1 | 6.829 | 6.829 | 0.000 | 11232542 | 500.0 | 477.4 | |
| 1 | 7.532 | 7.532 | 0.000 | 17517262 | 500.0 | 482.0 | |
| 1 | 7.976 | 7.976 | 0.000 | 39380635 | 500.0 | 482.3 | |
| 1 | 8.366 | 8.366 | 0.000 | 16493612 | 500.0 | 482.2 | |
| | | Average of Peak Amounts = | | | | 481.7 | |
| 2 | 6.726 | 6.726 | 0.000 | 51025026 | 500.0 | 467.6 | |
| 2 | 7.196 | 7.196 | 0.000 | 73709863 | 500.0 | 469.1 | |
| 2 | 7.332 | 7.332 | 0.000 | 40499657 | 500.0 | 464.6 | |
| 2 | 8.099 | 8.099 | 0.000 | 96609483 | 500.0 | 474.2 | |
| 2 | 8.606 | 8.606 | 0.000 | 69150252 | 500.0 | 471.7 | |
| | | Average of Peak Amounts = | | | | 469.4 | |
| | | | | | | RPD = 2.59 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.956 | 9.956 | 0.000 | 15597466 | 25.0 | 24.5 | |
| 2 | 10.279 | 10.279 | 0.000 | 41760348 | 25.0 | 23.6 | |
| | | | | | | RPD = 3.76 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.50 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

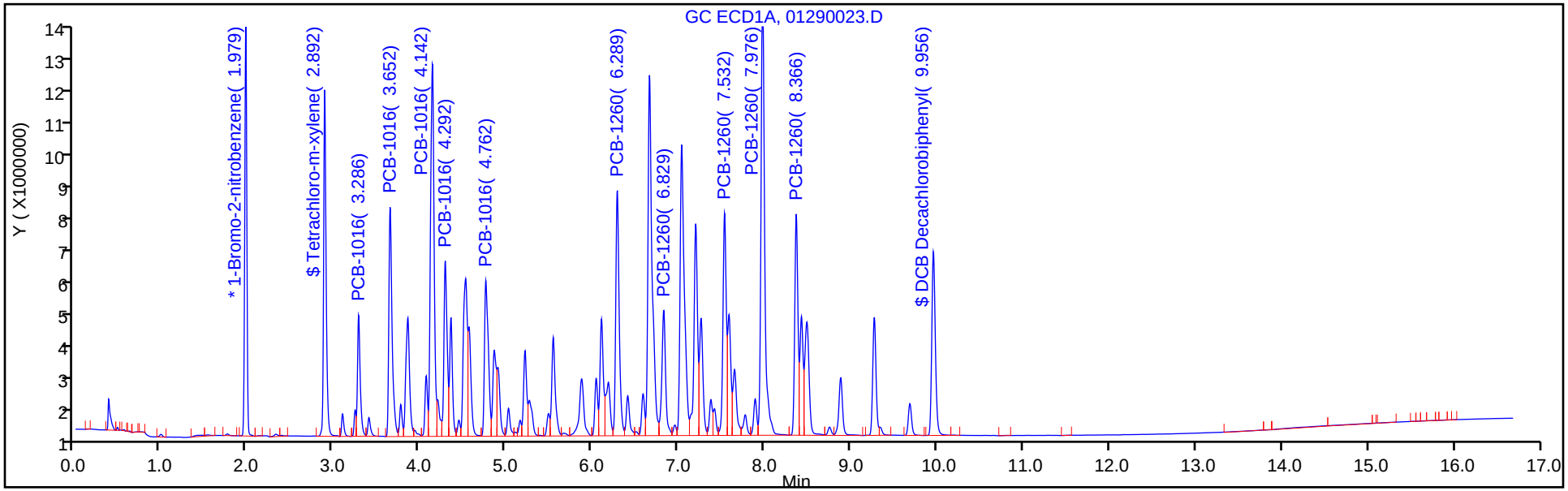
Report Date: 30-Jan-2019 14:59:09 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

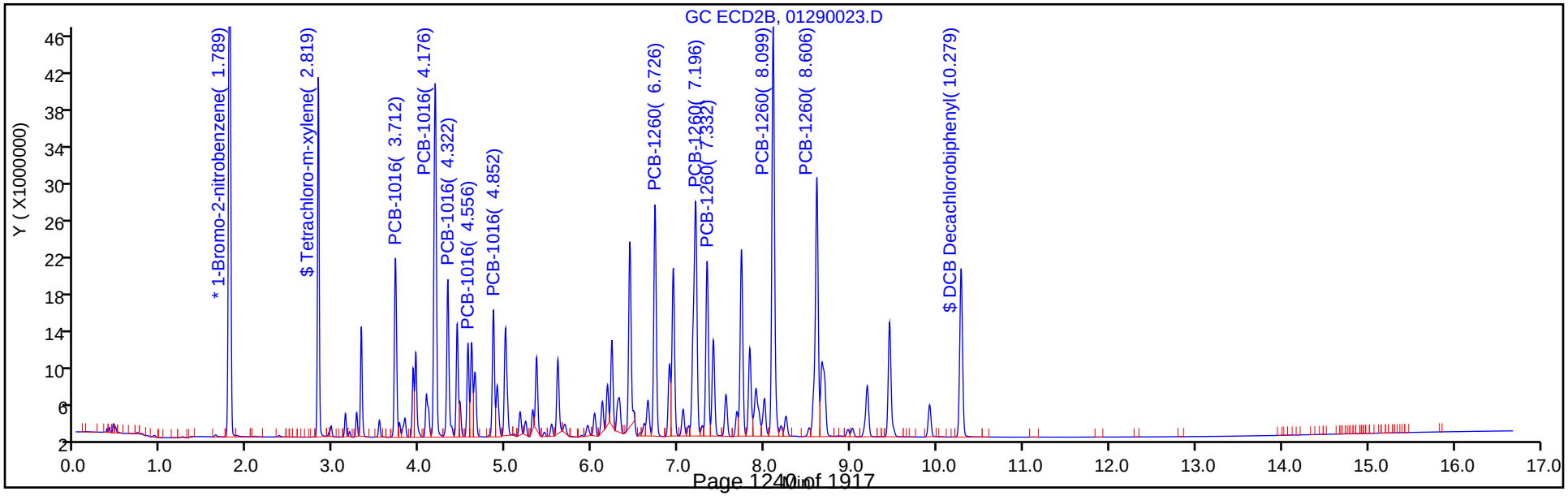
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290023.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 21:55:55 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD5 | | | Worklist Smp#: | 23 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 23 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290024.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 29-Jan-2019 22:17:03 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0078470-024
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:07 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 20087397 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 111093747 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.893 | 2.892 | 0.001 | 31266518 | 37.5 | 37.1 | |
| 2 | 2.820 | 2.819 | 0.001 | 77232852 | 37.5 | 36.5 | |
| | | | | | | RPD = 1.44 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.286 | 3.286 | 0.000 | 11548704 | 750.0 | 735.3 | |
| 1 | 3.653 | 3.652 | 0.001 | 25823234 | 750.0 | 735.8 | |
| 1 | 4.143 | 4.142 | 0.001 | 51613620 | 750.0 | 755.8 | |
| 1 | 4.293 | 4.292 | 0.001 | 19679998 | 750.0 | 736.0 | |
| 1 | 4.763 | 4.762 | 0.001 | 21228575 | 750.0 | 737.7 | |
| | | Average of Peak Amounts = | | | | 740.1 | |
| 2 | 3.713 | 3.712 | 0.001 | 50261441 | 750.0 | 699.5 | |
| 2 | 4.176 | 4.176 | 0.000 | 112828669 | 750.0 | 717.0 | |
| 2 | 4.320 | 4.322 | -0.002 | 46628474 | 750.0 | 701.7 | |
| 2 | 4.556 | 4.556 | 0.000 | 24121030 | 750.0 | 728.7 | |
| 2 | 4.850 | 4.852 | -0.002 | 35171114 | 750.0 | 730.5 | |
| | | Average of Peak Amounts = | | | | 715.5 | |
| | | | | | | RPD = 3.39 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.286 | 6.289 | -0.003 | 29648276 | 750.0 | 734.0 | |
| 1 | 6.826 | 6.829 | -0.003 | 16947271 | 750.0 | 737.4 | |
| 1 | 7.533 | 7.532 | 0.001 | 25970807 | 750.0 | 733.5 | |
| 1 | 7.976 | 7.976 | 0.000 | 58668909 | 750.0 | 735.0 | |
| 1 | 8.366 | 8.366 | 0.000 | 24515178 | 750.0 | 734.0 | |
| | | Average of Peak Amounts = | | | | 734.8 | |
| 2 | 6.726 | 6.726 | 0.000 | 74489703 | 750.0 | 707.2 | |
| 2 | 7.196 | 7.196 | 0.000 | 107647491 | 750.0 | 709.3 | |
| 2 | 7.330 | 7.332 | -0.002 | 59223019 | 750.0 | 704.1 | |
| 2 | 8.096 | 8.099 | -0.003 | 141474198 | 750.0 | 717.3 | |
| 2 | 8.603 | 8.606 | -0.003 | 100507503 | 750.0 | 709.3 | |
| | | Average of Peak Amounts = | | | | 709.4 | |
| | | | | | | RPD = 3.51 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.959 | 9.956 | 0.003 | 22722769 | 37.5 | 36.7 | |
| 2 | 10.280 | 10.279 | 0.001 | 59811197 | 37.5 | 35.0 | |
| | | | | | | RPD = 4.66 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 1474.9 | |
| 2 | | | | | | 1424.9 | |
| | | | | | | RPD = 3.45 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.75 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

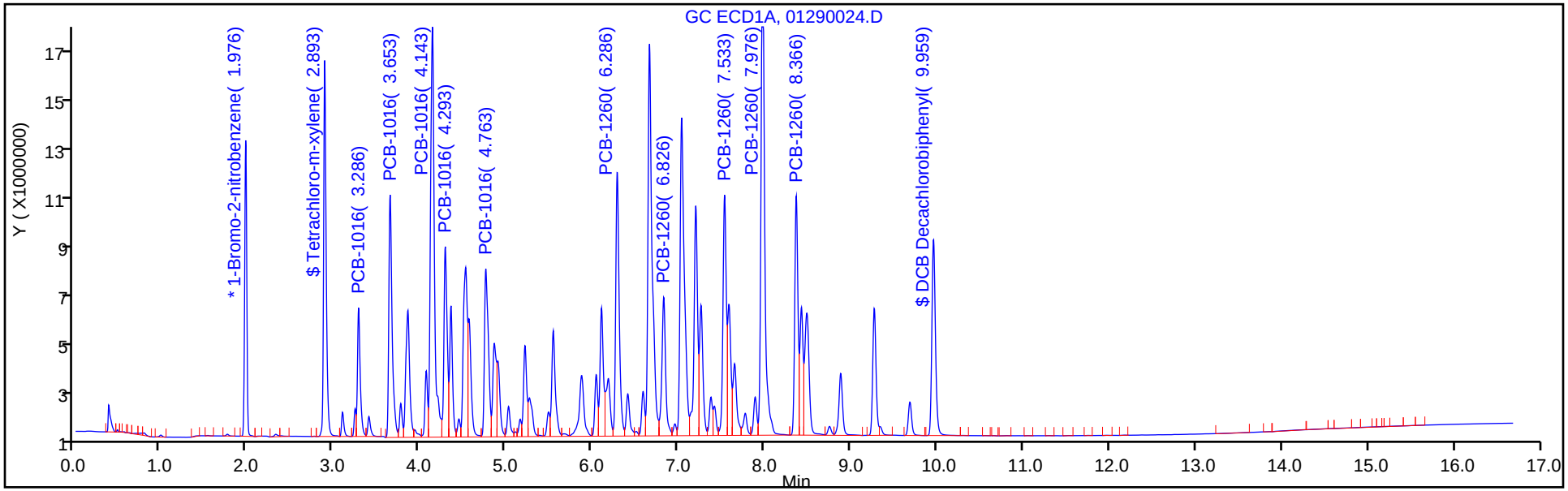
Report Date: 30-Jan-2019 14:59:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

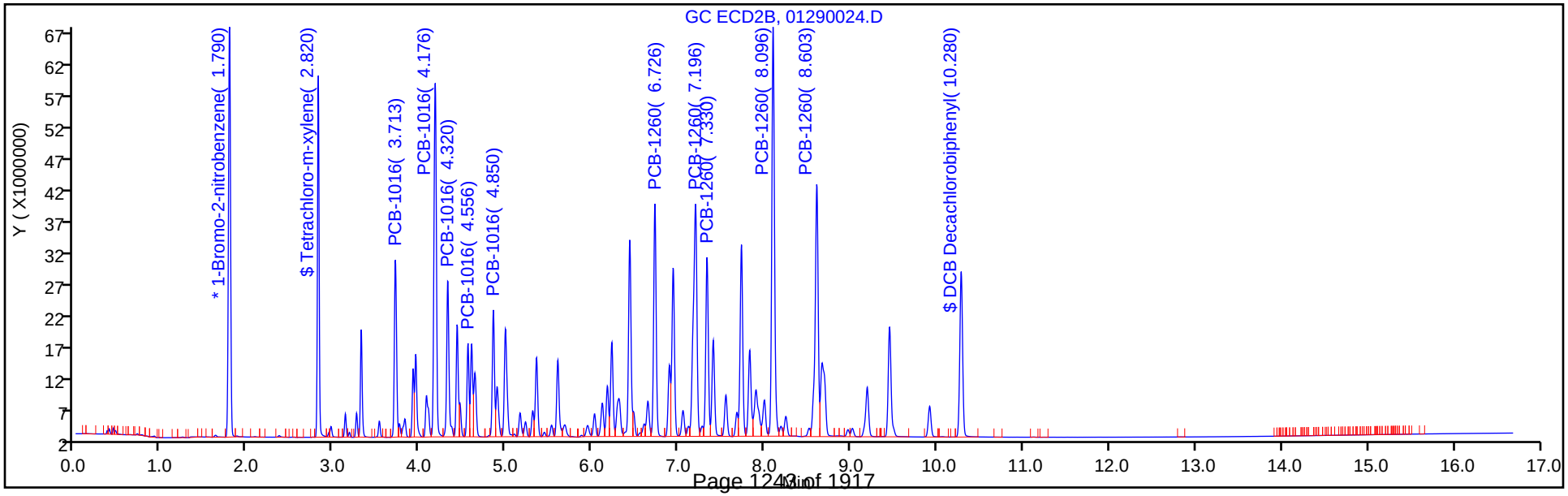
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290024.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 22:17:03 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD6 | | | Worklist Smp#: | 24 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 24 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290025.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Jan-2019 22:38:06 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0078470-025
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:05 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:32:26

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 19356422 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 106973467 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.892 | 2.892 | 0.000 | 42063367 | 50.0 | 51.7 | |
| 2 | 2.819 | 2.819 | 0.000 | 102309976 | 50.0 | 50.2 | |
| | | | | | | RPD = 2.81 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.286 | 3.286 | 0.000 | 15000661 | 1000.0 | 997.5 | |
| 1 | 3.652 | 3.652 | 0.000 | 33410558 | 1000.0 | 994.1 | |
| 1 | 4.142 | 4.142 | 0.000 | 68613189 | 1000.0 | 1042.3 | |
| 1 | 4.292 | 4.292 | 0.000 | 25930063 | 1000.0 | 1010.0 | |
| 1 | 4.762 | 4.762 | 0.000 | 27973098 | 1000.0 | 1011.6 | |
| | | Average of Peak Amounts = | | | | 1011.1 | |
| 2 | 3.713 | 3.712 | 0.001 | 65204162 | 1000.0 | 948.2 | |
| 2 | 4.176 | 4.176 | 0.000 | 148508749 | 1000.0 | 984.4 | |
| 2 | 4.323 | 4.322 | 0.001 | 60950394 | 1000.0 | 958.1 | |
| 2 | 4.556 | 4.556 | 0.000 | 31312479 | 1000.0 | 1028.9 | |
| 2 | 4.849 | 4.852 | -0.003 | 45994315 | 1000.0 | 1024.3 | |
| | | Average of Peak Amounts = | | | | 988.8 | |
| | | | | | | RPD = 2.23 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.286 | 6.289 | -0.003 | 39224988 | 1000.0 | 1011.7 | |
| 1 | 6.829 | 6.829 | 0.000 | 22769035 | 1000.0 | 1029.7 | |
| 1 | 7.532 | 7.532 | 0.000 | 34623161 | 1000.0 | 1017.8 | |
| 1 | 7.976 | 7.976 | 0.000 | 78962273 | 1000.0 | 1027.8 | |
| 1 | 8.366 | 8.366 | 0.000 | 32994132 | 1000.0 | 1026.9 | |
| | | Average of Peak Amounts = | | | | 1022.8 | |
| 2 | 6.726 | 6.726 | 0.000 | 98609065 | 1000.0 | 977.8 | |
| 2 | 7.196 | 7.196 | 0.000 | 142990875 | 1000.0 | 983.6 | |
| 2 | 7.329 | 7.332 | -0.003 | 78139671 | 1000.0 | 970.3 | |
| 2 | 8.096 | 8.099 | -0.003 | 187991129 | 1000.0 | 994.0 | |
| 2 | 8.603 | 8.606 | -0.003 | 133156158 | 1000.0 | 980.7 | |
| | | Average of Peak Amounts = | | | | 981.3 | |
| | | | | | | RPD = 4.14 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.956 | 9.956 | 0.000 | 29866597 | 50.0 | 50.2 | |
| 2 | 10.279 | 10.279 | 0.000 | 79228295 | 50.0 | 48.5 | |
| | | | | | | RPD = 3.58 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 2033.8 | |
| 2 | | | | | | 1970.0 | |
| | | | | | | RPD = 3.19 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

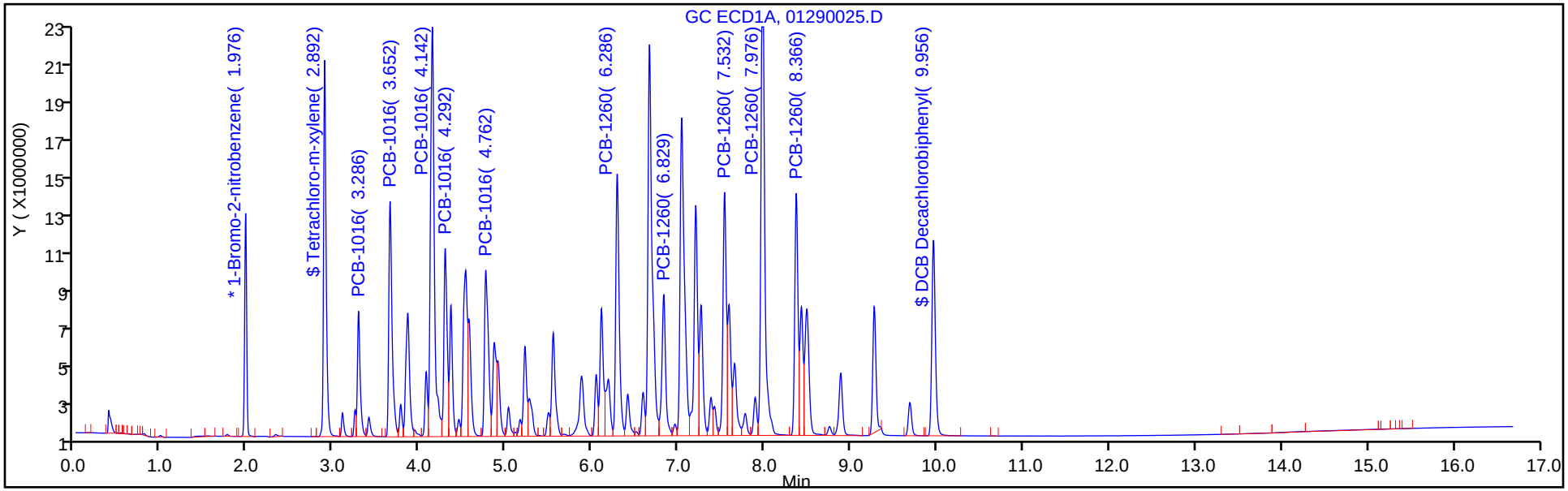
Report Date: 30-Jan-2019 14:59:05 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

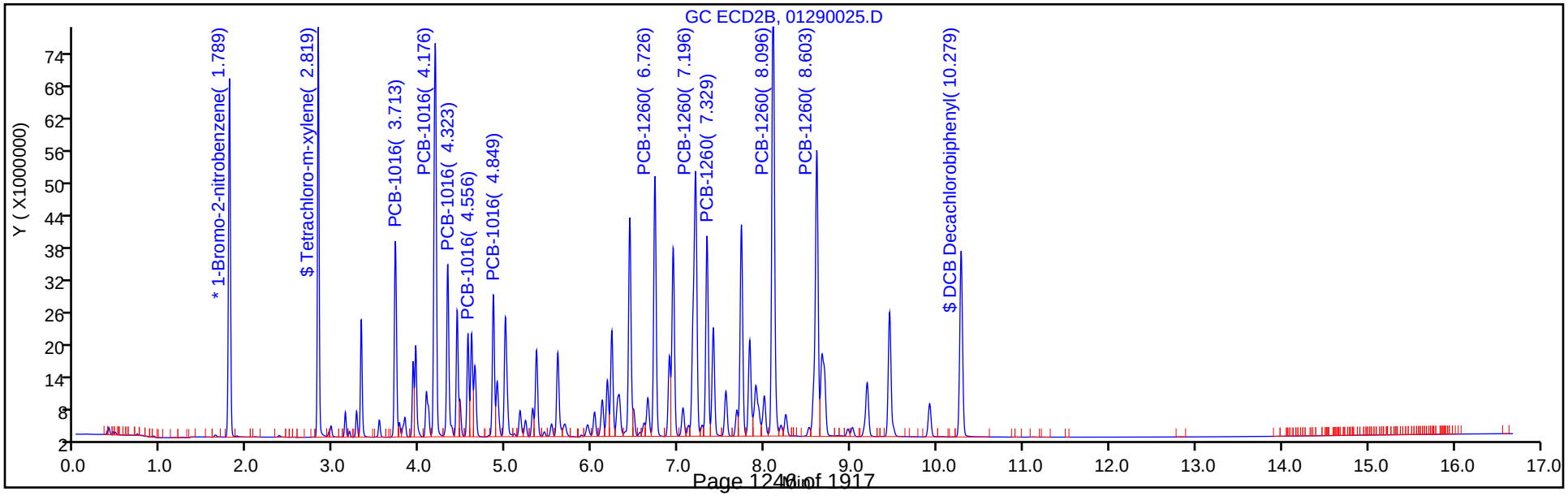
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290025.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 22:38:06 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD7 | | | Worklist Smp#: | 25 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 25 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 20:31 Calibration End Date: 01/29/2019 22:38 Calibration ID: 35092

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/19 | 01290019.D |
| Level 2 | STD2 280-445745/20 | 01290020.D |
| Level 3 | STD3 280-445745/21 | 01290021.D |
| Level 4 | STD4 280-445745/22 | 01290022.D |
| Level 5 | STD5 280-445745/23 | 01290023.D |
| Level 6 | STD6 280-445745/24 | 01290024.D |
| Level 7 | STD7 280-445745/25 | 01290025.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| PCB-1016 Peak 1 | 0.1004 0.0603 | 0.0900 0.0610 | 0.0803 | 0.0706 | 0.0614 | Lin2 | 1.0437 | 0.0632 | | | | | | | 0.9910 | | 0.9900 |
| PCB-1016 Peak 2 | 0.1988 0.1354 | 0.1790 0.1388 | 0.1637 | 0.1508 | 0.1363 | Lin2 | 1.6225 | 0.1394 | | | | | | | 0.9970 | | 0.9900 |
| PCB-1016 Peak 3 | 0.0907 0.0560 | 0.0817 0.0570 | 0.0735 | 0.0647 | 0.0569 | Lin2 | 0.9033 | 0.0585 | | | | | | | 0.9920 | | 0.9900 |
| PCB-1016 Peak 4 | 0.0504 0.0289 | 0.0460 0.0293 | 0.0402 | 0.0348 | 0.0294 | Qua1 | 0.6048 | 0.0316 | -0.000004 | | | | | | 0.9970 | | 0.9900 |
| PCB-1016 Peak 5 | 0.0790 0.0422 | 0.0700 0.0430 | 0.0576 | 0.0498 | 0.0427 | Qua1 | 1.0628 | 0.0442 | -0.000003 | | | | | | 0.9980 | | 0.9900 |
| PCB-1260 Peak 1 | 0.1413 0.0894 | 0.1280 0.0922 | 0.1147 | 0.1013 | 0.0896 | Lin2 | 1.3547 | 0.0929 | | | | | | | 0.9930 | | 0.9900 |
| PCB-1260 Peak 2 | 0.1992 0.1292 | 0.1819 0.1337 | 0.1633 | 0.1449 | 0.1294 | Lin2 | 1.8303 | 0.1340 | | | | | | | 0.9940 | | 0.9900 |
| PCB-1260 Peak 3 | 0.1132 0.0711 | 0.1037 0.0730 | 0.0927 | 0.0811 | 0.0711 | Lin2 | 1.1095 | 0.0741 | | | | | | | 0.9910 | | 0.9900 |
| PCB-1260 Peak 4 | 0.2421 0.1698 | 0.2241 0.1757 | 0.2038 | 0.1865 | 0.1696 | Lin2 | 1.8800 | 0.1749 | | | | | | | 0.9960 | | 0.9900 |
| PCB-1260 Peak 5 | 0.1823 0.1206 | 0.1690 0.1245 | 0.1513 | 0.1346 | 0.1214 | Lin2 | 1.6214 | 0.1253 | | | | | | | 0.9940 | | 0.9900 |
| Tetrachloro-m-xylene | 1.1242 1.8539 | 2.3533 1.9128 | 2.1698 | 2.0251 | 1.8335 | Lin1 | -0.037 | 1.9044 | | | | | | | 0.9950 | | 0.9900 |
| DCB Decachlorobiphenyl | 2.2996 1.4357 | 2.1210 1.4813 | 1.8738 | 1.6319 | 1.4665 | Lin2 | 1.1332 | 1.5049 | | | | | | | 0.9920 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 20:31 Calibration End Date: 01/29/2019 22:38 Calibration ID: 35092

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/19 | 01290019.D |
| Level 2 | STD2 280-445745/20 | 01290020.D |
| Level 3 | STD3 280-445745/21 | 01290021.D |
| Level 4 | STD4 280-445745/22 | 01290022.D |
| Level 5 | STD5 280-445745/23 | 01290023.D |
| Level 6 | STD6 280-445745/24 | 01290024.D |
| Level 7 | STD7 280-445745/25 | 01290025.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1016 Peak 1 | BNB | Lin2 | 2627578<br>50261441 | 4577403<br>65204162 | 8229745 | 18866059 | 34998168 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1016 Peak 2 | BNB | Lin2 | 5204108<br>112828669 | 9101267<br>148508749 | 16770420 | 40287772 | 77642819 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1016 Peak 3 | BNB | Lin2 | 2375701<br>46628474 | 4153755<br>60950394 | 7524499 | 17287413 | 32426114 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1016 Peak 4 | BNB | Qua1 | 1320720<br>24121030 | 2340987<br>31312479 | 4120556 | 9287733 | 16726012 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1016 Peak 5 | BNB | Qua1 | 2068748<br>35171114 | 3559060<br>45994315 | 5895931 | 13302362 | 24328109 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1260 Peak 1 | BNB | Lin2 | 3698458<br>74489703 | 6505968<br>98609065 | 11751902 | 27060107 | 51025026 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1260 Peak 2 | BNB | Lin2 | 5216162<br>107647491 | 9249707<br>142990875 | 16730388 | 38721098 | 73709863 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1260 Peak 3 | BNB | Lin2 | 2963336<br>59223019 | 5272800<br>78139671 | 9497849 | 21659841 | 40499657 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1260 Peak 4 | BNB | Lin2 | 6339377<br>141474198 | 11393234<br>187991129 | 20878089 | 49828439 | 96609483 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1260 Peak 5 | BNB | Lin2 | 4773952<br>100507503 | 8594861<br>133156158 | 15503715 | 35981937 | 69150252 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| Tetrachloro-m-xylene | BNB | Lin1 | 1471633<br>77232852 | 5982700<br>102309976 | 11113729 | 27059584 | 52211718 | 1.25<br>37.5 | 2.50<br>50.0 | 5.00 | 12.5 | 25.0 |
| DCB Decachlorobiphenyl | BNB | Lin2 | 3010343<br>59811197 | 5392068<br>79228295 | 9597384 | 21805920 | 41760348 | 1.25<br>37.5 | 2.50<br>50.0 | 5.00 | 12.5 | 25.0 |

Curve Type Legend:

Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua1 = Quadratic 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290019.D
Lims ID: STD1 1660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Jan-2019 20:31:38 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1 1660
Misc. Info.: 280-0078470-019
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:16 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:31:19

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.979 | -0.004 | 18728713 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.789 | -0.001 | 104727389 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.891 | 2.892 | -0.001 | 914469 | 1.25 | 1.32 | |
| 2 | 2.818 | 2.819 | -0.001 | 1471633 | 1.25 | 0.7573 | |
| | | | | | | RPD = 53.95 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.288 | 3.286 | 0.002 | 559860 | 25.0 | 21.0 | |
| 1 | 3.651 | 3.652 | -0.001 | 1209479 | 25.0 | 20.0 | |
| 1 | 4.141 | 4.142 | -0.001 | 1610058 | 25.0 | 26.3 | |
| 1 | 4.291 | 4.292 | -0.001 | 773065 | 25.0 | 21.6 | |
| 1 | 4.761 | 4.762 | -0.001 | 796349 | 25.0 | 22.4 | |
| | | Average of Peak Amounts = | | | | 22.3 | |
| 2 | 3.715 | 3.712 | 0.003 | 2627578 | 25.0 | 23.2 | |
| 2 | 4.175 | 4.176 | -0.001 | 5204108 | 25.0 | 24.0 | |
| 2 | 4.322 | 4.322 | 0.000 | 2375701 | 25.0 | 23.3 | |
| 2 | 4.558 | 4.556 | 0.002 | 1320720 | 25.0 | 20.8 | |
| 2 | 4.852 | 4.852 | 0.000 | 2068748 | 25.0 | 20.7 | |
| | | Average of Peak Amounts = | | | | 22.4 | |
| | | | | | | RPD = 0.57 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.288 | 6.289 | -0.001 | 1188688 | 25.0 | 21.4 | |
| 1 | 6.825 | 6.829 | -0.004 | 603264 | 25.0 | 24.4 | |
| 1 | 7.531 | 7.532 | -0.001 | 987009 | 25.0 | 22.6 | |
| 1 | 7.971 | 7.976 | -0.005 | 2023732 | 25.0 | 24.4 | |
| 1 | 8.361 | 8.366 | -0.005 | 875716 | 25.0 | 24.0 | |
| | | Average of Peak Amounts = | | | | 23.4 | |
| 2 | 6.725 | 6.726 | -0.001 | 3698458 | 25.0 | 23.4 | |
| 2 | 7.195 | 7.196 | -0.001 | 5216162 | 25.0 | 23.5 | |
| 2 | 7.328 | 7.332 | -0.004 | 2963336 | 25.0 | 23.2 | |
| 2 | 8.098 | 8.099 | -0.001 | 6339377 | 25.0 | 23.9 | |
| 2 | 8.605 | 8.606 | -0.001 | 4773952 | 25.0 | 23.4 | |
| | | Average of Peak Amounts = | | | | 23.5 | |
| | | | | | | RPD = 0.57 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.955 | 9.956 | -0.001 | 870801 | 1.25 | 1.04 | |
| 2 | 10.278 | 10.279 | -0.001 | 3010343 | 1.25 | 1.16 | |
| | | | | | | RPD = 10.80 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 45.6 | |
| 2 | | | | | | 45.9 | |
| | | | | | | RPD = 0.57 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.03 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

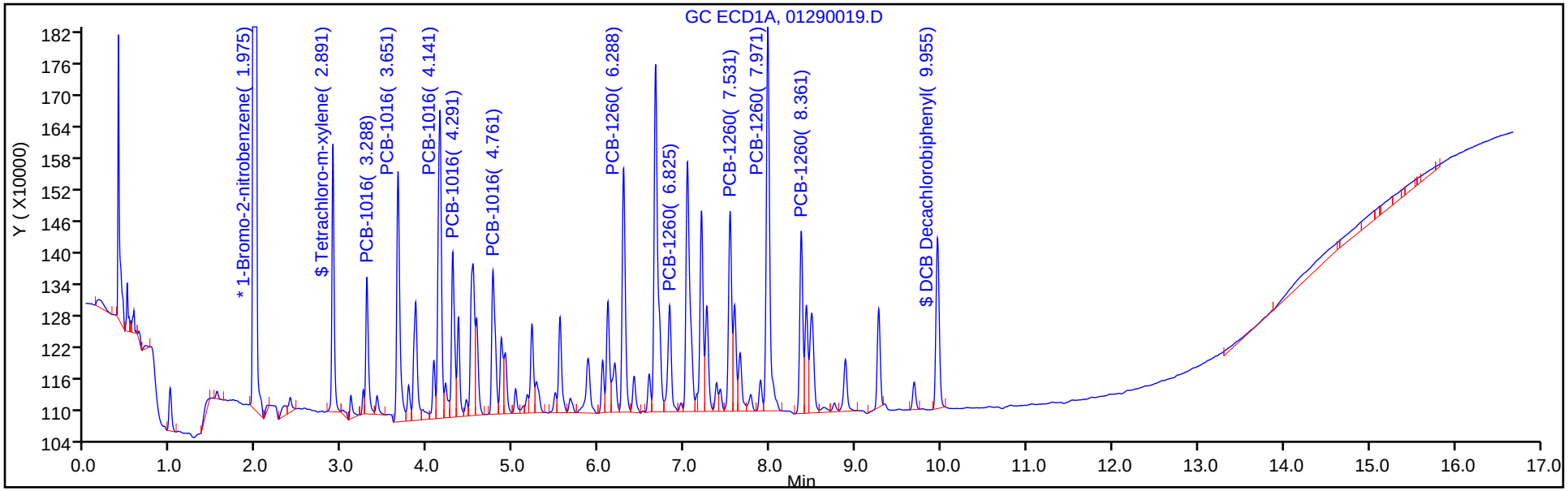
Report Date: 30-Jan-2019 14:59:17 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

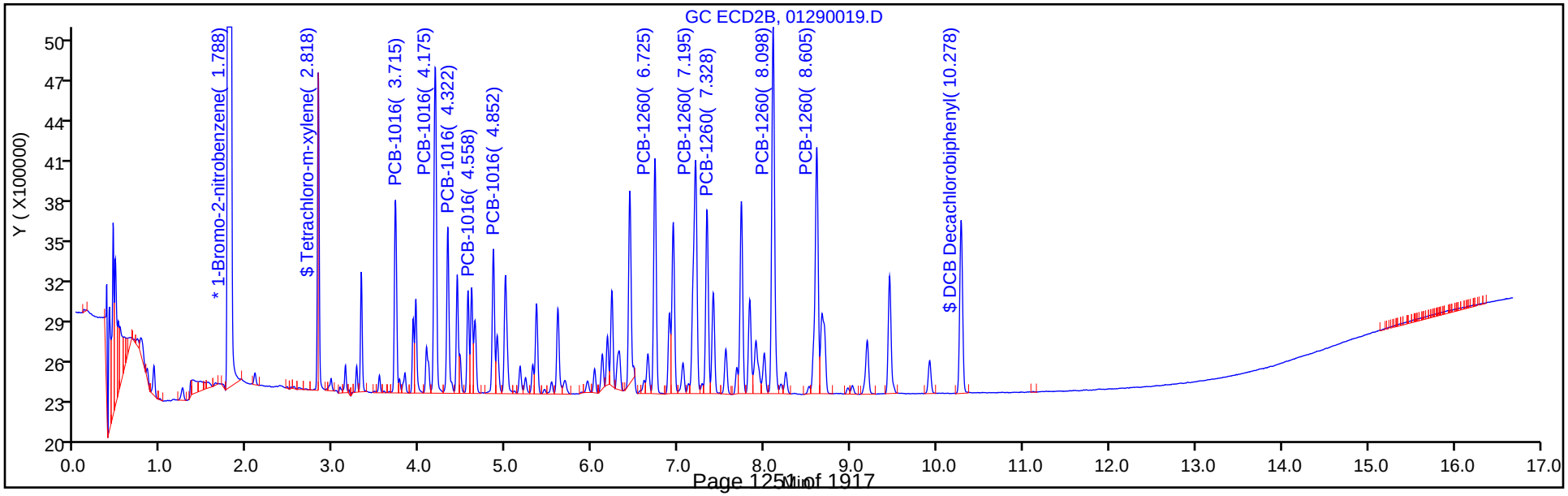
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290019.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 20:31:38 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD1 1660 | | | Worklist Smp#: | 19 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 19 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290020.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Jan-2019 20:52:40 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0078470-020
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:15 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.979 | -0.002 | 18222309 | 100.0 | 100.0 | |
| 2 | 1.791 | 1.789 | 0.002 | 101690991 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.891 | 2.892 | -0.001 | 1822602 | 2.50 | 2.53 | |
| 2 | 2.821 | 2.819 | 0.002 | 5982700 | 2.50 | 3.11 | |
| | | | | | | RPD = 20.52 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.287 | 3.286 | 0.001 | 965503 | 50.0 | 51.2 | |
| 1 | 3.651 | 3.652 | -0.001 | 2171469 | 50.0 | 52.0 | |
| 1 | 4.141 | 4.142 | -0.001 | 3115498 | 50.0 | 51.3 | |
| 1 | 4.291 | 4.292 | -0.001 | 1480509 | 50.0 | 52.0 | |
| 1 | 4.761 | 4.762 | -0.001 | 1527261 | 50.0 | 51.6 | |
| | | Average of Peak Amounts = | | | | 51.6 | |
| 2 | 3.714 | 3.712 | 0.002 | 4577403 | 50.0 | 54.7 | |
| 2 | 4.177 | 4.176 | 0.001 | 9101267 | 50.0 | 52.6 | |
| 2 | 4.321 | 4.322 | -0.001 | 4153755 | 50.0 | 54.4 | |
| 2 | 4.557 | 4.556 | 0.001 | 2340987 | 50.0 | 54.0 | |
| 2 | 4.851 | 4.852 | -0.001 | 3559060 | 50.0 | 55.3 | |
| | | Average of Peak Amounts = | | | | 54.2 | |
| | | | | | | RPD = 4.84 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.287 | 6.289 | -0.002 | 2279107 | 50.0 | 52.5 | |
| 1 | 6.824 | 6.829 | -0.005 | 1129457 | 50.0 | 50.5 | |
| 1 | 7.531 | 7.532 | -0.001 | 1895416 | 50.0 | 52.0 | |
| 1 | 7.974 | 7.976 | -0.002 | 3900466 | 50.0 | 51.2 | |
| 1 | 8.364 | 8.366 | -0.002 | 1685702 | 50.0 | 51.7 | |
| | | Average of Peak Amounts = | | | | 51.6 | |
| 2 | 6.724 | 6.726 | -0.002 | 6505968 | 50.0 | 54.3 | |
| 2 | 7.197 | 7.196 | 0.001 | 9249707 | 50.0 | 54.2 | |
| 2 | 7.331 | 7.332 | -0.001 | 5272800 | 50.0 | 55.0 | |
| 2 | 8.097 | 8.099 | -0.002 | 11393234 | 50.0 | 53.3 | |
| 2 | 8.604 | 8.606 | -0.002 | 8594861 | 50.0 | 54.5 | |
| | | Average of Peak Amounts = | | | | 54.3 | |
| | | | | | | RPD = 5.07 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.954 | 9.956 | -0.002 | 1734330 | 2.50 | 2.64 | |
| 2 | 10.277 | 10.279 | -0.002 | 5392068 | 2.50 | 2.77 | |
| | | | | | | RPD = 4.87 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 103.2 | |
| 2 | | | | | | 108.4 | |
| | | | | | | RPD = 4.96 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.05 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

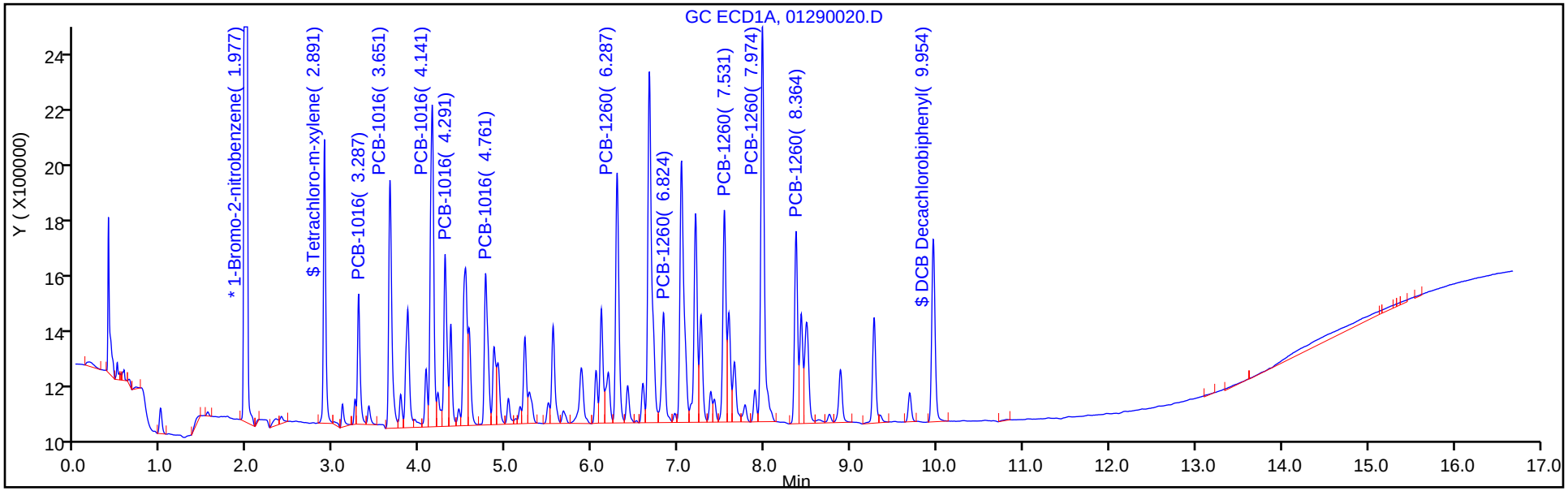
Report Date: 30-Jan-2019 14:59:15 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

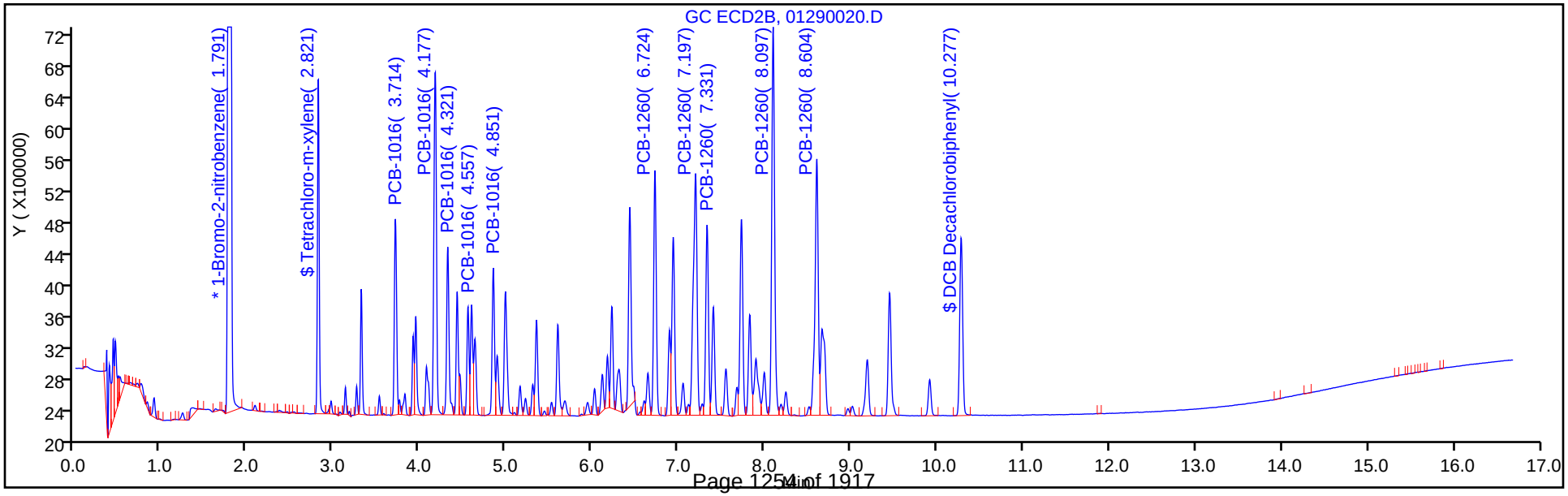
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290020.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 20:52:40 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD2 | | | Worklist Smp#: | 20 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 20 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290021.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Jan-2019 21:13:50 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0078470-021
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:13 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.979 | -0.002 | 18362303 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 102438475 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.894 | 2.892 | 0.002 | 3624536 | 5.00 | 4.84 | |
| 2 | 2.820 | 2.819 | 0.001 | 11113729 | 5.00 | 5.72 | |
| | | | | | | RPD = 16.64 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.287 | 3.286 | 0.001 | 1792682 | 100.0 | 109.7 | |
| 1 | 3.650 | 3.652 | -0.002 | 4067241 | 100.0 | 112.0 | |
| 1 | 4.144 | 4.142 | 0.002 | 6083533 | 100.0 | 98.4 | |
| 1 | 4.290 | 4.292 | -0.002 | 2839877 | 100.0 | 107.9 | |
| 1 | 4.760 | 4.762 | -0.002 | 2960668 | 100.0 | 106.2 | |
| | | Average of Peak Amounts = | | | | 106.8 | |
| 2 | 3.714 | 3.712 | 0.002 | 8229745 | 100.0 | 110.6 | |
| 2 | 4.177 | 4.176 | 0.001 | 16770420 | 100.0 | 105.8 | |
| 2 | 4.320 | 4.322 | -0.002 | 7524499 | 100.0 | 110.1 | |
| 2 | 4.557 | 4.556 | 0.001 | 4120556 | 100.0 | 109.4 | |
| 2 | 4.850 | 4.852 | -0.002 | 5895931 | 100.0 | 106.9 | |
| | | Average of Peak Amounts = | | | | 108.6 | |
| | | | | | | RPD = 1.60 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.287 | 6.289 | -0.002 | 4326070 | 100.0 | 108.3 | |
| 1 | 6.827 | 6.829 | -0.002 | 2254364 | 100.0 | 104.0 | |
| 1 | 7.534 | 7.532 | 0.002 | 3603564 | 100.0 | 104.9 | |
| 1 | 7.974 | 7.976 | -0.002 | 7624671 | 100.0 | 102.0 | |
| 1 | 8.364 | 8.366 | -0.002 | 3223947 | 100.0 | 101.9 | |
| | | Average of Peak Amounts = | | | | 104.2 | |
| 2 | 6.727 | 6.726 | 0.001 | 11751902 | 100.0 | 108.9 | |
| 2 | 7.197 | 7.196 | 0.001 | 16730388 | 100.0 | 108.2 | |
| 2 | 7.330 | 7.332 | -0.002 | 9497849 | 100.0 | 110.1 | |
| 2 | 8.097 | 8.099 | -0.002 | 20878089 | 100.0 | 105.8 | |
| 2 | 8.604 | 8.606 | -0.002 | 15503715 | 100.0 | 107.9 | |
| | | Average of Peak Amounts = | | | | 108.2 | |
| | | | | | | RPD = 3.74 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.957 | 9.956 | 0.001 | 3343034 | 5.00 | 5.49 | |
| 2 | 10.277 | 10.279 | -0.002 | 9597384 | 5.00 | 5.47 | |
| | | | | | | RPD = 0.40 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 211.0 | |
| 2 | | | | | | 216.7 | |
| | | | | | | RPD = 2.66 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.10 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

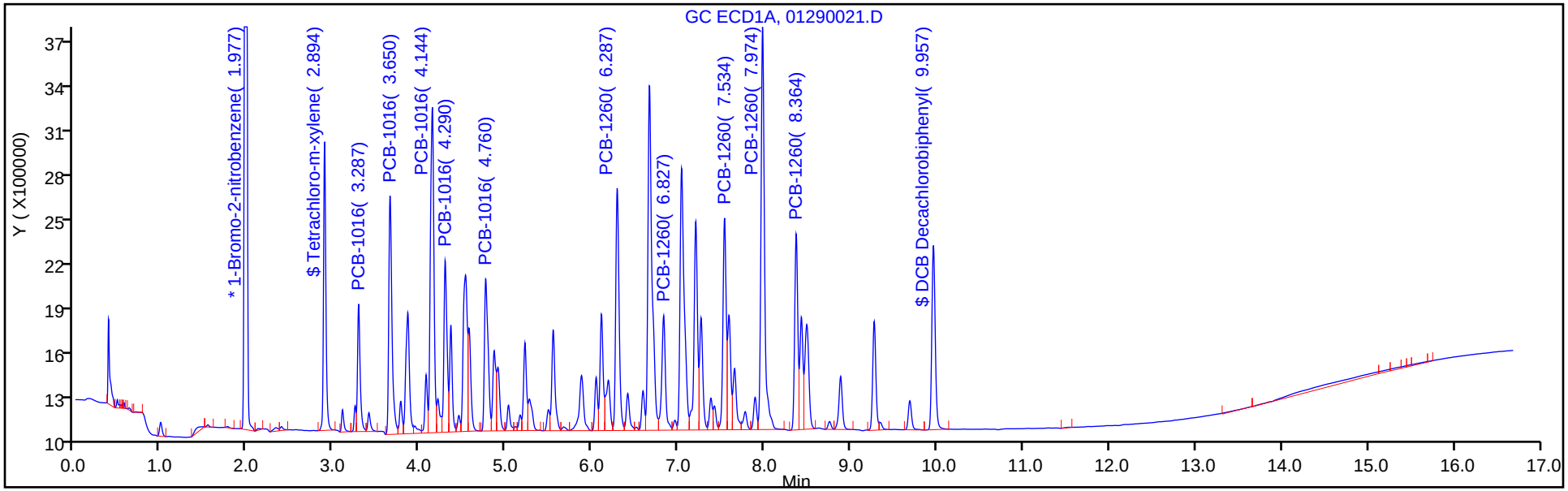
Report Date: 30-Jan-2019 14:59:13 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

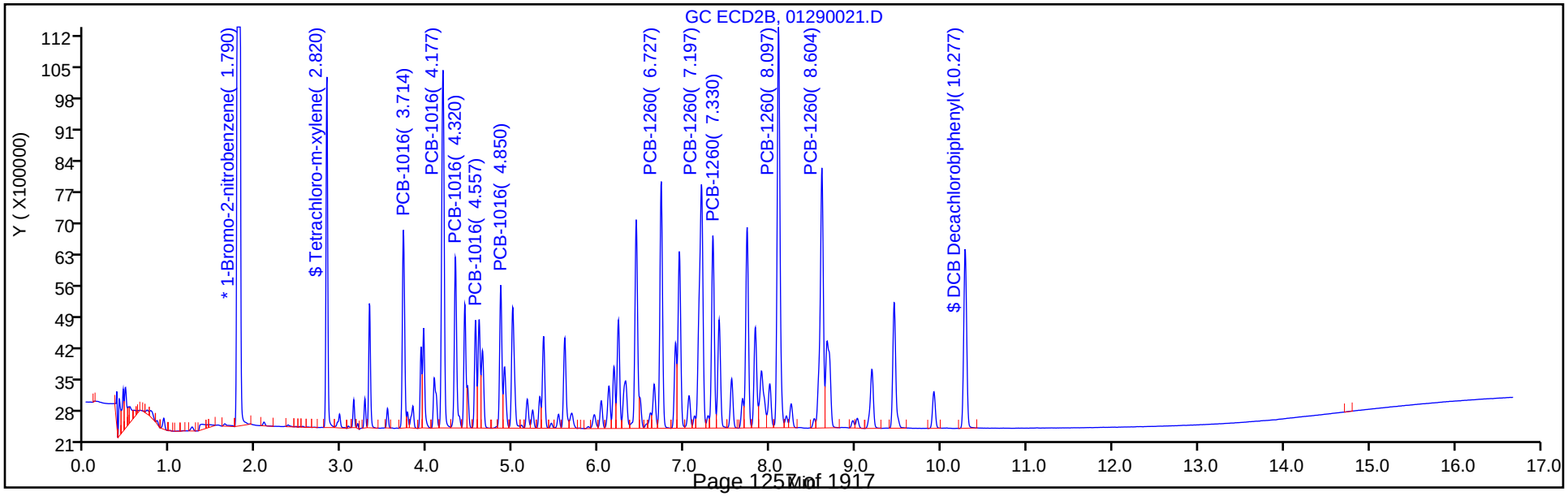
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290021.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 21:13:50 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD3 | | | Worklist Smp#: | 21 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 21 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290022.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Jan-2019 21:34:52 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0078470-022
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:11 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:28:15

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 19204388 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 106896067 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.893 | 2.892 | 0.001 | 9829518 | 12.5 | 12.3 | |
| 2 | 2.820 | 2.819 | 0.001 | 27059584 | 12.5 | 13.3 | |
| | | | | | | RPD = 7.97 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.286 | 3.286 | 0.000 | 4226504 | 250.0 | 270.2 | |
| 1 | 3.653 | 3.652 | 0.001 | 9498775 | 250.0 | 272.1 | |
| 1 | 4.143 | 4.142 | 0.001 | 15763921 | 250.0 | 242.2 | |
| 1 | 4.290 | 4.292 | -0.002 | 6921564 | 250.0 | 264.6 | |
| 1 | 4.763 | 4.762 | 0.001 | 7327932 | 250.0 | 261.6 | |
| | | Average of Peak Amounts = | | | | 262.1 | |
| 2 | 3.713 | 3.712 | 0.001 | 18866059 | 250.0 | 262.8 | |
| 2 | 4.176 | 4.176 | 0.000 | 40287772 | 250.0 | 258.7 | |
| 2 | 4.320 | 4.322 | -0.002 | 17287413 | 250.0 | 260.9 | |
| 2 | 4.556 | 4.556 | 0.000 | 9287733 | 250.0 | 263.5 | |
| 2 | 4.850 | 4.852 | -0.002 | 13302362 | 250.0 | 262.3 | |
| | | Average of Peak Amounts = | | | | 261.7 | |
| | | | | | | RPD = 0.18 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.286 | 6.289 | -0.003 | 10387117 | 250.0 | 262.3 | |
| 1 | 6.826 | 6.829 | -0.003 | 5585726 | 250.0 | 251.7 | |
| 1 | 7.533 | 7.532 | 0.001 | 9041388 | 250.0 | 262.3 | |
| 1 | 7.973 | 7.976 | -0.003 | 19402857 | 250.0 | 252.4 | |
| 1 | 8.363 | 8.366 | -0.003 | 8209562 | 250.0 | 254.3 | |
| | | Average of Peak Amounts = | | | | 256.6 | |
| 2 | 6.726 | 6.726 | 0.000 | 27060107 | 250.0 | 257.9 | |
| 2 | 7.196 | 7.196 | 0.000 | 38721098 | 250.0 | 256.6 | |
| 2 | 7.330 | 7.332 | -0.002 | 21659841 | 250.0 | 258.3 | |
| 2 | 8.096 | 8.099 | -0.003 | 49828439 | 250.0 | 255.8 | |
| 2 | 8.603 | 8.606 | -0.003 | 35981937 | 250.0 | 255.8 | |
| | | Average of Peak Amounts = | | | | 256.9 | |
| | | | | | | RPD = 0.12 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.956 | 9.956 | 0.000 | 7962949 | 12.5 | 13.1 | |
| 2 | 10.280 | 10.279 | 0.001 | 21805920 | 12.5 | 12.8 | |
| | | | | | | RPD = 2.61 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 518.7 | |
| 2 | | | | | | 518.5 | |
| | | | | | | RPD = 0.03 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.25 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

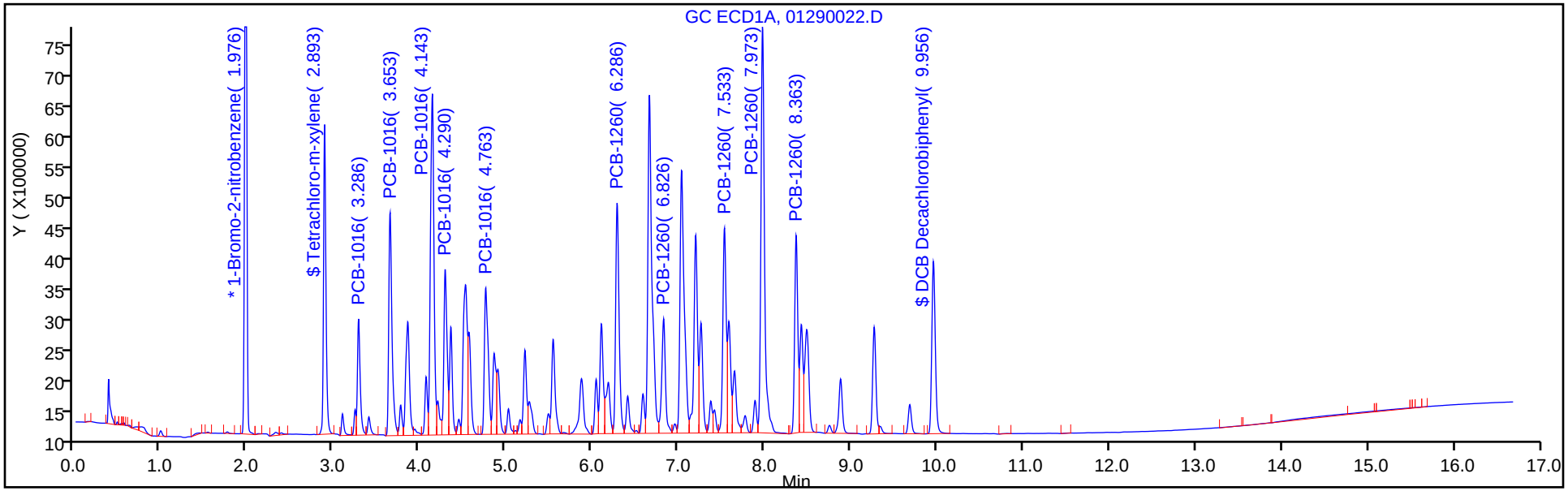
Report Date: 30-Jan-2019 14:59:11 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

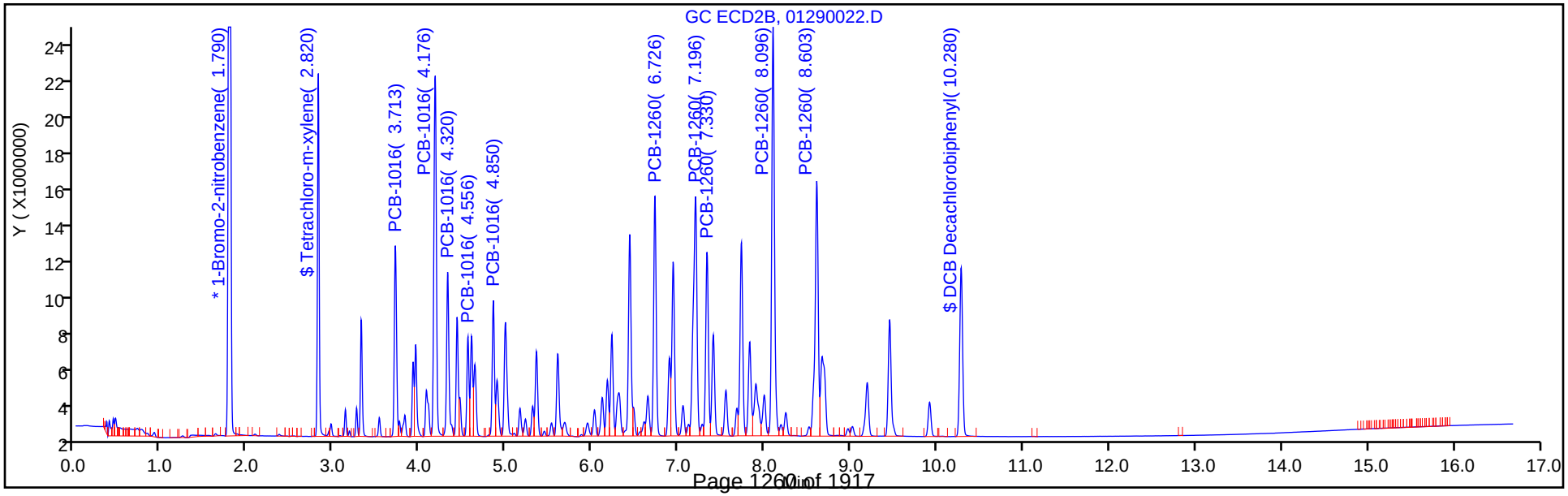
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290022.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 21:34:52 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD4 | | | Worklist Smp#: | 22 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 22 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290023.D
Lims ID: STD5
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 29-Jan-2019 21:55:55 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0078470-023
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:09 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:30:04

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.979 | 1.979 | 0.000 | 20507310 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 113907969 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.892 | 2.892 | 0.000 | 20664986 | 25.0 | 24.0 | |
| 2 | 2.819 | 2.819 | 0.000 | 52211718 | 25.0 | 24.1 | |
| | | | | | | RPD = 0.18 | |
| 1 PCB-1016 | | | | | | | M |
| 1 | 3.286 | 3.286 | 0.000 | 7952245 | 500.0 | 490.0 | |
| 1 | 3.652 | 3.652 | 0.000 | 17733988 | 500.0 | 489.1 | |
| 1 | 4.142 | 4.142 | 0.000 | 31945318 | 500.0 | 458.6 | |
| 1 | 4.292 | 4.292 | 0.000 | 13273314 | 500.0 | 482.9 | |
| 1 | 4.762 | 4.762 | 0.000 | 14291318 | 500.0 | 483.9 | |
| | | Average of Peak Amounts = | | | | 480.9 | |
| 2 | 3.712 | 3.712 | 0.000 | 34998168 | 500.0 | 469.8 | M |
| 2 | 4.176 | 4.176 | 0.000 | 77642819 | 500.0 | 477.4 | M |
| 2 | 4.322 | 4.322 | 0.000 | 32426114 | 500.0 | 471.0 | M |
| 2 | 4.556 | 4.556 | 0.000 | 16726012 | 500.0 | 470.6 | M |
| 2 | 4.852 | 4.852 | 0.000 | 24328109 | 500.0 | 475.3 | M |
| | | Average of Peak Amounts = | | | | 472.8 | |
| | | | | | | RPD = 1.70 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.289 | 6.289 | 0.000 | 20138087 | 500.0 | 484.8 | |
| 1 | 6.829 | 6.829 | 0.000 | 11232542 | 500.0 | 477.4 | |
| 1 | 7.532 | 7.532 | 0.000 | 17517262 | 500.0 | 482.0 | |
| 1 | 7.976 | 7.976 | 0.000 | 39380635 | 500.0 | 482.3 | |
| 1 | 8.366 | 8.366 | 0.000 | 16493612 | 500.0 | 482.2 | |
| | | Average of Peak Amounts = | | | | 481.7 | |
| 2 | 6.726 | 6.726 | 0.000 | 51025026 | 500.0 | 467.6 | |
| 2 | 7.196 | 7.196 | 0.000 | 73709863 | 500.0 | 469.1 | |
| 2 | 7.332 | 7.332 | 0.000 | 40499657 | 500.0 | 464.6 | |
| 2 | 8.099 | 8.099 | 0.000 | 96609483 | 500.0 | 474.2 | |
| 2 | 8.606 | 8.606 | 0.000 | 69150252 | 500.0 | 471.7 | |
| | | Average of Peak Amounts = | | | | 469.4 | |
| | | | | | | RPD = 2.59 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.956 | 9.956 | 0.000 | 15597466 | 25.0 | 24.5 | |
| 2 | 10.279 | 10.279 | 0.000 | 41760348 | 25.0 | 23.6 | |
| | | | | | | RPD = 3.76 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.50 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

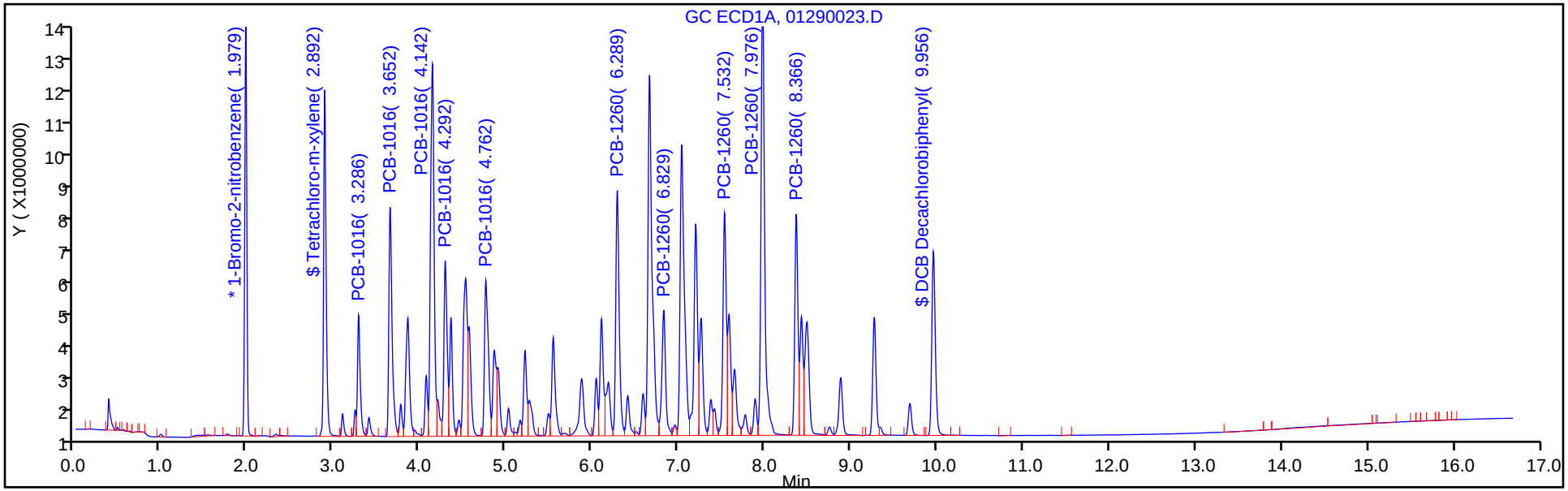
Report Date: 30-Jan-2019 14:59:09 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

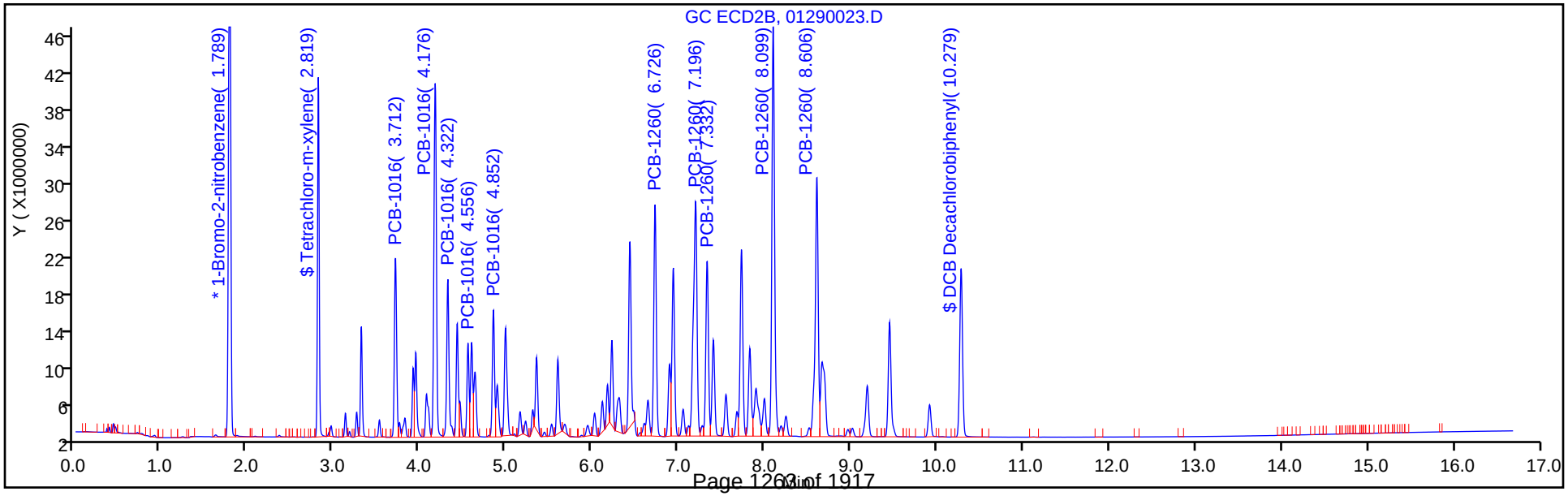
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290023.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 21:55:55 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD5 | | | Worklist Smp#: | 23 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 23 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:59:10 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290023.D

Injection Date: 29-Jan-2019 21:55:55 Instrument ID: SGC_J

Lims ID: STD5

Client ID:

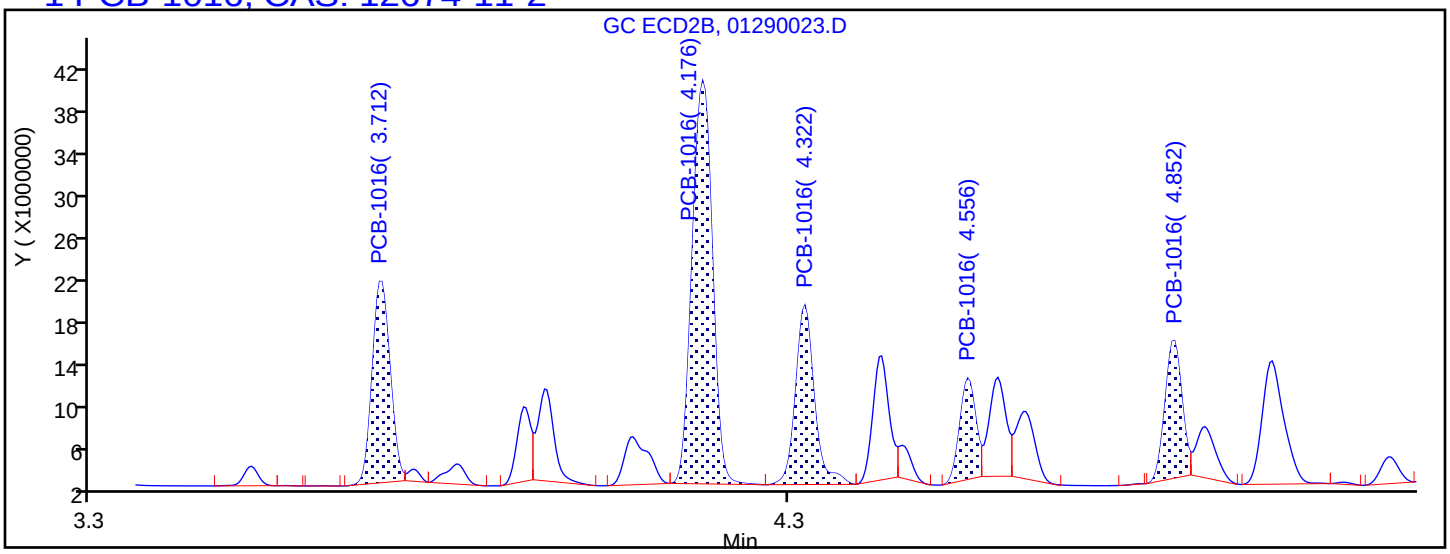
Operator ID: TEM ALS Bottle#: 23 Worklist Smp#: 23

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

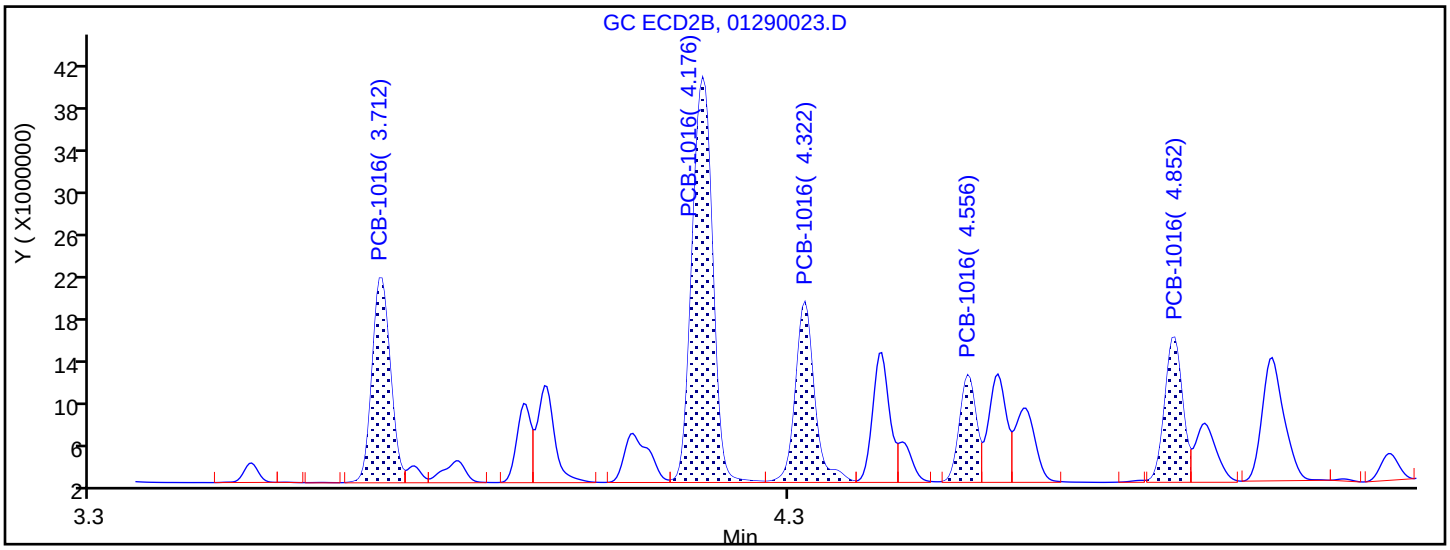
Column: CLP2 Pesticides Column 2 ( 0.32 mm) Detector GC ECD2B

1 PCB-1016, CAS: 12674-11-2




Processing Integration Results

| | |
|---|---|
| 3.712 | Response = 33625401 |
| 4.176 | Response = 76320909 |
| 4.322 | Response = 31521739 |
| 4.556 | Response = 15145979 |
| 4.852 | Response = 22064079 |




Manual Integration Results

| | | |
|---|---|---|
| 3.712 | Response = 34998168 | M |
| 4.176 | Response = 77642819 | M |
| 4.322 | Response = 32426114 | M |
| 4.556 | Response = 16726012 | M |
| 4.852 | Response = 24328109 | M |

Reviewer: mooret, 30-Jan-2019 14:29:59

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290024.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 29-Jan-2019 22:17:03 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0078470-024
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:07 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 20087397 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 111093747 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.893 | 2.892 | 0.001 | 31266518 | 37.5 | 37.1 | |
| 2 | 2.820 | 2.819 | 0.001 | 77232852 | 37.5 | 36.5 | |
| | | | | | | RPD = 1.44 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.286 | 3.286 | 0.000 | 11548704 | 750.0 | 735.3 | |
| 1 | 3.653 | 3.652 | 0.001 | 25823234 | 750.0 | 735.8 | |
| 1 | 4.143 | 4.142 | 0.001 | 51613620 | 750.0 | 755.8 | |
| 1 | 4.293 | 4.292 | 0.001 | 19679998 | 750.0 | 736.0 | |
| 1 | 4.763 | 4.762 | 0.001 | 21228575 | 750.0 | 737.7 | |
| | | Average of Peak Amounts = | | | | 740.1 | |
| 2 | 3.713 | 3.712 | 0.001 | 50261441 | 750.0 | 699.5 | |
| 2 | 4.176 | 4.176 | 0.000 | 112828669 | 750.0 | 717.0 | |
| 2 | 4.320 | 4.322 | -0.002 | 46628474 | 750.0 | 701.7 | |
| 2 | 4.556 | 4.556 | 0.000 | 24121030 | 750.0 | 728.7 | |
| 2 | 4.850 | 4.852 | -0.002 | 35171114 | 750.0 | 730.5 | |
| | | Average of Peak Amounts = | | | | 715.5 | |
| | | | | | | RPD = 3.39 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.286 | 6.289 | -0.003 | 29648276 | 750.0 | 734.0 | |
| 1 | 6.826 | 6.829 | -0.003 | 16947271 | 750.0 | 737.4 | |
| 1 | 7.533 | 7.532 | 0.001 | 25970807 | 750.0 | 733.5 | |
| 1 | 7.976 | 7.976 | 0.000 | 58668909 | 750.0 | 735.0 | |
| 1 | 8.366 | 8.366 | 0.000 | 24515178 | 750.0 | 734.0 | |
| | | Average of Peak Amounts = | | | | 734.8 | |
| 2 | 6.726 | 6.726 | 0.000 | 74489703 | 750.0 | 707.2 | |
| 2 | 7.196 | 7.196 | 0.000 | 107647491 | 750.0 | 709.3 | |
| 2 | 7.330 | 7.332 | -0.002 | 59223019 | 750.0 | 704.1 | |
| 2 | 8.096 | 8.099 | -0.003 | 141474198 | 750.0 | 717.3 | |
| 2 | 8.603 | 8.606 | -0.003 | 100507503 | 750.0 | 709.3 | |
| | | Average of Peak Amounts = | | | | 709.4 | |
| | | | | | | RPD = 3.51 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.959 | 9.956 | 0.003 | 22722769 | 37.5 | 36.7 | |
| 2 | 10.280 | 10.279 | 0.001 | 59811197 | 37.5 | 35.0 | |
| | | | | | | RPD = 4.66 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 1474.9 | |
| 2 | | | | | | 1424.9 | |
| | | | | | | RPD = 3.45 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.75 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

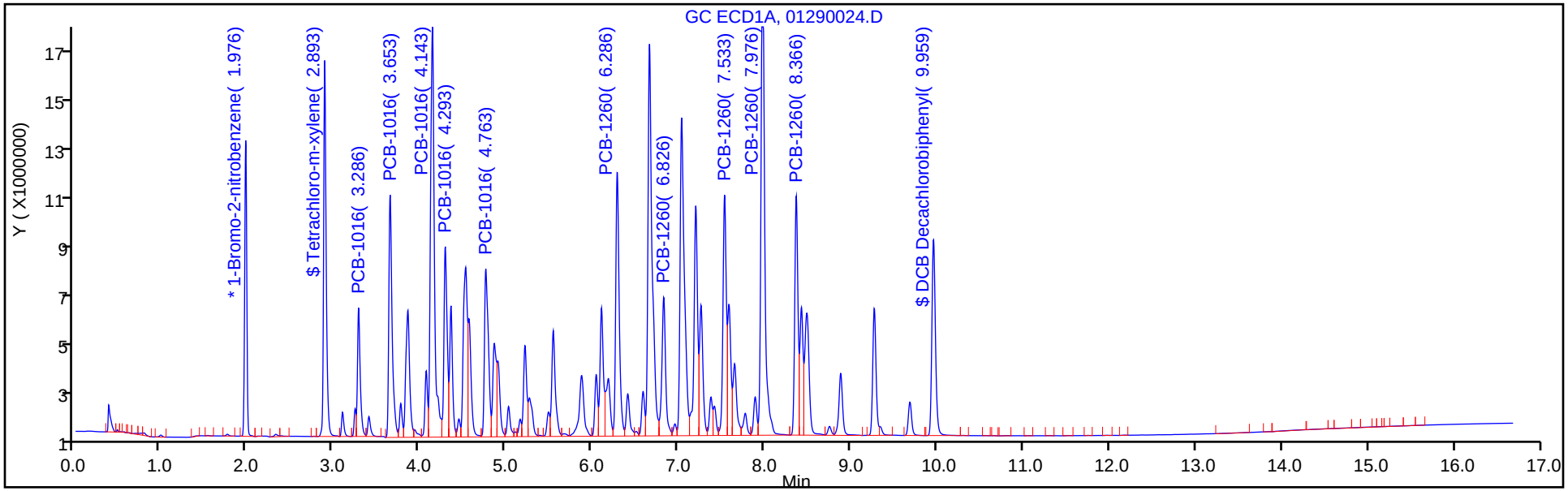
Report Date: 30-Jan-2019 14:59:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

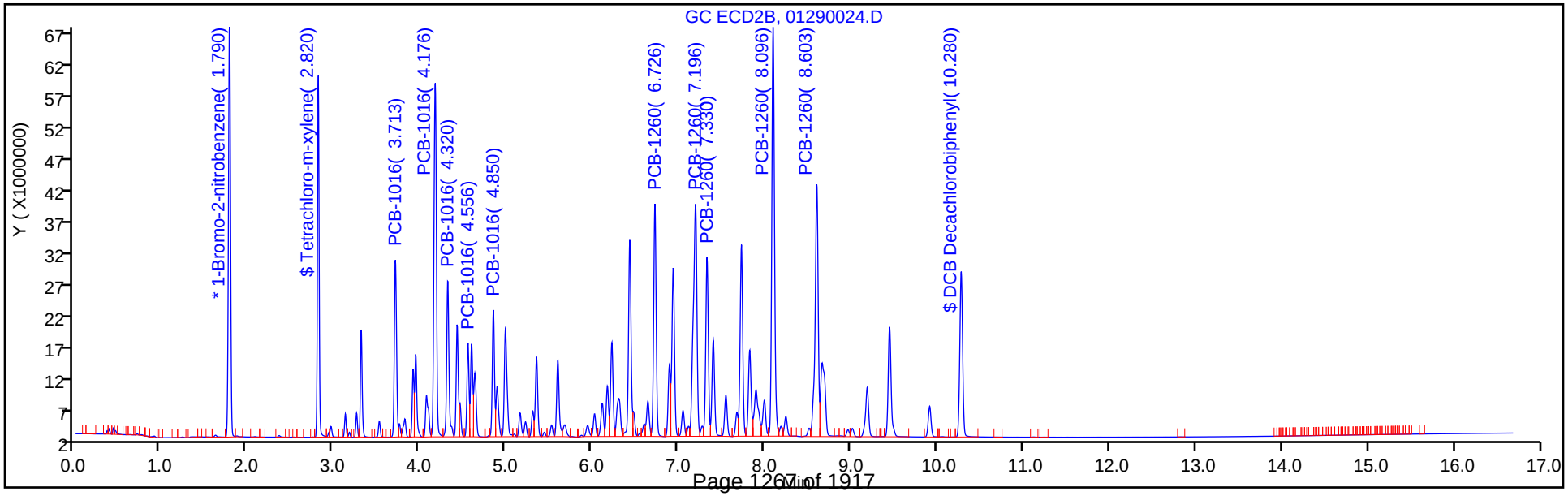
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290024.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 22:17:03 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD6 | | | Worklist Smp#: | 24 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 24 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290025.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Jan-2019 22:38:06 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0078470-025
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:05 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:32:26

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 19356422 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 106973467 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.892 | 2.892 | 0.000 | 42063367 | 50.0 | 51.7 | |
| 2 | 2.819 | 2.819 | 0.000 | 102309976 | 50.0 | 50.2 | |
| | | | | | | RPD = 2.81 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.286 | 3.286 | 0.000 | 15000661 | 1000.0 | 997.5 | |
| 1 | 3.652 | 3.652 | 0.000 | 33410558 | 1000.0 | 994.1 | |
| 1 | 4.142 | 4.142 | 0.000 | 68613189 | 1000.0 | 1042.3 | |
| 1 | 4.292 | 4.292 | 0.000 | 25930063 | 1000.0 | 1010.0 | |
| 1 | 4.762 | 4.762 | 0.000 | 27973098 | 1000.0 | 1011.6 | |
| | | Average of Peak Amounts = | | | | 1011.1 | |
| 2 | 3.713 | 3.712 | 0.001 | 65204162 | 1000.0 | 948.2 | |
| 2 | 4.176 | 4.176 | 0.000 | 148508749 | 1000.0 | 984.4 | |
| 2 | 4.323 | 4.322 | 0.001 | 60950394 | 1000.0 | 958.1 | |
| 2 | 4.556 | 4.556 | 0.000 | 31312479 | 1000.0 | 1028.9 | |
| 2 | 4.849 | 4.852 | -0.003 | 45994315 | 1000.0 | 1024.3 | |
| | | Average of Peak Amounts = | | | | 988.8 | |
| | | | | | | RPD = 2.23 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.286 | 6.289 | -0.003 | 39224988 | 1000.0 | 1011.7 | |
| 1 | 6.829 | 6.829 | 0.000 | 22769035 | 1000.0 | 1029.7 | |
| 1 | 7.532 | 7.532 | 0.000 | 34623161 | 1000.0 | 1017.8 | |
| 1 | 7.976 | 7.976 | 0.000 | 78962273 | 1000.0 | 1027.8 | |
| 1 | 8.366 | 8.366 | 0.000 | 32994132 | 1000.0 | 1026.9 | |
| | | Average of Peak Amounts = | | | | 1022.8 | |
| 2 | 6.726 | 6.726 | 0.000 | 98609065 | 1000.0 | 977.8 | |
| 2 | 7.196 | 7.196 | 0.000 | 142990875 | 1000.0 | 983.6 | |
| 2 | 7.329 | 7.332 | -0.003 | 78139671 | 1000.0 | 970.3 | |
| 2 | 8.096 | 8.099 | -0.003 | 187991129 | 1000.0 | 994.0 | |
| 2 | 8.603 | 8.606 | -0.003 | 133156158 | 1000.0 | 980.7 | |
| | | Average of Peak Amounts = | | | | 981.3 | |
| | | | | | | RPD = 4.14 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.956 | 9.956 | 0.000 | 29866597 | 50.0 | 50.2 | |
| 2 | 10.279 | 10.279 | 0.000 | 79228295 | 50.0 | 48.5 | |
| | | | | | | RPD = 3.58 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 2033.8 | |
| 2 | | | | | | 1970.0 | |
| | | | | | | RPD = 3.19 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

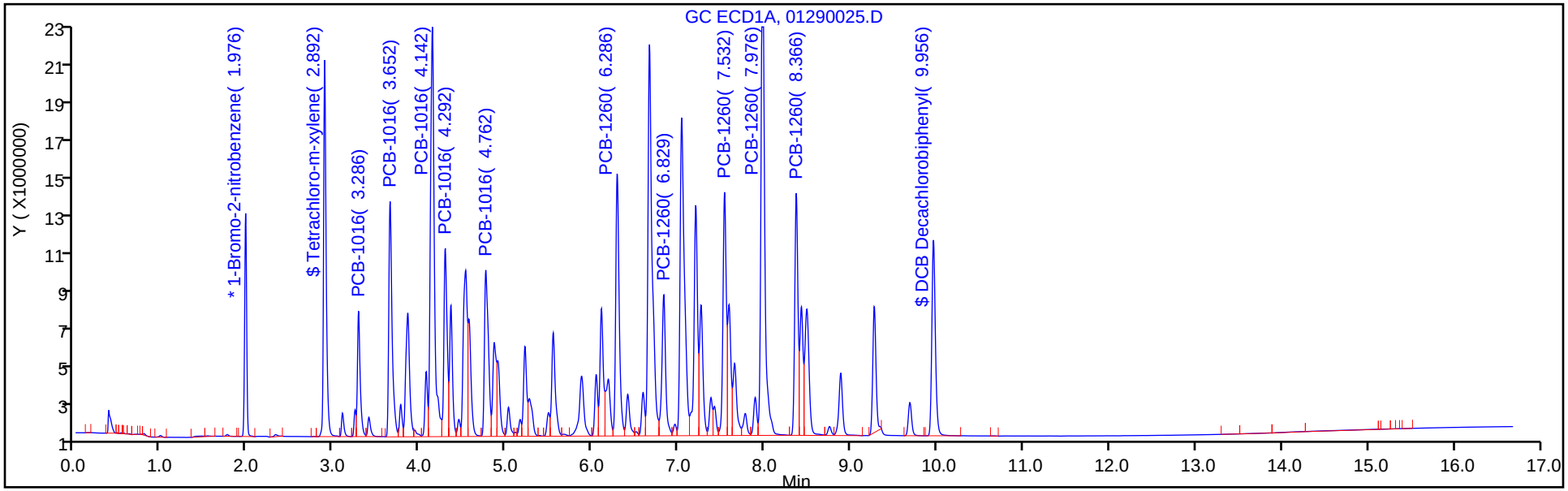
Report Date: 30-Jan-2019 14:59:05 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

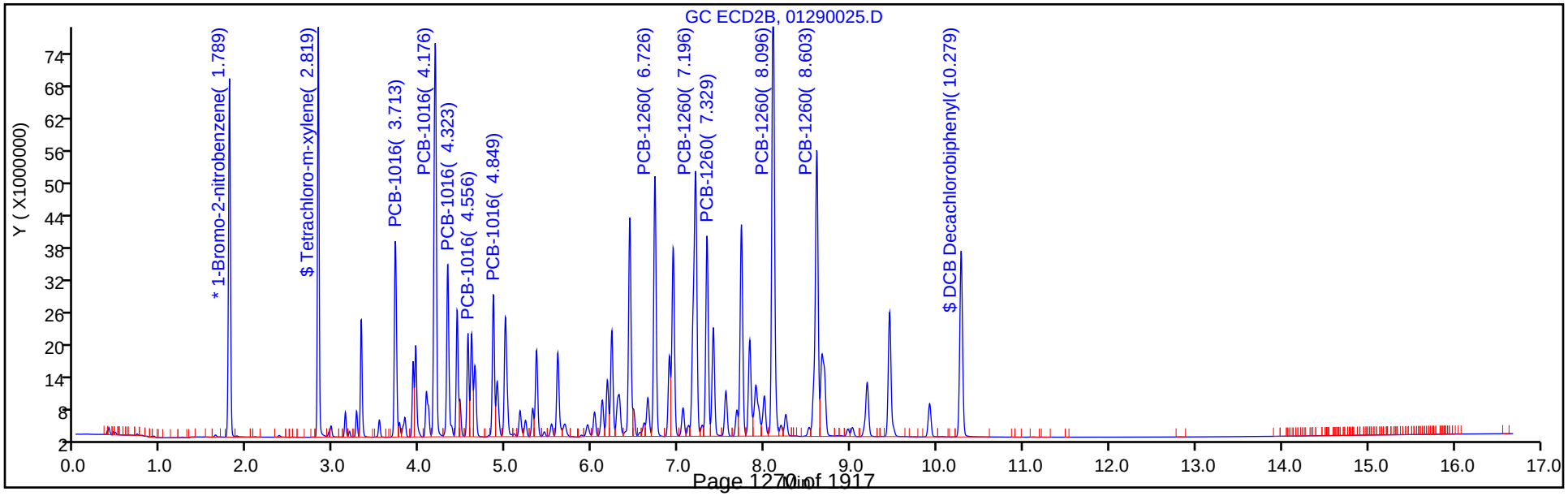
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290025.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 22:38:06 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD7 | | | Worklist Smp#: | 25 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 25 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 23:20 Calibration End Date: 01/30/2019 01:26 Calibration ID: 35075

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/27 | 01290027.D |
| Level 2 | STD2 280-445745/28 | 01290028.D |
| Level 3 | STD3 280-445745/29 | 01290029.D |
| Level 4 | STD4 280-445745/30 | 01290030.D |
| Level 5 | STD5 280-445745/31 | 01290031.D |
| Level 6 | STD6 280-445745/32 | 01290032.D |
| Level 7 | STD7 280-445745/33 | 01290033.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| PCB-1232 Peak 1 | 0.1391<br>0.0898 | 0.1195<br>0.0933 | 0.1246 | 0.1075 | 0.0975 | Lin1 | 1.5932 | 0.0924 | | | | | | | 0.9960 | | 0.9900 |
| PCB-1232 Peak 2 | 0.1241<br>0.0846 | 0.1181<br>0.0869 | 0.1189 | 0.0999 | 0.0900 | Lin1 | 1.5213 | 0.0862 | | | | | | | 0.9950 | | 0.9900 |
| PCB-1232 Peak 3 | 0.1404<br>0.1331 | 0.1459<br>0.1398 | 0.1506 | 0.1399 | 0.1383 | Lin1 | 0.3468 | 0.1373 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1232 Peak 4 | 0.0692<br>0.0589 | 0.0716<br>0.0615 | 0.0742 | 0.0667 | 0.0615 | Lin1 | 0.4917 | 0.0607 | | | | | | | 0.9970 | | 0.9900 |
| PCB-1232 Peak 5 | 0.0679<br>0.0588 | 0.0673<br>0.0612 | 0.0739 | 0.0676 | 0.0622 | Lin1 | 0.4182 | 0.0609 | | | | | | | 0.9970 | | 0.9900 |
| PCB-1262 Peak 1 | 0.2594<br>0.3263 | 0.2576<br>0.3437 | 0.2937 | 0.3187 | 0.3423 | Lin1 | -3.032 | 0.3399 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1262 Peak 2 | 0.3131<br>0.2717 | 0.3108<br>0.2840 | 0.3568 | 0.3101 | 0.2821 | Lin1 | 2.0940 | 0.2807 | | | | | | | 0.9960 | | 0.9900 |
| PCB-1262 Peak 3 | 0.2616<br>0.2421 | 0.2672<br>0.2536 | 0.3026 | 0.2755 | 0.2493 | Lin1 | 1.2587 | 0.2505 | | | | | | | 0.9970 | | 0.9900 |
| PCB-1262 Peak 4 | 0.4882<br>0.4896 | 0.4887<br>0.5273 | 0.5772 | 0.5388 | 0.5046 | Lin1 | 0.2349 | 0.5137 | | | | | | | 0.9980 | | 0.9900 |
| PCB-1262 Peak 5 | 0.1448<br>0.1398 | 0.1452<br>0.1487 | 0.1728 | 0.1574 | 0.1430 | Lin1 | 0.4071 | 0.1457 | | | | | | | 0.9970 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 23:20 Calibration End Date: 01/30/2019 01:26 Calibration ID: 35075

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/27 | 01290027.D |
| Level 2 | STD2 280-445745/28 | 01290028.D |
| Level 3 | STD3 280-445745/29 | 01290029.D |
| Level 4 | STD4 280-445745/30 | 01290030.D |
| Level 5 | STD5 280-445745/31 | 01290031.D |
| Level 6 | STD6 280-445745/32 | 01290032.D |
| Level 7 | STD7 280-445745/33 | 01290033.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1232 Peak 1 | BNB | Lin1 | 693248<br>12676511 | 1118140<br>16507067 | 1919629 | 4641793 | 9022765 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1232 Peak 2 | BNB | Lin1 | 618262<br>11929931 | 1104878<br>15376163 | 1832930 | 4313490 | 8322978 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1232 Peak 3 | BNB | Lin1 | 699435<br>18782266 | 1364870<br>24725808 | 2320975 | 6043672 | 12795158 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1232 Peak 4 | BNB | Lin1 | 344732<br>8317170 | 669721<br>10885313 | 1142874 | 2881266 | 5689339 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1232 Peak 5 | BNB | Lin1 | 338220<br>8301972 | 629687<br>10827109 | 1138677 | 2920818 | 5757161 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1262 Peak 1 | BNB | Lin1 | 1292278<br>46035892 | 2409794<br>60805698 | 4526234 | 13766939 | 31665893 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1262 Peak 2 | BNB | Lin1 | 1560094<br>38341756 | 2907641<br>50241058 | 5498128 | 13395489 | 26099961 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1262 Peak 3 | BNB | Lin1 | 1303552<br>34157747 | 2499853<br>44863477 | 4663641 | 11901000 | 23061459 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1262 Peak 4 | BNB | Lin1 | 2432737<br>69084143 | 4572344<br>93284117 | 8895019 | 23270420 | 46682586 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1262 Peak 5 | BNB | Lin1 | 721259<br>19726998 | 1358687<br>26303379 | 2662832 | 6798468 | 13233559 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290027.D
Lims ID: STD1 3262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Jan-2019 23:20:15 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1 3262
Misc. Info.: 280-0078470-027
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:00 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:12:37

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.979 | -0.001 | 19930472 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.789 | -0.001 | 110786865 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | |
| 1 | 3.288 | 3.285 | 0.003 | 693248 | 25.0 | 20.4 | |
| 1 | 3.651 | 3.652 | -0.001 | 618262 | 25.0 | 18.3 | |
| 1 | 4.141 | 4.142 | -0.001 | 699435 | 25.0 | 23.0 | |
| 1 | 4.291 | 4.292 | -0.001 | 344732 | 25.0 | 20.4 | |
| 1 | 4.761 | 4.762 | -0.001 | 338220 | 25.0 | 21.0 | |
| | | Average of Peak Amounts = | | | | 20.6 | |
| 2 | 3.318 | 3.319 | -0.001 | 1496532 | 25.0 | 17.7 | |
| 2 | 3.714 | 3.712 | 0.002 | 1233959 | 25.0 | 15.5 | |
| 2 | 4.174 | 4.176 | -0.002 | 2506015 | 25.0 | 19.0 | |
| 2 | 4.321 | 4.322 | -0.001 | 1140508 | 25.0 | 17.3 | |
| 2 | 4.848 | 4.852 | -0.004 | 1101509 | 25.0 | 18.9 | |
| | | Average of Peak Amounts = | | | | 17.7 | |
| | | | | | | RPD = 15.37 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.661 | 6.665 | -0.004 | 1292278 | 25.0 | 28.0 | |
| 1 | 7.198 | 7.202 | -0.004 | 1560094 | 25.0 | 20.4 | |
| 1 | 7.531 | 7.535 | -0.004 | 1303552 | 25.0 | 21.1 | |
| 1 | 7.974 | 7.975 | -0.001 | 2432737 | 25.0 | 23.3 | |
| 1 | 8.364 | 8.365 | -0.001 | 721259 | 25.0 | 22.0 | |
| | | Average of Peak Amounts = | | | | 23.0 | |
| 2 | 6.724 | 6.726 | -0.002 | 3056339 | 25.0 | 18.9 | |
| 2 | 7.331 | 7.329 | 0.002 | 4209181 | 25.0 | 19.6 | |
| 2 | 7.728 | 7.729 | -0.001 | 4000469 | 25.0 | 19.6 | |
| 2 | 8.098 | 8.096 | 0.002 | 7272798 | 25.0 | 21.1 | |
| 2 | 8.601 | 8.602 | -0.001 | 5444960 | 25.0 | 20.2 | |
| | | Average of Peak Amounts = | | | | 19.9 | |
| | | | | | | RPD = 14.38 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 43.6 | |
| 2 | | | | | | 37.6 | |
| | | | | | | RPD = 14.84 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.03 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

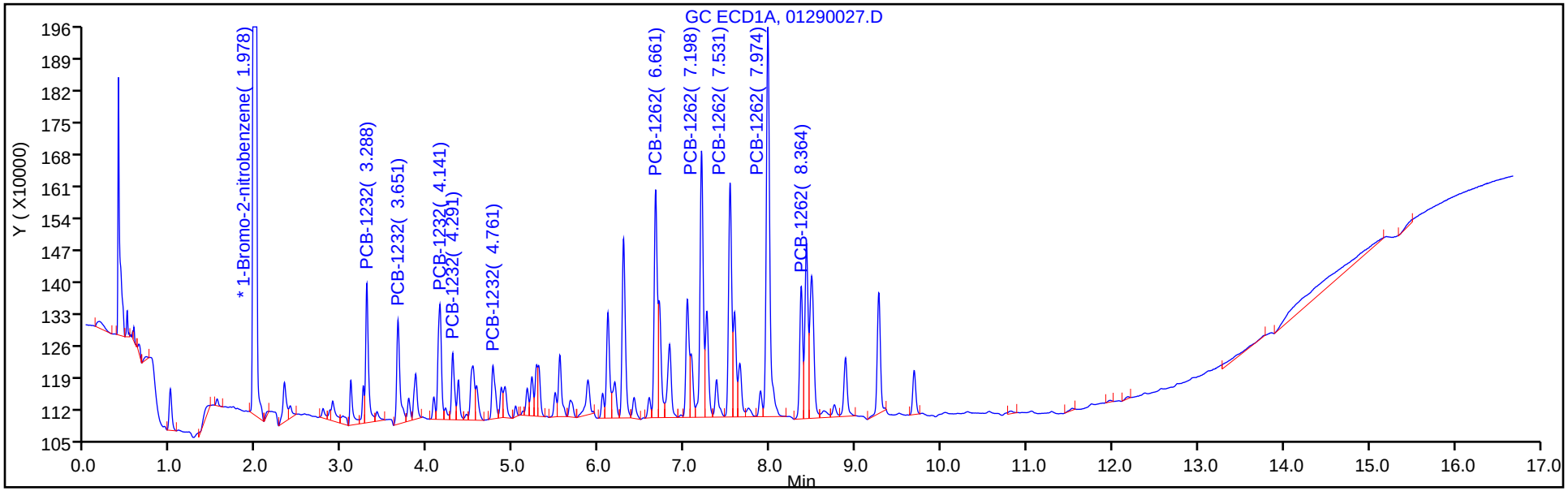
Report Date: 30-Jan-2019 14:59:00 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

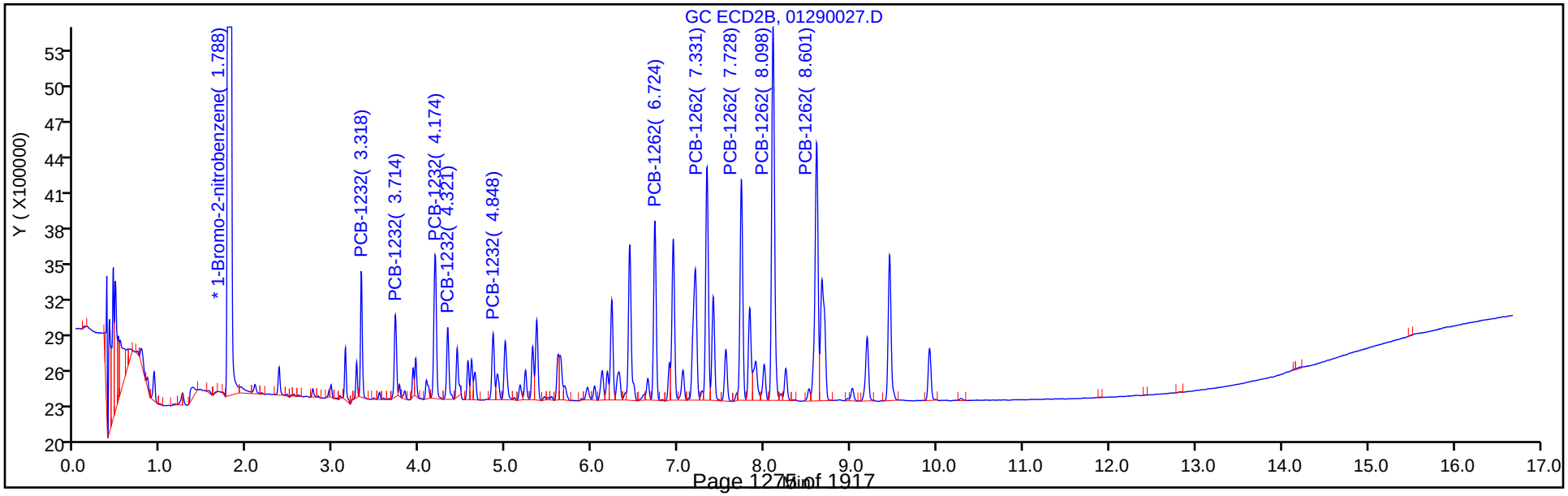
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290027.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 23:20:15 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD1 3262 | | | Worklist Smp#: | 27 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 27 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290028.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Jan-2019 23:41:16 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0078470-028
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:58 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:41:01

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 18712922 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 103173235 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | |
| 1 | 3.286 | 3.285 | 0.001 | 1118140 | 50.0 | 47.4 | |
| 1 | 3.650 | 3.652 | -0.002 | 1104878 | 50.0 | 50.9 | |
| 1 | 4.140 | 4.142 | -0.002 | 1364870 | 50.0 | 50.6 | |
| 1 | 4.290 | 4.292 | -0.002 | 669721 | 50.0 | 50.8 | |
| 1 | 4.760 | 4.762 | -0.002 | 629687 | 50.0 | 48.4 | |
| | | Average of Peak Amounts = | | | | 49.6 | |
| 2 | 3.317 | 3.319 | -0.002 | 2748487 | 50.0 | 53.1 | |
| 2 | 3.713 | 3.712 | 0.001 | 2360172 | 50.0 | 53.1 | |
| 2 | 4.177 | 4.176 | 0.001 | 4397390 | 50.0 | 51.0 | |
| 2 | 4.320 | 4.322 | -0.002 | 1999602 | 50.0 | 49.8 | |
| 2 | 4.850 | 4.852 | -0.002 | 1779819 | 50.0 | 51.7 | |
| | | Average of Peak Amounts = | | | | 51.7 | |
| | | | | | | RPD = 4.15 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.663 | 6.665 | -0.002 | 2409794 | 50.0 | 46.8 | |
| 1 | 7.200 | 7.202 | -0.002 | 2907641 | 50.0 | 47.9 | |
| 1 | 7.533 | 7.535 | -0.002 | 2499853 | 50.0 | 48.3 | |
| 1 | 7.973 | 7.975 | -0.002 | 4572344 | 50.0 | 47.1 | |
| 1 | 8.363 | 8.365 | -0.002 | 1358687 | 50.0 | 47.0 | |
| | | Average of Peak Amounts = | | | | 47.4 | |
| 2 | 6.727 | 6.726 | 0.001 | 5453862 | 50.0 | 50.1 | |
| 2 | 7.330 | 7.329 | 0.001 | 7472482 | 50.0 | 49.3 | |
| 2 | 7.730 | 7.729 | 0.001 | 7122870 | 50.0 | 49.2 | |
| 2 | 8.097 | 8.096 | 0.001 | 12954262 | 50.0 | 48.2 | |
| 2 | 8.603 | 8.602 | 0.001 | 9679909 | 50.0 | 48.9 | |
| | | Average of Peak Amounts = | | | | 49.2 | |
| | | | | | | RPD = 3.56 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 97.1 | |
| 2 | | | | | | 100.9 | |
| | | | | | | RPD = 3.86 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.05 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

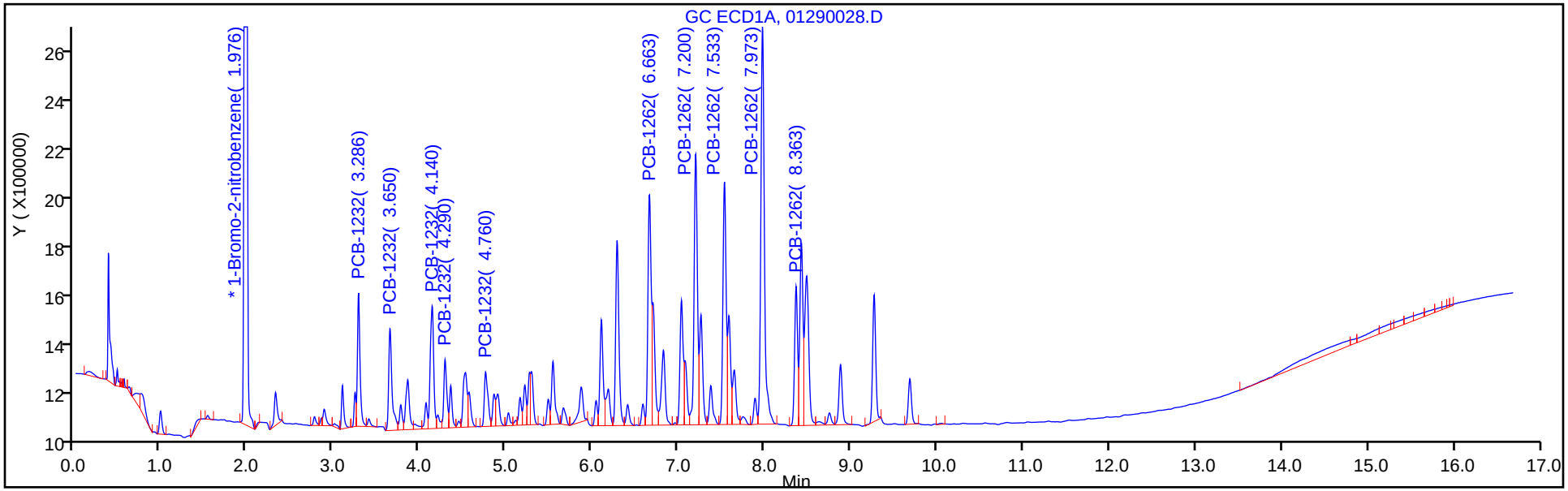
Report Date: 30-Jan-2019 14:58:59 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

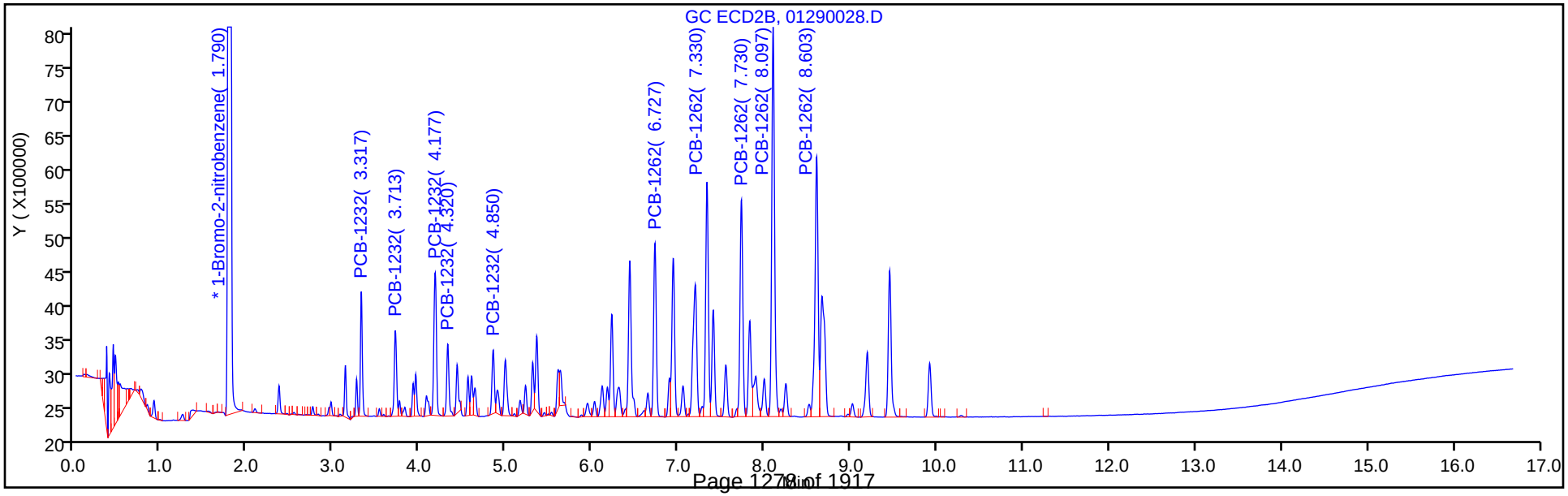
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290028.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 23:41:16 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD2 | | | Worklist Smp#: | 28 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 28 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290029.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Jan-2019 00:02:19 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0078470-029
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:57 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:38:27

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.979 | -0.004 | 15410247 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 85324946 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | M |
| 1 | 3.285 | 3.285 | 0.000 | 1919629 | 100.0 | 117.6 | |
| 1 | 3.652 | 3.652 | 0.000 | 1832930 | 100.0 | 120.4 | |
| 1 | 4.142 | 4.142 | 0.000 | 2320975 | 100.0 | 107.2 | |
| 1 | 4.289 | 4.292 | -0.003 | 1142874 | 100.0 | 114.0 | |
| 1 | 4.762 | 4.762 | 0.000 | 1138677 | 100.0 | 114.5 | |
| | | Average of Peak Amounts = | | | | 114.7 | |
| 2 | 3.319 | 3.319 | 0.000 | 4309382 | 100.0 | 117.4 | |
| 2 | 3.712 | 3.712 | 0.000 | 3908201 | 100.0 | 126.4 | M |
| 2 | 4.176 | 4.176 | 0.000 | 7329760 | 100.0 | 120.2 | M |
| 2 | 4.322 | 4.322 | 0.000 | 3484604 | 100.0 | 126.7 | M |
| 2 | 4.849 | 4.852 | -0.003 | 2892417 | 100.0 | 128.0 | M |
| | | Average of Peak Amounts = | | | | 123.7 | |
| | | | | | | RPD = 7.54 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.662 | 6.665 | -0.003 | 4526234 | 100.0 | 95.3 | |
| 1 | 7.199 | 7.202 | -0.003 | 5498128 | 100.0 | 119.7 | |
| 1 | 7.532 | 7.535 | -0.003 | 4663641 | 100.0 | 115.8 | |
| 1 | 7.975 | 7.975 | 0.000 | 8895019 | 100.0 | 111.9 | |
| 1 | 8.365 | 8.365 | 0.000 | 2662832 | 100.0 | 115.8 | |
| | | Average of Peak Amounts = | | | | 111.7 | |
| 2 | 6.726 | 6.726 | 0.000 | 9445459 | 100.0 | 121.4 | |
| 2 | 7.329 | 7.329 | 0.000 | 13226656 | 100.0 | 120.6 | |
| 2 | 7.729 | 7.729 | 0.000 | 12704521 | 100.0 | 120.8 | |
| 2 | 8.096 | 8.096 | 0.000 | 23821211 | 100.0 | 117.9 | |
| 2 | 8.602 | 8.602 | 0.000 | 17440956 | 100.0 | 120.1 | |
| | | Average of Peak Amounts = | | | | 120.2 | |
| | | | | | | RPD = 7.29 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 226.4 | |
| 2 | | | | | | 243.9 | |
| | | | | | | RPD = 7.42 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.10 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

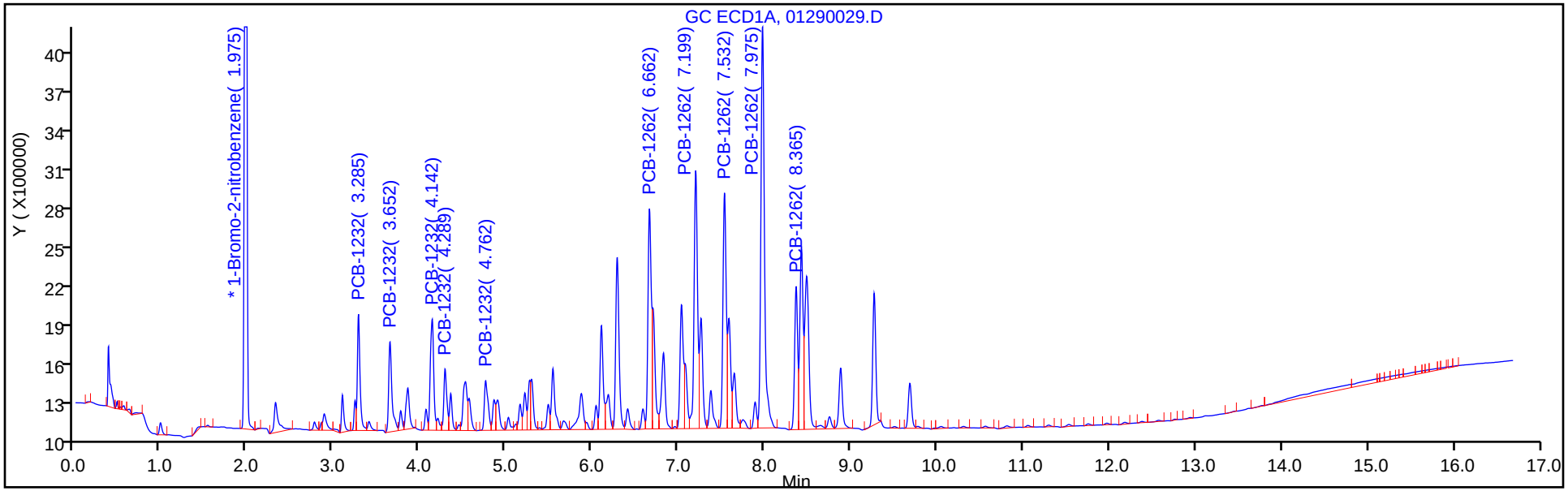
Report Date: 30-Jan-2019 14:58:57 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

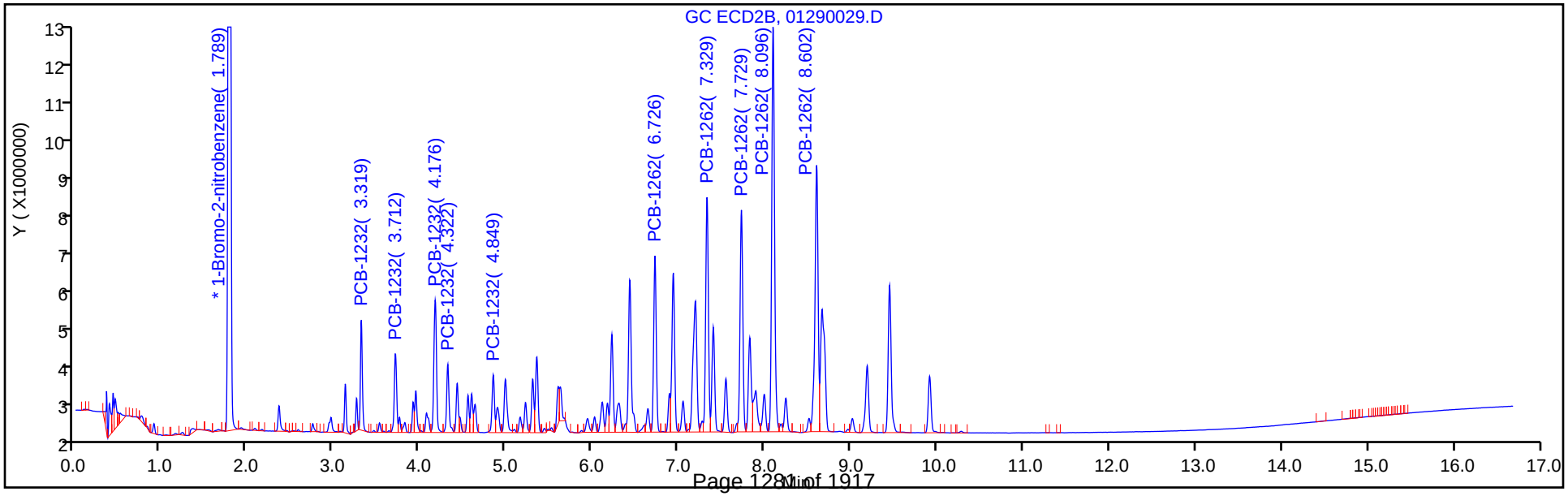
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290029.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 00:02:19 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD3 | | | Worklist Smp#: | 29 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 29 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290030.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Jan-2019 00:23:27 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0078470-030
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:55 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:13:34

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.979 | -0.001 | 17277006 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.789 | -0.001 | 95129968 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | M |
| 1 | 3.285 | 3.285 | 0.000 | 4641793 | 250.0 | 273.6 | |
| 1 | 3.651 | 3.652 | -0.001 | 4313490 | 250.0 | 272.1 | M |
| 1 | 4.141 | 4.142 | -0.001 | 6043672 | 250.0 | 252.3 | M |
| 1 | 4.291 | 4.292 | -0.001 | 2881266 | 250.0 | 266.5 | M |
| 1 | 4.761 | 4.762 | -0.001 | 2920818 | 250.0 | 270.8 | M |
| | | Average of Peak Amounts = | | | | 267.1 | |
| 2 | 3.318 | 3.319 | -0.001 | 10324727 | 250.0 | 273.8 | |
| 2 | 3.715 | 3.712 | 0.003 | 8800849 | 250.0 | 275.7 | |
| 2 | 4.175 | 4.176 | -0.001 | 16600503 | 250.0 | 261.8 | |
| 2 | 4.322 | 4.322 | 0.000 | 7752050 | 250.0 | 272.4 | |
| 2 | 4.852 | 4.852 | 0.000 | 5567666 | 250.0 | 245.4 | |
| | | Average of Peak Amounts = | | | | 265.8 | |
| | | | | | | RPD = 0.47 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | M |
| 1 | 6.661 | 6.665 | -0.004 | 13766939 | 250.0 | 243.4 | M |
| 1 | 7.198 | 7.202 | -0.004 | 13395489 | 250.0 | 268.8 | M |
| 1 | 7.531 | 7.535 | -0.004 | 11901000 | 250.0 | 270.0 | M |
| 1 | 7.975 | 7.975 | 0.000 | 23270420 | 250.0 | 261.7 | M |
| 1 | 8.365 | 8.365 | 0.000 | 6798468 | 250.0 | 267.3 | M |
| | | Average of Peak Amounts = | | | | 262.2 | |
| 2 | 6.725 | 6.726 | -0.001 | 21896336 | 250.0 | 268.7 | |
| 2 | 7.328 | 7.329 | -0.001 | 30972003 | 250.0 | 267.7 | |
| 2 | 7.728 | 7.729 | -0.001 | 29773062 | 250.0 | 268.1 | |
| 2 | 8.095 | 8.096 | -0.001 | 57437514 | 250.0 | 265.1 | |
| 2 | 8.602 | 8.602 | 0.000 | 41037918 | 250.0 | 266.1 | |
| | | Average of Peak Amounts = | | | | 267.1 | |
| | | | | | | RPD = 1.85 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 529.3 | |
| 2 | | | | | | 532.9 | |
| | | | | | | RPD = 0.69 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.25 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

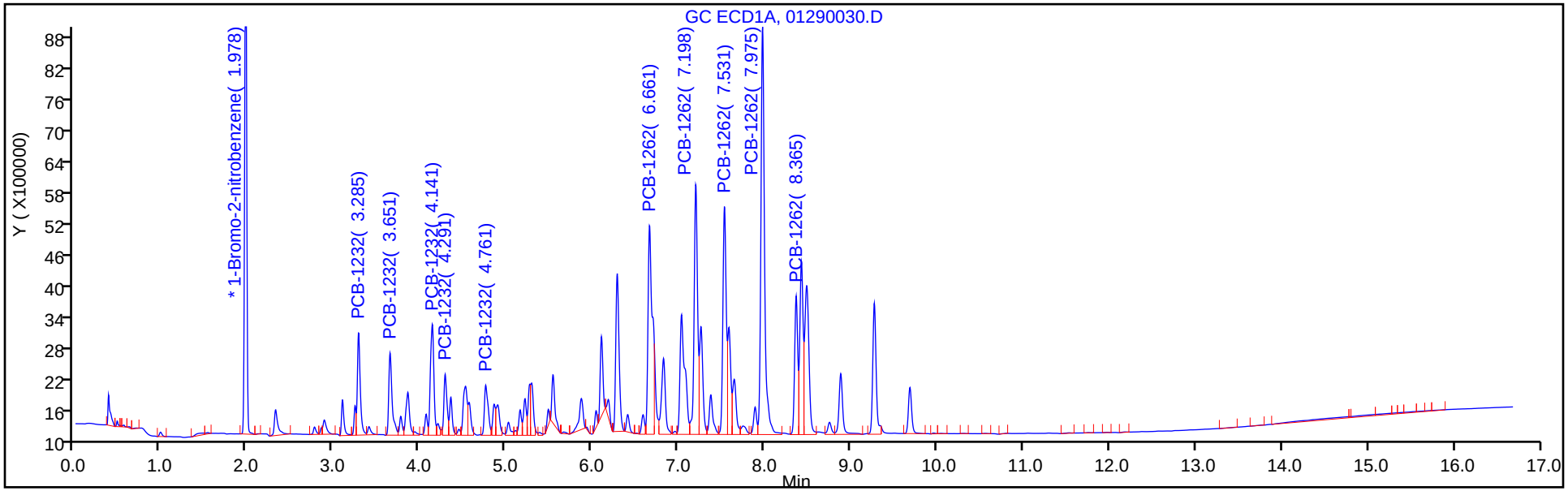
Report Date: 30-Jan-2019 14:58:55 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

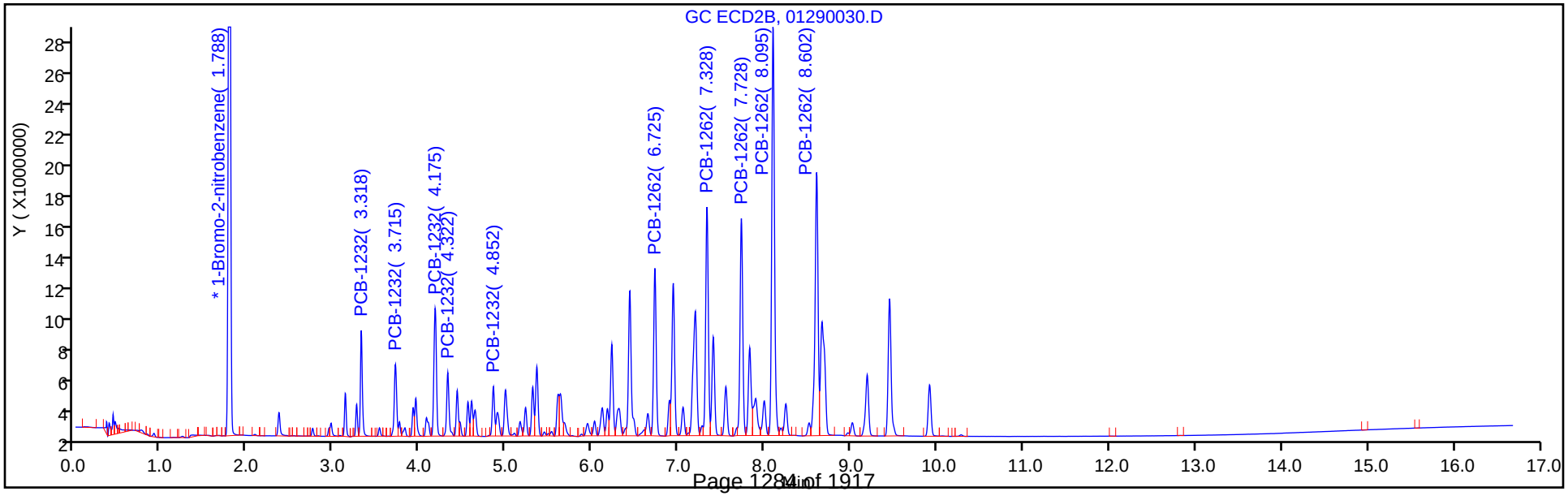
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290030.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 00:23:27 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD4 | | | Worklist Smp#: | 30 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 30 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:58:55 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290030.D

Injection Date: 30-Jan-2019 00:23:27 Instrument ID: SGC_J

Lims ID: STD4

Client ID:

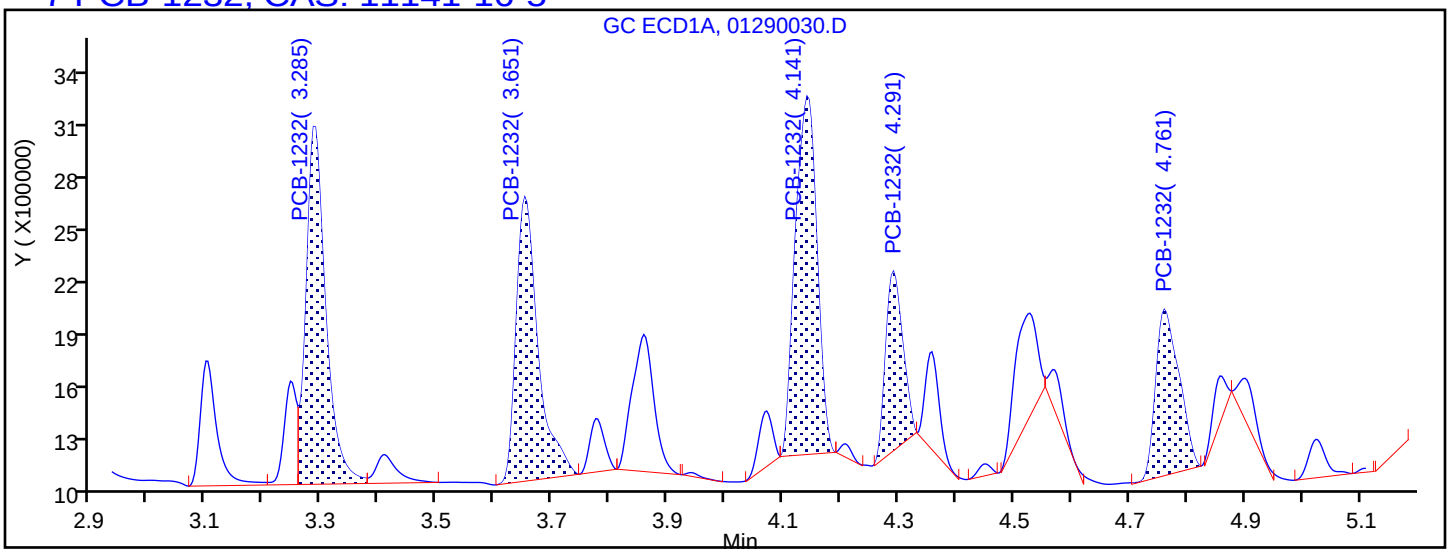
Operator ID: TEM ALS Bottle#: 30 Worklist Smp#: 30

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

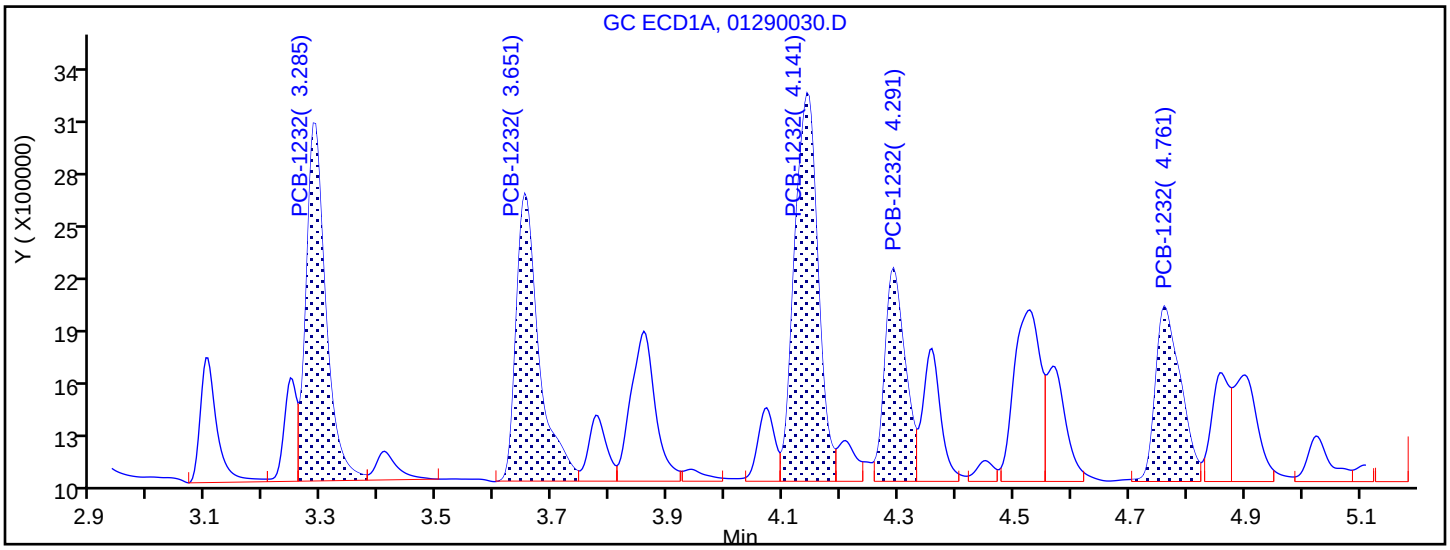
Column: CLP1 Pesticides Column 1 ( 0.32 mm) Detector GC ECD1A

## 7 PCB-1232, CAS: 11141-16-5




Processing Integration Results

| | |
|---|---|
| 3.285 | Response = 4641793 |
| 3.651 | Response = 4088496 |
| 4.141 | Response = 5085074 |
| 4.291 | Response = 2026531 |
| 4.761 | Response = 2543131 |




Manual Integration Results

| | | |
|---|---|---|
| 3.285 | Response = 4641793 | |
| 3.651 | Response = 4313490 | M |
| 4.141 | Response = 6043672 | M |
| 4.291 | Response = 2881266 | M |
| 4.761 | Response = 2920818 | M |

Reviewer: mooret, 30-Jan-2019 14:38:42

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 30-Jan-2019 14:58:55 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290030.D

Injection Date: 30-Jan-2019 00:23:27 Instrument ID: SGC_J

Lims ID: STD4

Client ID:

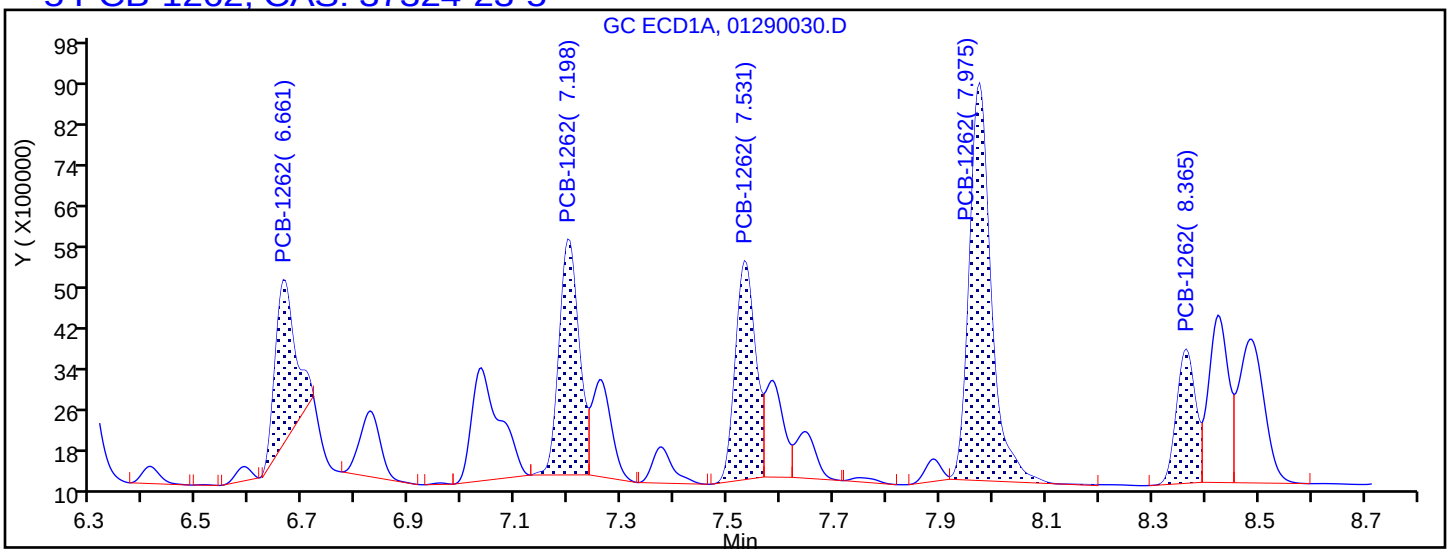
Operator ID: TEM ALS Bottle#: 30 Worklist Smp#: 30

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

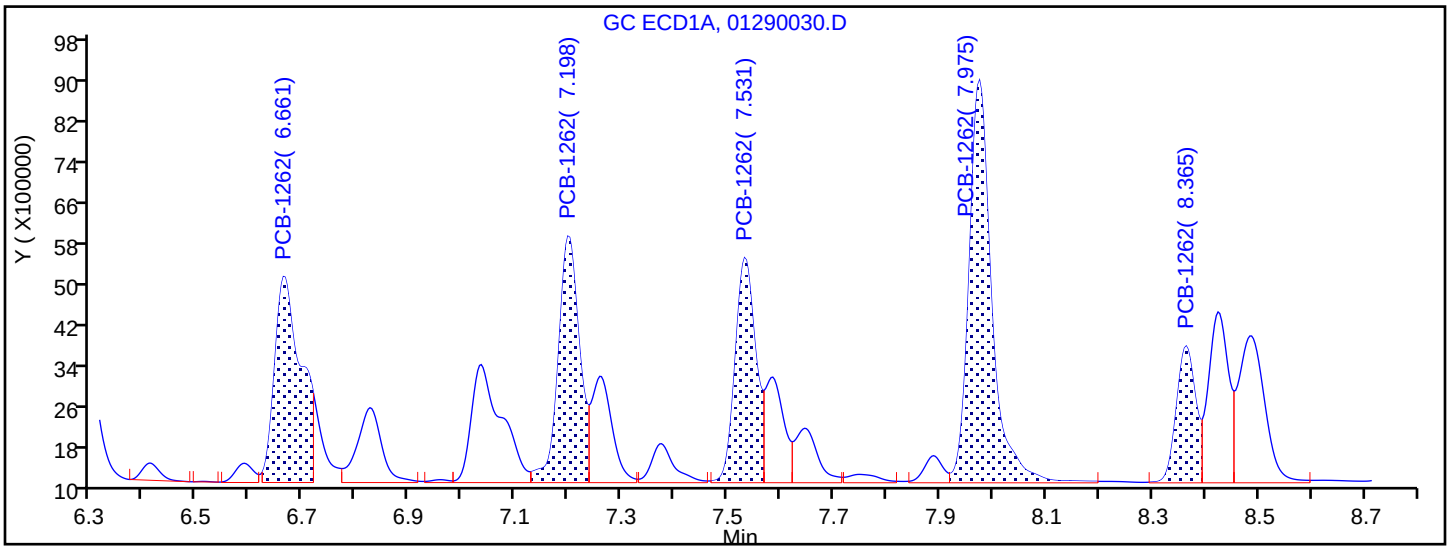
Column: CLP1 Pesticides Column 1 ( 0.32 mm) Detector GC ECD1A

## 5 PCB-1262, CAS: 37324-23-5




Processing Integration Results

| | |
|---|---|
| 6.661 | Response = 8266799 |
| 7.198 | Response = 11986525 |
| 7.531 | Response = 11275665 |
| 7.975 | Response = 22074058 |
| 8.365 | Response = 6546393 |




Manual Integration Results

| | | |
|---|---|---|
| 6.661 | Response = 13766939 | M |
| 7.198 | Response = 13395489 | M |
| 7.531 | Response = 11901000 | M |
| 7.975 | Response = 23270420 | M |
| 8.365 | Response = 6798468 | M |

Reviewer: mooret, 30-Jan-2019 14:38:49

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290031.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Jan-2019 00:44:48 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0078470-031
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:53 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:17:09

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.979 | 1.979 | 0.000 | 18503197 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 101555118 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | M |
| 1 | 3.285 | 3.285 | 0.000 | 9022765 | 500.0 | 510.7 | |
| 1 | 3.652 | 3.652 | 0.000 | 8322978 | 500.0 | 504.3 | |
| 1 | 4.142 | 4.142 | 0.000 | 12795158 | 500.0 | 501.3 | |
| 1 | 4.292 | 4.292 | 0.000 | 5689339 | 500.0 | 498.2 | |
| 1 | 4.762 | 4.762 | 0.000 | 5757161 | 500.0 | 504.2 | |
| | | Average of Peak Amounts = | | | | 503.7 | |
| 2 | 3.319 | 3.319 | 0.000 | 19890713 | 500.0 | 509.2 | M |
| 2 | 3.712 | 3.712 | 0.000 | 16824422 | 500.0 | 509.6 | M |
| 2 | 4.176 | 4.176 | 0.000 | 33406438 | 500.0 | 508.7 | M |
| 2 | 4.322 | 4.322 | 0.000 | 15015730 | 500.0 | 510.2 | M |
| 2 | 4.852 | 4.852 | 0.000 | 10657721 | 500.0 | 484.5 | M |
| | | Average of Peak Amounts = | | | | 504.4 | |
| | | | | | | RPD = 0.14 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.665 | 6.665 | 0.000 | 31665893 | 500.0 | 512.5 | |
| 1 | 7.202 | 7.202 | 0.000 | 26099961 | 500.0 | 495.1 | |
| 1 | 7.535 | 7.535 | 0.000 | 23061459 | 500.0 | 492.6 | |
| 1 | 7.975 | 7.975 | 0.000 | 46682586 | 500.0 | 490.7 | |
| 1 | 8.365 | 8.365 | 0.000 | 13233559 | 500.0 | 488.1 | |
| | | Average of Peak Amounts = | | | | 495.8 | |
| 2 | 6.726 | 6.726 | 0.000 | 42240800 | 500.0 | 497.8 | |
| 2 | 7.329 | 7.329 | 0.000 | 60041530 | 500.0 | 496.8 | |
| 2 | 7.729 | 7.729 | 0.000 | 57508699 | 500.0 | 495.3 | |
| 2 | 8.096 | 8.096 | 0.000 | 112291389 | 500.0 | 492.6 | |
| 2 | 8.602 | 8.602 | 0.000 | 79435986 | 500.0 | 491.8 | |
| | | Average of Peak Amounts = | | | | 494.9 | |
| | | | | | | RPD = 0.19 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.50 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

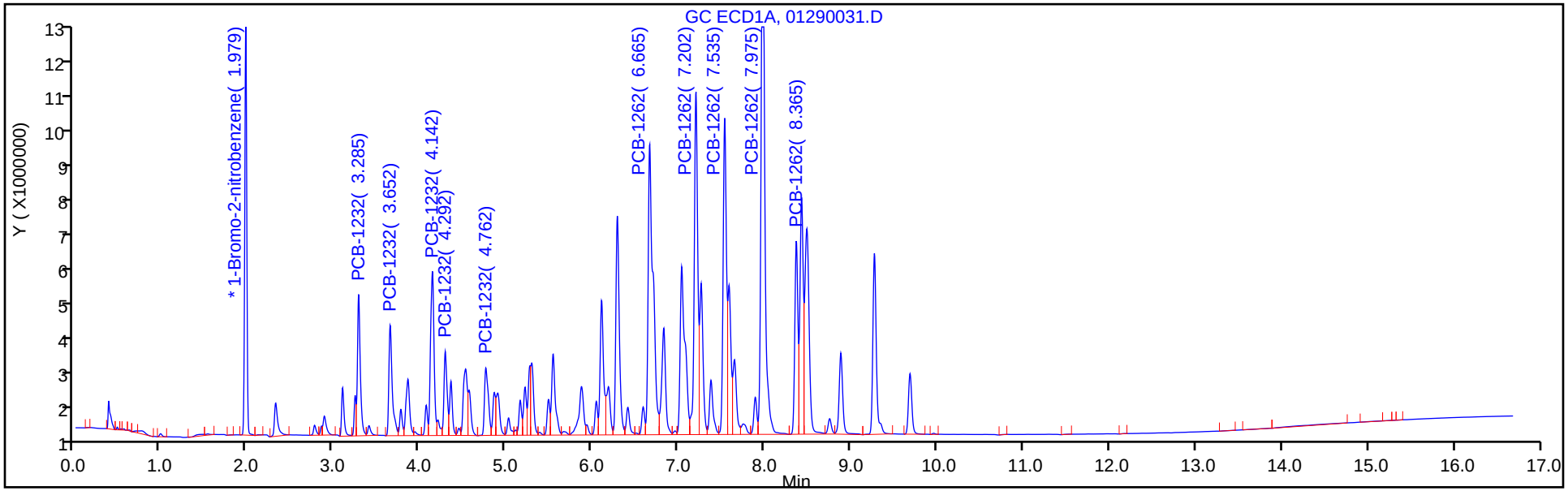
Report Date: 30-Jan-2019 14:58:53 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

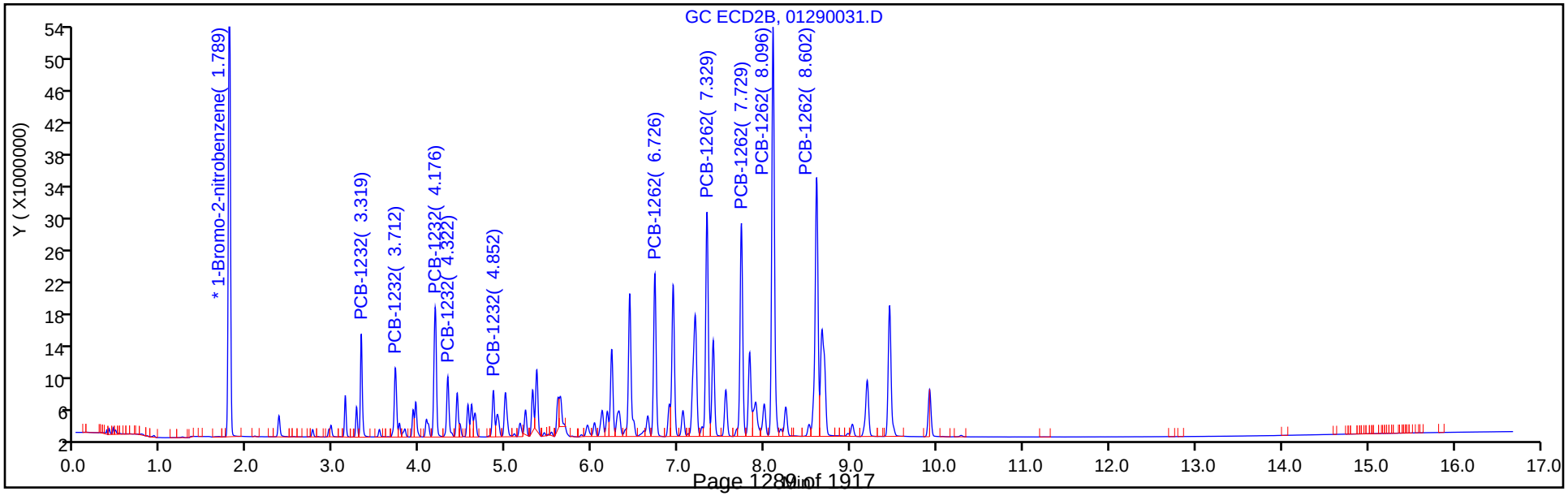
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290031.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 00:44:48 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD5 | | | Worklist Smp#: | 31 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 31 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290032.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Jan-2019 01:05:50 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0078470-032
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:51 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.974 | 0.001 | 18812752 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.788 | 0.000 | 103158822 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | |
| 1 | 3.285 | 3.285 | 0.000 | 12676511 | 750.0 | 712.3 | |
| 1 | 3.651 | 3.652 | -0.001 | 11929931 | 750.0 | 718.2 | |
| 1 | 4.141 | 4.142 | -0.001 | 18782266 | 750.0 | 724.9 | |
| 1 | 4.291 | 4.292 | -0.001 | 8317170 | 750.0 | 719.9 | |
| 1 | 4.761 | 4.762 | -0.001 | 8301972 | 750.0 | 717.9 | |
| | | Average of Peak Amounts = | | | | 718.6 | |
| 2 | 3.318 | 3.319 | -0.001 | 28136423 | 750.0 | 716.4 | |
| 2 | 3.715 | 3.712 | 0.003 | 23589575 | 750.0 | 711.0 | |
| 2 | 4.175 | 4.176 | -0.001 | 47384099 | 750.0 | 717.1 | |
| 2 | 4.321 | 4.322 | -0.001 | 21054657 | 750.0 | 711.8 | |
| 2 | 4.851 | 4.852 | -0.001 | 14563335 | 750.0 | 691.9 | |
| | | Average of Peak Amounts = | | | | 709.6 | |
| | | | | | | RPD = 1.26 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.661 | 6.665 | -0.004 | 46035892 | 750.0 | 728.9 | |
| 1 | 7.198 | 7.202 | -0.004 | 38341756 | 750.0 | 718.7 | |
| 1 | 7.531 | 7.535 | -0.004 | 34157747 | 750.0 | 719.9 | |
| 1 | 7.975 | 7.975 | 0.000 | 69084143 | 750.0 | 714.4 | |
| 1 | 8.365 | 8.365 | 0.000 | 19726998 | 750.0 | 717.0 | |
| | | Average of Peak Amounts = | | | | 719.8 | |
| 2 | 6.725 | 6.726 | -0.001 | 61101092 | 750.0 | 715.2 | |
| 2 | 7.328 | 7.329 | -0.001 | 86881411 | 750.0 | 713.3 | |
| 2 | 7.728 | 7.729 | -0.001 | 83506182 | 750.0 | 713.6 | |
| 2 | 8.095 | 8.096 | -0.001 | 164230890 | 750.0 | 713.1 | |
| 2 | 8.601 | 8.602 | -0.001 | 115507342 | 750.0 | 709.0 | |
| | | Average of Peak Amounts = | | | | 712.8 | |
| | | | | | | RPD = 0.97 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 1438.4 | |
| 2 | | | | | | 1422.5 | |
| | | | | | | RPD = 1.11 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.75 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

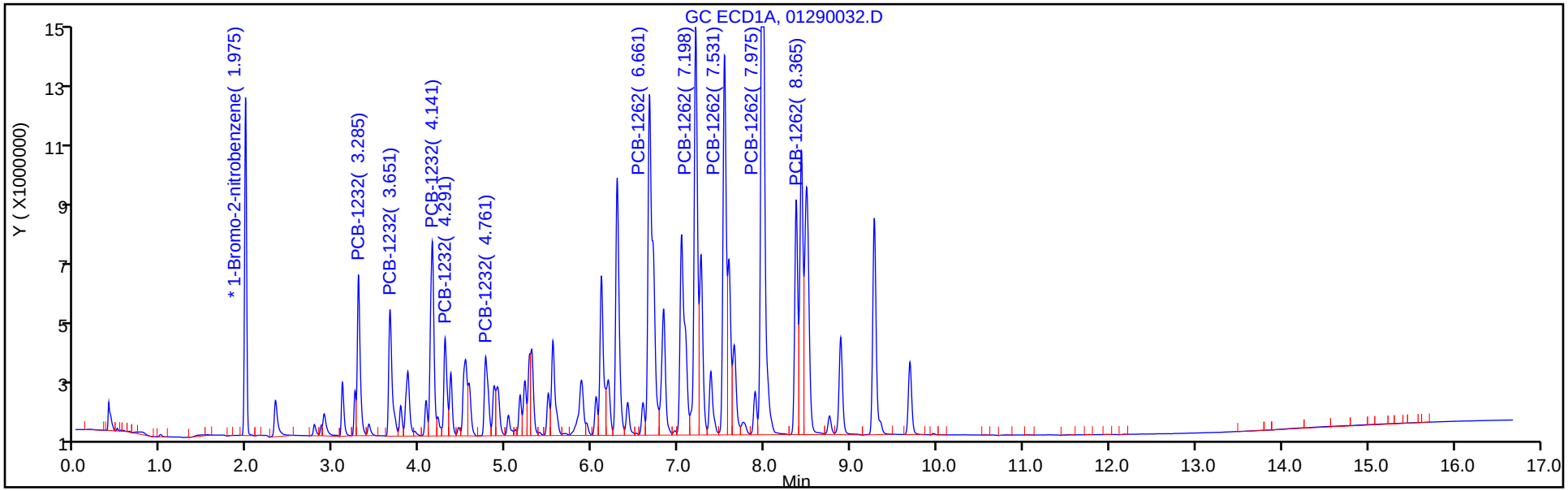
Report Date: 30-Jan-2019 14:58:51 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

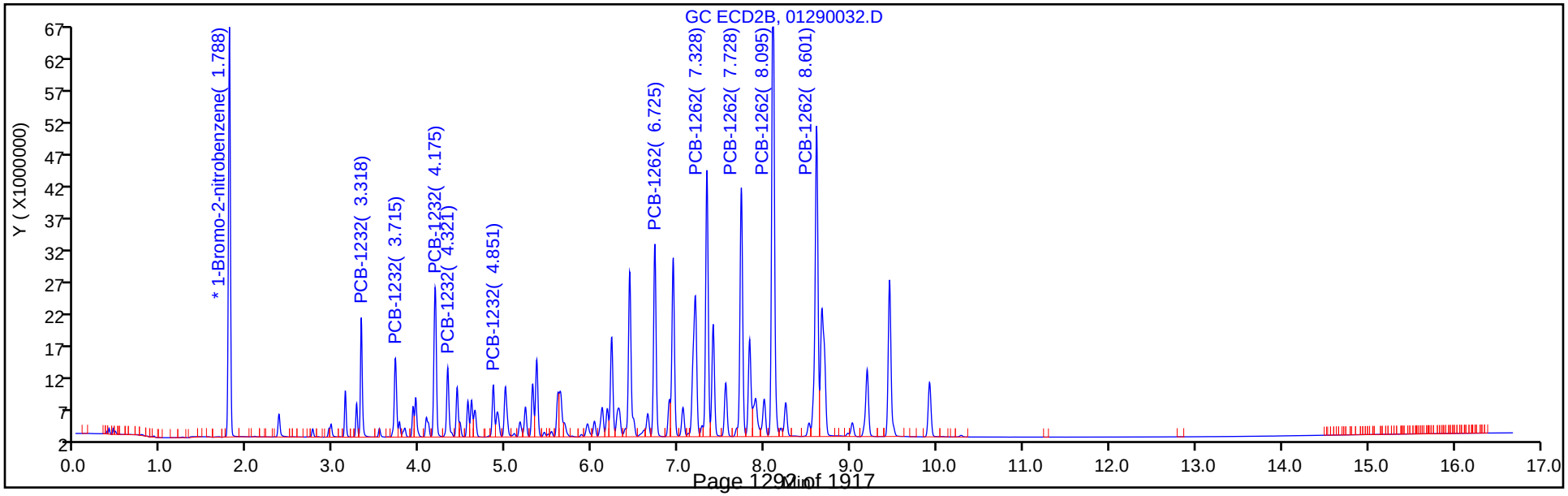
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290032.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 01:05:50 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD6 | | | Worklist Smp#: | 32 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 32 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290033.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 30-Jan-2019 01:26:59 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0078470-033
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:49 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:39:46

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.974 | 0.003 | 17692445 | 100.0 | 100.0 | |
| 2 | 1.787 | 1.788 | -0.001 | 97032804 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | M |
| 1 | 3.287 | 3.285 | 0.002 | 16507067 | 1000.0 | 992.9 | |
| 1 | 3.653 | 3.652 | 0.001 | 15376163 | 1000.0 | 990.8 | |
| 1 | 4.143 | 4.142 | 0.001 | 24725808 | 1000.0 | 1015.7 | |
| 1 | 4.290 | 4.292 | -0.002 | 10885313 | 1000.0 | 1005.1 | |
| 1 | 4.763 | 4.762 | 0.001 | 10827109 | 1000.0 | 998.2 | |
| | | Average of Peak Amounts = | | | | 1000.5 | |
| 2 | 3.317 | 3.319 | -0.002 | 36225380 | 1000.0 | 987.5 | M |
| 2 | 3.714 | 3.712 | 0.002 | 30469249 | 1000.0 | 983.8 | M |
| 2 | 4.174 | 4.176 | -0.002 | 61574579 | 1000.0 | 997.2 | M |
| 2 | 4.320 | 4.322 | -0.002 | 27250311 | 1000.0 | 986.8 | M |
| 2 | 4.850 | 4.852 | -0.002 | 19038677 | 1000.0 | 1060.0 | M |
| | | Average of Peak Amounts = | | | | 1003.1 | |
| | | | | | | RPD = 0.25 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.663 | 6.665 | -0.002 | 60805698 | 1000.0 | 1020.1 | |
| 1 | 7.200 | 7.202 | -0.002 | 50241058 | 1000.0 | 1004.3 | |
| 1 | 7.533 | 7.535 | -0.002 | 44863477 | 1000.0 | 1007.4 | |
| 1 | 7.973 | 7.975 | -0.002 | 93284117 | 1000.0 | 1025.9 | |
| 1 | 8.367 | 8.365 | 0.002 | 26303379 | 1000.0 | 1017.7 | |
| | | Average of Peak Amounts = | | | | 1015.1 | |
| 2 | 6.723 | 6.726 | -0.003 | 80102455 | 1000.0 | 1002.8 | |
| 2 | 7.330 | 7.329 | 0.001 | 114854535 | 1000.0 | 1007.8 | |
| 2 | 7.727 | 7.729 | -0.002 | 110434783 | 1000.0 | 1008.4 | |
| 2 | 8.097 | 8.096 | 0.001 | 219516811 | 1000.0 | 1017.0 | |
| 2 | 8.603 | 8.602 | 0.001 | 155377462 | 1000.0 | 1018.8 | |
| | | Average of Peak Amounts = | | | | 1011.0 | |
| | | | | | | RPD = 0.41 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 2015.6 | |
| 2 | | | | | | 2014.0 | |
| | | | | | | RPD = 0.08 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

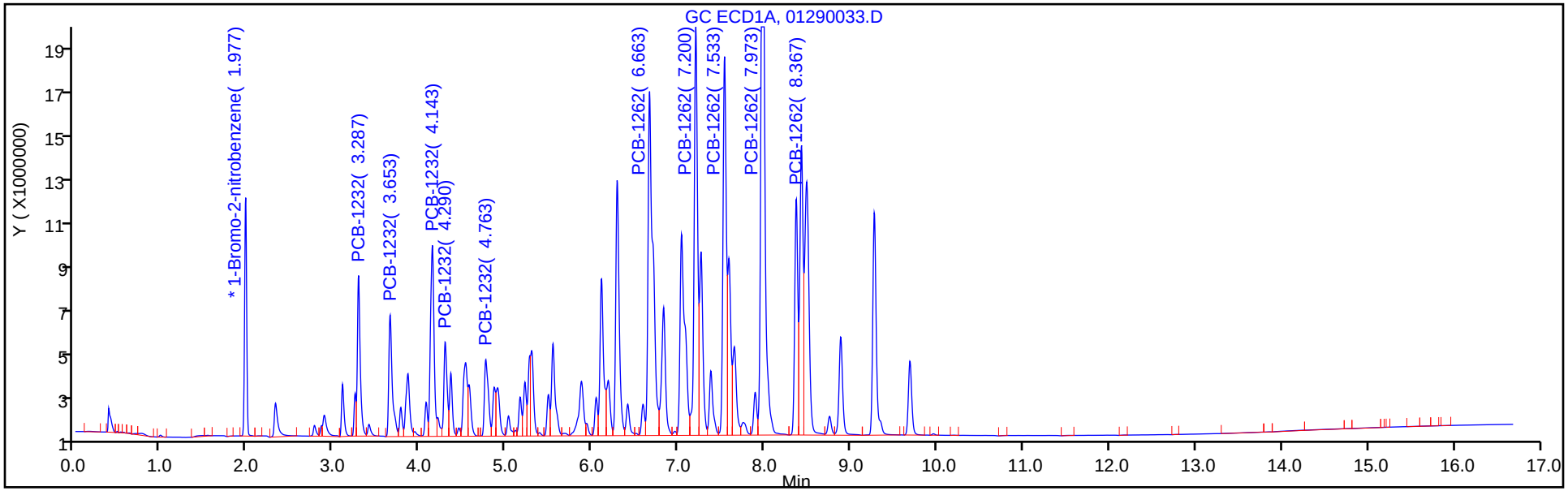
Report Date: 30-Jan-2019 14:58:49 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

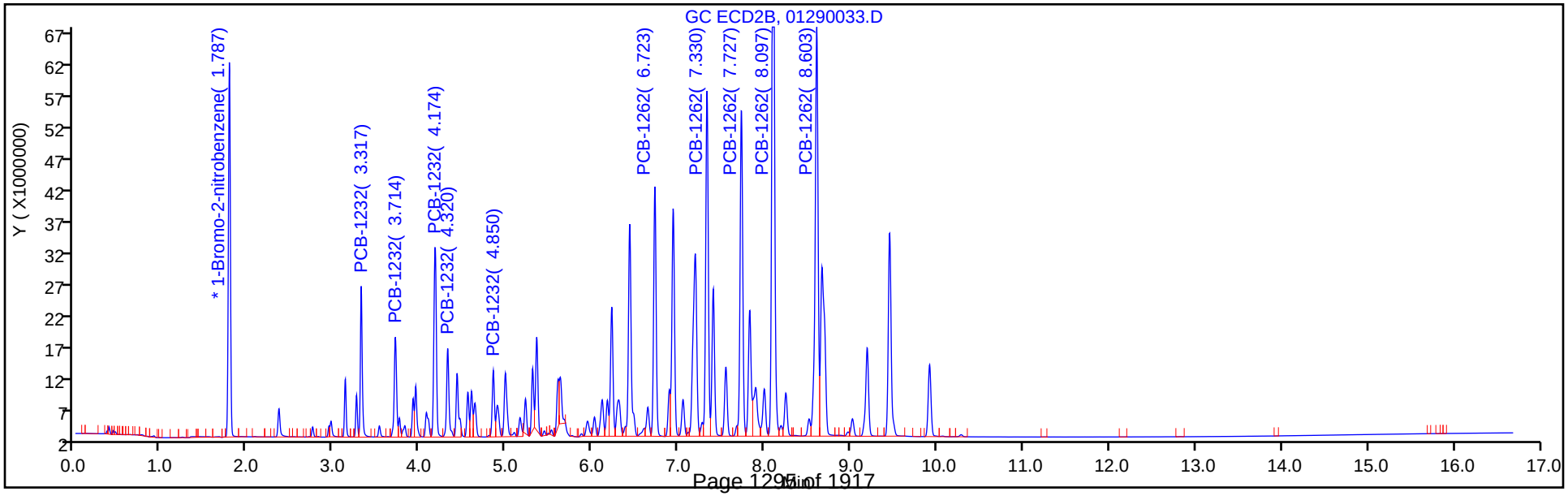
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290033.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 01:26:59 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD7 | | | Worklist Smp#: | 33 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 33 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP2  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 23:20  Calibration End Date: 01/30/2019 01:26  Calibration ID: 35076

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/27 | 01290027.D |
| Level 2 | STD2 280-445745/28 | 01290028.D |
| Level 3 | STD3 280-445745/29 | 01290029.D |
| Level 4 | STD4 280-445745/30 | 01290030.D |
| Level 5 | STD5 280-445745/31 | 01290031.D |
| Level 6 | STD6 280-445745/32 | 01290032.D |
| Level 7 | STD7 280-445745/33 | 01290033.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| PCB-1232 Peak 1 | 0.0540<br>0.0364 | 0.0533<br>0.0373 | 0.0505 | 0.0434 | 0.0392 | Lin1 | 0.6941 | 0.0371 | | | | | | | 0.9950 | | 0.9900 |
| PCB-1232 Peak 2 | 0.0446<br>0.0305 | 0.0458<br>0.0314 | 0.0458 | 0.0370 | 0.0331 | Lin1 | 0.6278 | 0.0313 | | | | | | | 0.9920 | | 0.9900 |
| PCB-1232 Peak 3 | 0.0905<br>0.0612 | 0.0852<br>0.0635 | 0.0859 | 0.0698 | 0.0658 | Lin1 | 1.0725 | 0.0626 | | | | | | | 0.9960 | | 0.9900 |
| PCB-1232 Peak 4 | 0.0412<br>0.0272 | 0.0388<br>0.0281 | 0.0408 | 0.0326 | 0.0296 | Lin1 | 0.5478 | 0.0279 | | | | | | | 0.9930 | | 0.9900 |
| PCB-1232 Peak 5 | 0.0398<br>0.0188 | 0.0345<br>0.0196 | 0.0339 | 0.0234 | 0.0210 | Qua1 | 0.5675 | 0.0226 | -0.000004 | | | | | | 0.9910 | | 0.9900 |
| PCB-1262 Peak 1 | 0.1104<br>0.0790 | 0.1057<br>0.0826 | 0.1107 | 0.0921 | 0.0832 | Lin1 | 1.2237 | 0.0811 | | | | | | | 0.9960 | | 0.9900 |
| PCB-1262 Peak 2 | 0.1520<br>0.1123 | 0.1449<br>0.1184 | 0.1550 | 0.1302 | 0.1182 | Lin1 | 1.5242 | 0.1159 | | | | | | | 0.9960 | | 0.9900 |
| PCB-1262 Peak 3 | 0.1444<br>0.1079 | 0.1381<br>0.1138 | 0.1489 | 0.1252 | 0.1133 | Lin1 | 1.4226 | 0.1115 | | | | | | | 0.9960 | | 0.9900 |
| PCB-1262 Peak 4 | 0.2626<br>0.2123 | 0.2511<br>0.2262 | 0.2792 | 0.2415 | 0.2211 | Lin1 | 1.9161 | 0.2206 | | | | | | | 0.9970 | | 0.9900 |
| PCB-1262 Peak 5 | 0.1966<br>0.1493 | 0.1876<br>0.1601 | 0.2044 | 0.1726 | 0.1564 | Lin1 | 1.7753 | 0.1554 | | | | | | | 0.9960 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/29/2019 23:20 Calibration End Date: 01/30/2019 01:26 Calibration ID: 35076

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/27 | 01290027.D |
| Level 2 | STD2 280-445745/28 | 01290028.D |
| Level 3 | STD3 280-445745/29 | 01290029.D |
| Level 4 | STD4 280-445745/30 | 01290030.D |
| Level 5 | STD5 280-445745/31 | 01290031.D |
| Level 6 | STD6 280-445745/32 | 01290032.D |
| Level 7 | STD7 280-445745/33 | 01290033.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1232 Peak 1 | BNB | Lin1 | 1496532<br>28136423 | 2748487<br>36225380 | 4309382 | 10324727 | 19890713 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1232 Peak 2 | BNB | Lin1 | 1233959<br>23589575 | 2360172<br>30469249 | 3908201 | 8800849 | 16824422 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1232 Peak 3 | BNB | Lin1 | 2506015<br>47384099 | 4397390<br>61574579 | 7329760 | 16600503 | 33406438 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1232 Peak 4 | BNB | Lin1 | 1140508<br>21054657 | 1999602<br>27250311 | 3484604 | 7752050 | 15015730 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1232 Peak 5 | BNB | Qua1 | 1101509<br>14563335 | 1779819<br>19038677 | 2892417 | 5567666 | 10657721 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1262 Peak 1 | BNB | Lin1 | 3056339<br>61101092 | 5453862<br>80102455 | 9445459 | 21896336 | 42240800 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1262 Peak 2 | BNB | Lin1 | 4209181<br>86881411 | 7472482<br>114854535 | 13226656 | 30972003 | 60041530 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1262 Peak 3 | BNB | Lin1 | 4000469<br>83506182 | 7122870<br>110434783 | 12704521 | 29773062 | 57508699 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1262 Peak 4 | BNB | Lin1 | 7272798<br>164230890 | 12954262<br>219516811 | 23821211 | 57437514 | 112291389 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1262 Peak 5 | BNB | Lin1 | 5444960<br>115507342 | 9679909<br>155377462 | 17440956 | 41037918 | 79435986 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |

Curve Type Legend:

Lin1 = Linear 1/conc ISTD
Qua1 = Quadratic 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290027.D
Lims ID: STD1 3262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Jan-2019 23:20:15 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1 3262
Misc. Info.: 280-0078470-027
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:00 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:12:37

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.979 | -0.001 | 19930472 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.789 | -0.001 | 110786865 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | |
| 1 | 3.288 | 3.285 | 0.003 | 693248 | 25.0 | 20.4 | |
| 1 | 3.651 | 3.652 | -0.001 | 618262 | 25.0 | 18.3 | |
| 1 | 4.141 | 4.142 | -0.001 | 699435 | 25.0 | 23.0 | |
| 1 | 4.291 | 4.292 | -0.001 | 344732 | 25.0 | 20.4 | |
| 1 | 4.761 | 4.762 | -0.001 | 338220 | 25.0 | 21.0 | |
| | | Average of Peak Amounts = | | | | 20.6 | |
| 2 | 3.318 | 3.319 | -0.001 | 1496532 | 25.0 | 17.7 | |
| 2 | 3.714 | 3.712 | 0.002 | 1233959 | 25.0 | 15.5 | |
| 2 | 4.174 | 4.176 | -0.002 | 2506015 | 25.0 | 19.0 | |
| 2 | 4.321 | 4.322 | -0.001 | 1140508 | 25.0 | 17.3 | |
| 2 | 4.848 | 4.852 | -0.004 | 1101509 | 25.0 | 18.9 | |
| | | Average of Peak Amounts = | | | | 17.7 | |
| | | | | | | RPD = 15.37 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.661 | 6.665 | -0.004 | 1292278 | 25.0 | 28.0 | |
| 1 | 7.198 | 7.202 | -0.004 | 1560094 | 25.0 | 20.4 | |
| 1 | 7.531 | 7.535 | -0.004 | 1303552 | 25.0 | 21.1 | |
| 1 | 7.974 | 7.975 | -0.001 | 2432737 | 25.0 | 23.3 | |
| 1 | 8.364 | 8.365 | -0.001 | 721259 | 25.0 | 22.0 | |
| | | Average of Peak Amounts = | | | | 23.0 | |
| 2 | 6.724 | 6.726 | -0.002 | 3056339 | 25.0 | 18.9 | |
| 2 | 7.331 | 7.329 | 0.002 | 4209181 | 25.0 | 19.6 | |
| 2 | 7.728 | 7.729 | -0.001 | 4000469 | 25.0 | 19.6 | |
| 2 | 8.098 | 8.096 | 0.002 | 7272798 | 25.0 | 21.1 | |
| 2 | 8.601 | 8.602 | -0.001 | 5444960 | 25.0 | 20.2 | |
| | | Average of Peak Amounts = | | | | 19.9 | |
| | | | | | | RPD = 14.38 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 43.6 | |
| 2 | | | | | | 37.6 | |
| | | | | | | RPD = 14.84 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.03 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

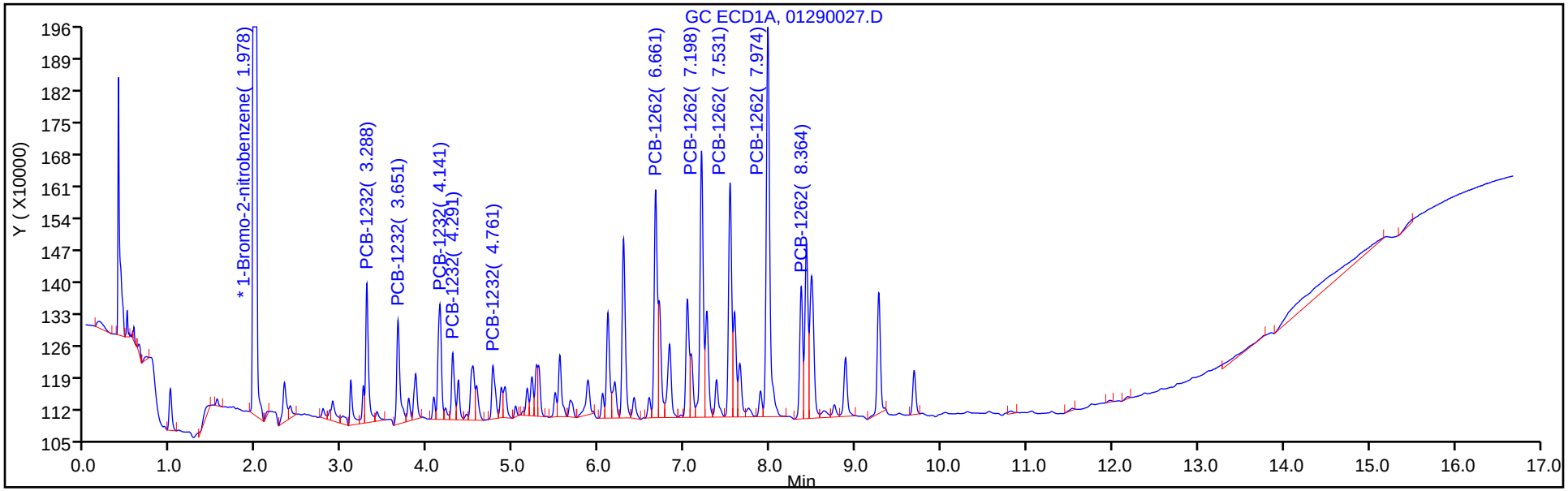
Report Date: 30-Jan-2019 14:59:00 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

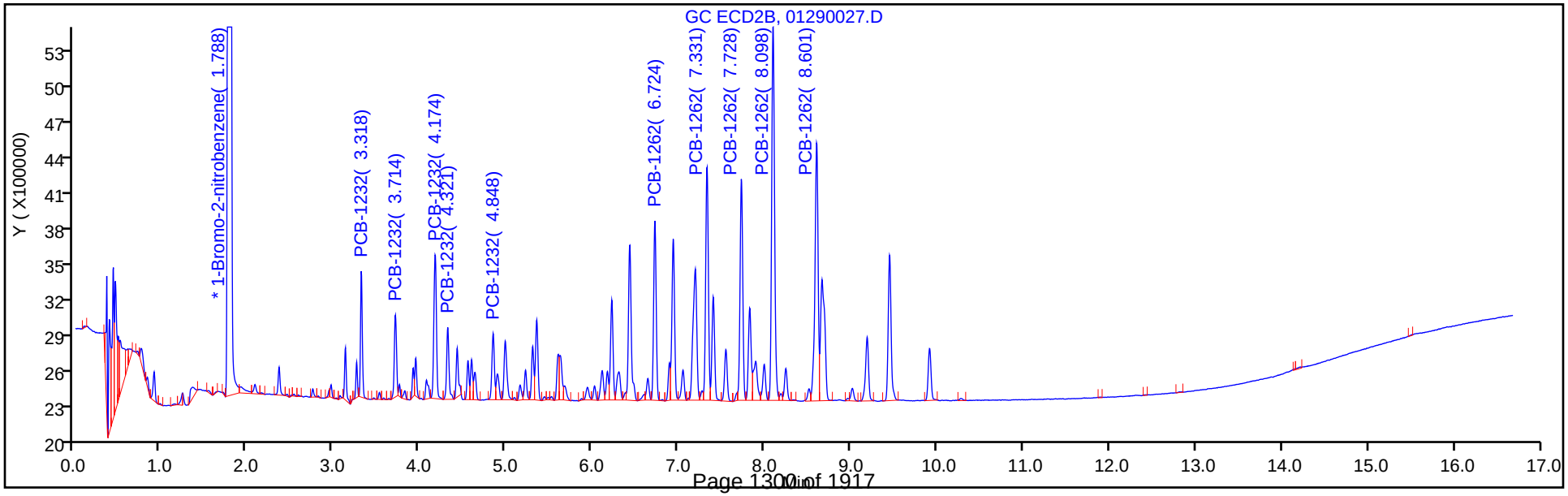
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290027.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 23:20:15 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD1 3262 | | | Worklist Smp#: | 27 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 27 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290028.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Jan-2019 23:41:16 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0078470-028
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:58 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:41:01

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 18712922 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 103173235 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | |
| 1 | 3.286 | 3.285 | 0.001 | 1118140 | 50.0 | 47.4 | |
| 1 | 3.650 | 3.652 | -0.002 | 1104878 | 50.0 | 50.9 | |
| 1 | 4.140 | 4.142 | -0.002 | 1364870 | 50.0 | 50.6 | |
| 1 | 4.290 | 4.292 | -0.002 | 669721 | 50.0 | 50.8 | |
| 1 | 4.760 | 4.762 | -0.002 | 629687 | 50.0 | 48.4 | |
| | | Average of Peak Amounts = | | | | 49.6 | |
| 2 | 3.317 | 3.319 | -0.002 | 2748487 | 50.0 | 53.1 | |
| 2 | 3.713 | 3.712 | 0.001 | 2360172 | 50.0 | 53.1 | |
| 2 | 4.177 | 4.176 | 0.001 | 4397390 | 50.0 | 51.0 | |
| 2 | 4.320 | 4.322 | -0.002 | 1999602 | 50.0 | 49.8 | |
| 2 | 4.850 | 4.852 | -0.002 | 1779819 | 50.0 | 51.7 | |
| | | Average of Peak Amounts = | | | | 51.7 | |
| | | | | | | RPD = 4.15 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.663 | 6.665 | -0.002 | 2409794 | 50.0 | 46.8 | |
| 1 | 7.200 | 7.202 | -0.002 | 2907641 | 50.0 | 47.9 | |
| 1 | 7.533 | 7.535 | -0.002 | 2499853 | 50.0 | 48.3 | |
| 1 | 7.973 | 7.975 | -0.002 | 4572344 | 50.0 | 47.1 | |
| 1 | 8.363 | 8.365 | -0.002 | 1358687 | 50.0 | 47.0 | |
| | | Average of Peak Amounts = | | | | 47.4 | |
| 2 | 6.727 | 6.726 | 0.001 | 5453862 | 50.0 | 50.1 | |
| 2 | 7.330 | 7.329 | 0.001 | 7472482 | 50.0 | 49.3 | |
| 2 | 7.730 | 7.729 | 0.001 | 7122870 | 50.0 | 49.2 | |
| 2 | 8.097 | 8.096 | 0.001 | 12954262 | 50.0 | 48.2 | |
| 2 | 8.603 | 8.602 | 0.001 | 9679909 | 50.0 | 48.9 | |
| | | Average of Peak Amounts = | | | | 49.2 | |
| | | | | | | RPD = 3.56 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 97.1 | |
| 2 | | | | | | 100.9 | |
| | | | | | | RPD = 3.86 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.05 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

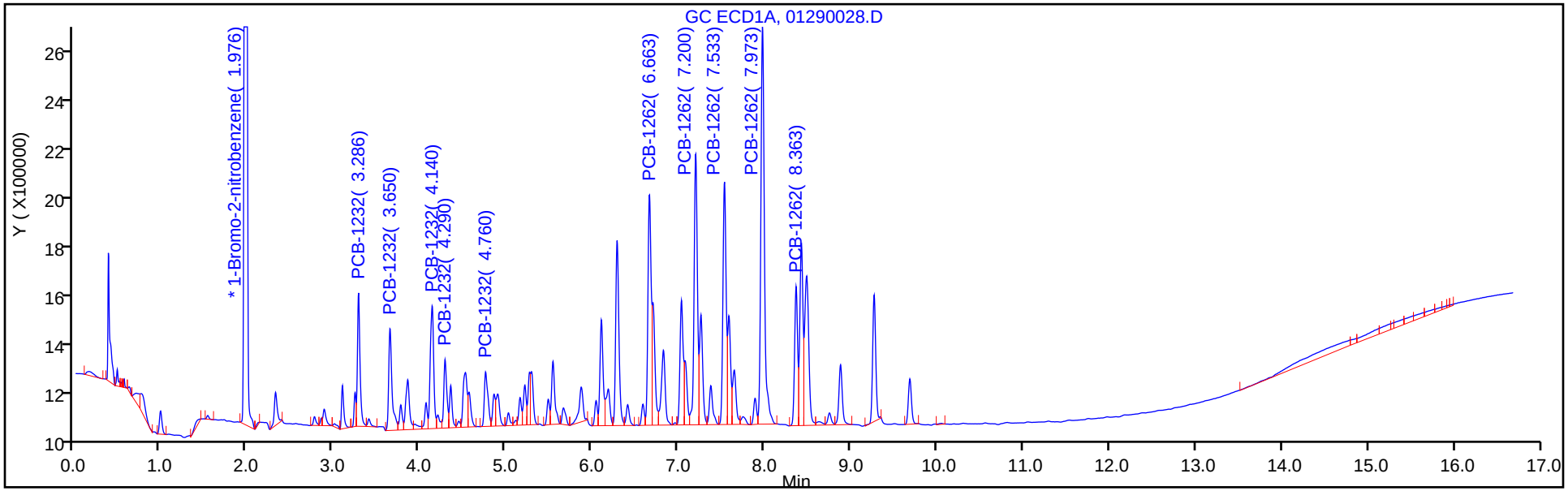
Report Date: 30-Jan-2019 14:58:59 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

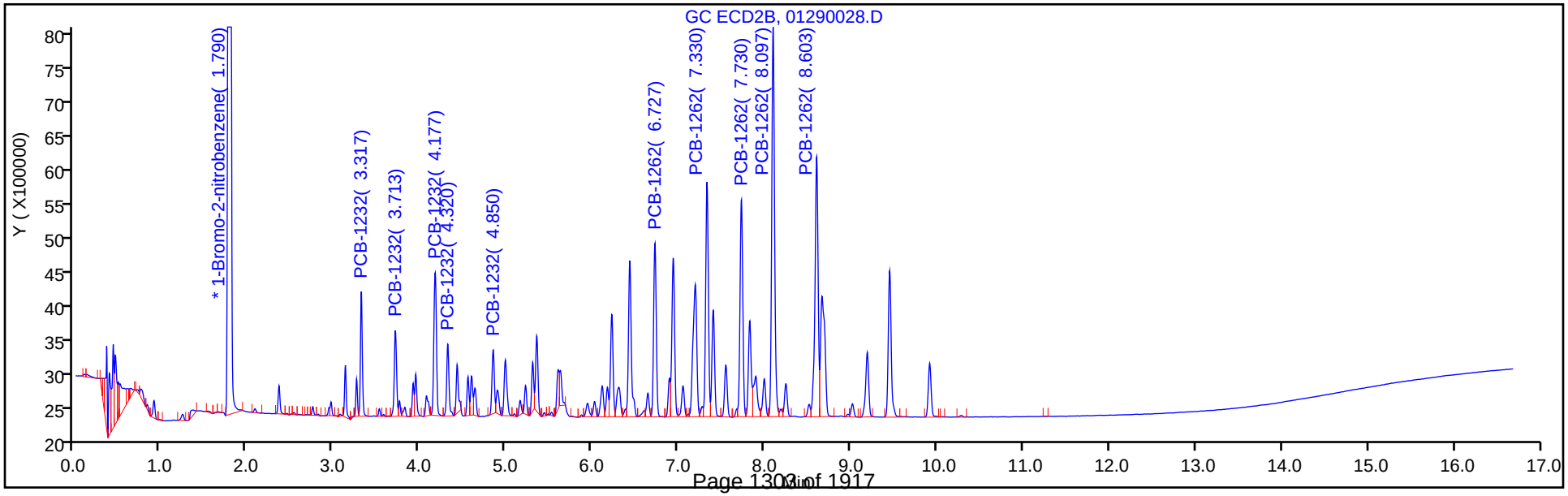
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290028.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 23:41:16 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD2 | | | Worklist Smp#: | 28 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 28 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290029.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Jan-2019 00:02:19 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0078470-029
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:57 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:38:27

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.979 | -0.004 | 15410247 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 85324946 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | M |
| 1 | 3.285 | 3.285 | 0.000 | 1919629 | 100.0 | 117.6 | |
| 1 | 3.652 | 3.652 | 0.000 | 1832930 | 100.0 | 120.4 | |
| 1 | 4.142 | 4.142 | 0.000 | 2320975 | 100.0 | 107.2 | |
| 1 | 4.289 | 4.292 | -0.003 | 1142874 | 100.0 | 114.0 | |
| 1 | 4.762 | 4.762 | 0.000 | 1138677 | 100.0 | 114.5 | |
| | | Average of Peak Amounts = | | | | 114.7 | |
| 2 | 3.319 | 3.319 | 0.000 | 4309382 | 100.0 | 117.4 | |
| 2 | 3.712 | 3.712 | 0.000 | 3908201 | 100.0 | 126.4 | M |
| 2 | 4.176 | 4.176 | 0.000 | 7329760 | 100.0 | 120.2 | M |
| 2 | 4.322 | 4.322 | 0.000 | 3484604 | 100.0 | 126.7 | M |
| 2 | 4.849 | 4.852 | -0.003 | 2892417 | 100.0 | 128.0 | M |
| | | Average of Peak Amounts = | | | | 123.7 | |
| | | | | | | RPD = 7.54 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.662 | 6.665 | -0.003 | 4526234 | 100.0 | 95.3 | |
| 1 | 7.199 | 7.202 | -0.003 | 5498128 | 100.0 | 119.7 | |
| 1 | 7.532 | 7.535 | -0.003 | 4663641 | 100.0 | 115.8 | |
| 1 | 7.975 | 7.975 | 0.000 | 8895019 | 100.0 | 111.9 | |
| 1 | 8.365 | 8.365 | 0.000 | 2662832 | 100.0 | 115.8 | |
| | | Average of Peak Amounts = | | | | 111.7 | |
| 2 | 6.726 | 6.726 | 0.000 | 9445459 | 100.0 | 121.4 | |
| 2 | 7.329 | 7.329 | 0.000 | 13226656 | 100.0 | 120.6 | |
| 2 | 7.729 | 7.729 | 0.000 | 12704521 | 100.0 | 120.8 | |
| 2 | 8.096 | 8.096 | 0.000 | 23821211 | 100.0 | 117.9 | |
| 2 | 8.602 | 8.602 | 0.000 | 17440956 | 100.0 | 120.1 | |
| | | Average of Peak Amounts = | | | | 120.2 | |
| | | | | | | RPD = 7.29 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 226.4 | |
| 2 | | | | | | 243.9 | |
| | | | | | | RPD = 7.42 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.10 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

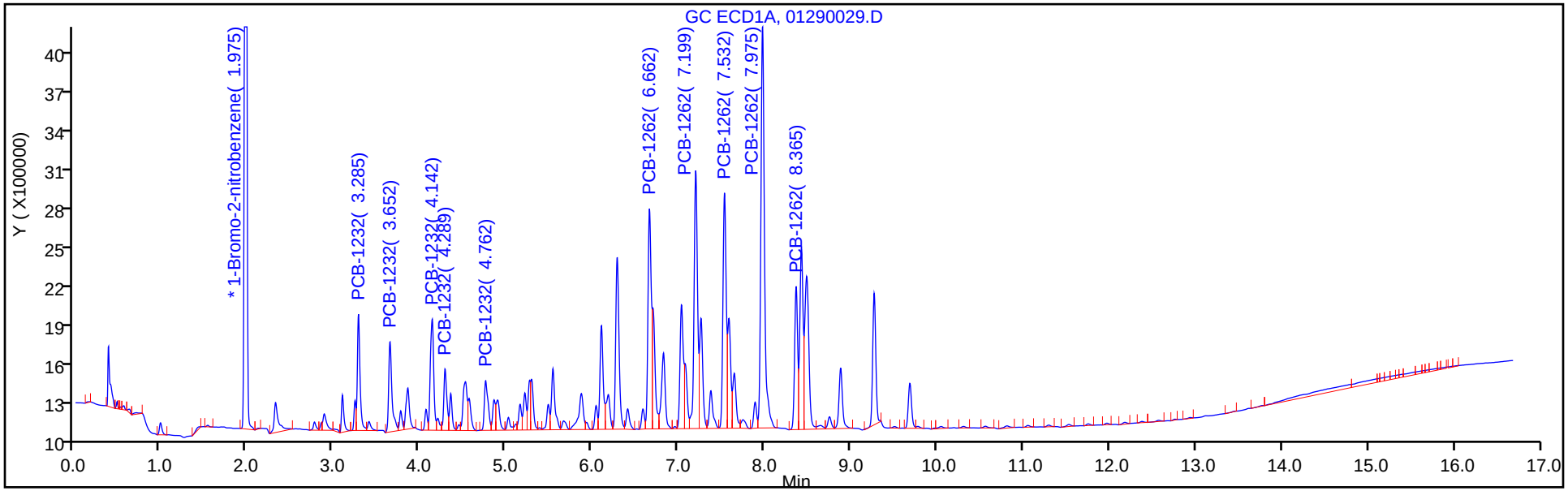
Report Date: 30-Jan-2019 14:58:57 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

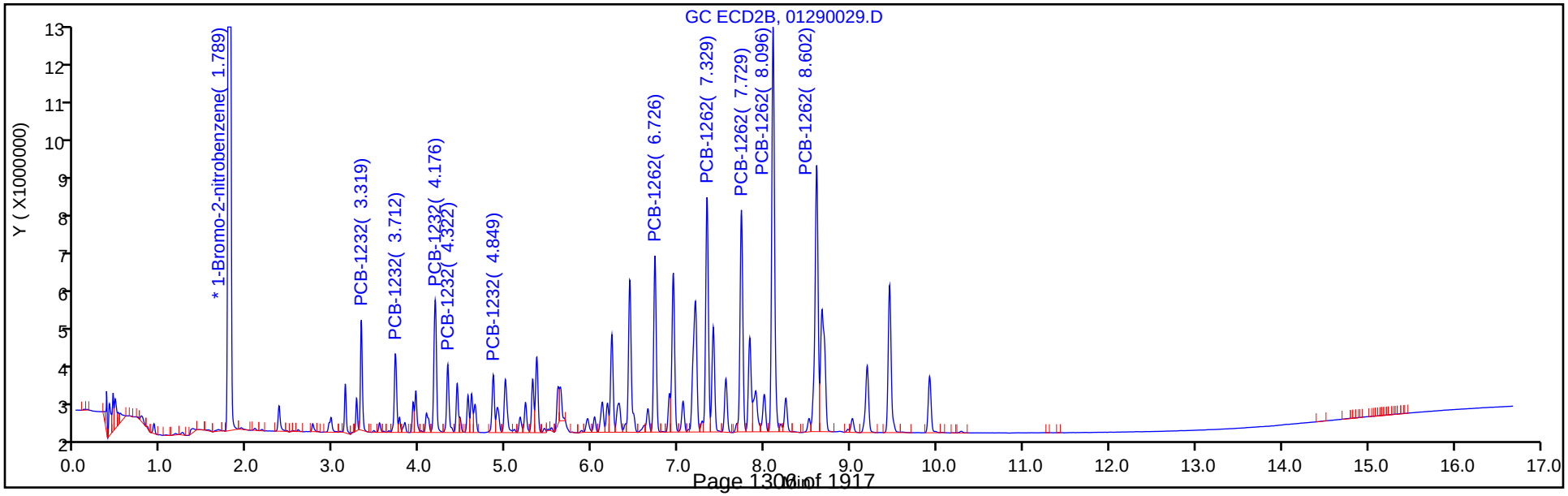
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290029.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 00:02:19 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD3 | | | Worklist Smp#: | 29 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 29 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:58:57 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290029.D

Injection Date: 30-Jan-2019 00:02:19 Instrument ID: SGC_J

Lims ID: STD3

Client ID:

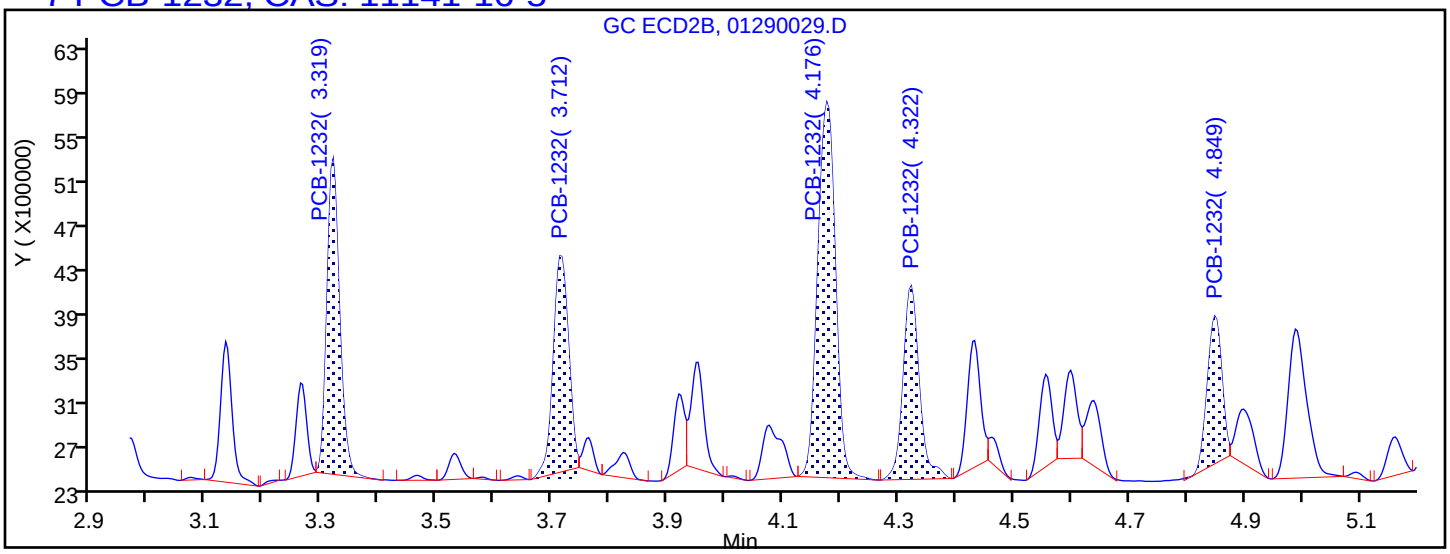
Operator ID: TEM ALS Bottle#: 29 Worklist Smp#: 29

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

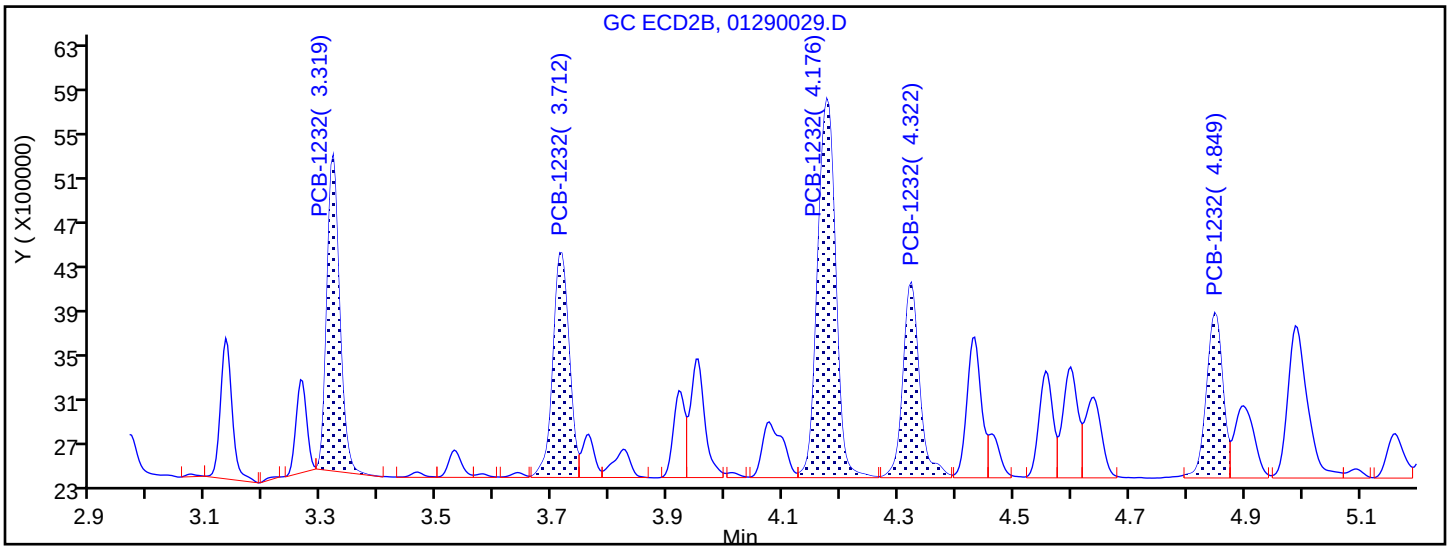
Column: CLP2 Pesticides Column 2 ( 0.32 mm) Detector GC ECD2B

## 7 PCB-1232, CAS: 11141-16-5




Processing Integration Results

| | | |
|---|---|---|
| 3.319 | Response = 4309382 | |
| 3.712 | Response = 3584301 | |
| 4.176 | Response = 7124863 | |
| 4.322 | Response = 3369297 | |
| 4.849 | Response = 2325066 | |




Manual Integration Results

| | | |
|---|---|---|
| 3.319 | Response = 4309382 | |
| 3.712 | Response = 3908201 | M |
| 4.176 | Response = 7329760 | M |
| 4.322 | Response = 3484604 | M |
| 4.849 | Response = 2892417 | M |

Reviewer: mooret, 30-Jan-2019 14:46:26

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290030.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Jan-2019 00:23:27 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0078470-030
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:55 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:13:34

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.979 | -0.001 | 17277006 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.789 | -0.001 | 95129968 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | M |
| 1 | 3.285 | 3.285 | 0.000 | 4641793 | 250.0 | 273.6 | |
| 1 | 3.651 | 3.652 | -0.001 | 4313490 | 250.0 | 272.1 | M |
| 1 | 4.141 | 4.142 | -0.001 | 6043672 | 250.0 | 252.3 | M |
| 1 | 4.291 | 4.292 | -0.001 | 2881266 | 250.0 | 266.5 | M |
| 1 | 4.761 | 4.762 | -0.001 | 2920818 | 250.0 | 270.8 | M |
| | | Average of Peak Amounts = | | | | 267.1 | |
| 2 | 3.318 | 3.319 | -0.001 | 10324727 | 250.0 | 273.8 | |
| 2 | 3.715 | 3.712 | 0.003 | 8800849 | 250.0 | 275.7 | |
| 2 | 4.175 | 4.176 | -0.001 | 16600503 | 250.0 | 261.8 | |
| 2 | 4.322 | 4.322 | 0.000 | 7752050 | 250.0 | 272.4 | |
| 2 | 4.852 | 4.852 | 0.000 | 5567666 | 250.0 | 245.4 | |
| | | Average of Peak Amounts = | | | | 265.8 | |
| | | | | | | RPD = 0.47 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | M |
| 1 | 6.661 | 6.665 | -0.004 | 13766939 | 250.0 | 243.4 | M |
| 1 | 7.198 | 7.202 | -0.004 | 13395489 | 250.0 | 268.8 | M |
| 1 | 7.531 | 7.535 | -0.004 | 11901000 | 250.0 | 270.0 | M |
| 1 | 7.975 | 7.975 | 0.000 | 23270420 | 250.0 | 261.7 | M |
| 1 | 8.365 | 8.365 | 0.000 | 6798468 | 250.0 | 267.3 | M |
| | | Average of Peak Amounts = | | | | 262.2 | |
| 2 | 6.725 | 6.726 | -0.001 | 21896336 | 250.0 | 268.7 | |
| 2 | 7.328 | 7.329 | -0.001 | 30972003 | 250.0 | 267.7 | |
| 2 | 7.728 | 7.729 | -0.001 | 29773062 | 250.0 | 268.1 | |
| 2 | 8.095 | 8.096 | -0.001 | 57437514 | 250.0 | 265.1 | |
| 2 | 8.602 | 8.602 | 0.000 | 41037918 | 250.0 | 266.1 | |
| | | Average of Peak Amounts = | | | | 267.1 | |
| | | | | | | RPD = 1.85 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 529.3 | |
| 2 | | | | | | 532.9 | |
| | | | | | | RPD = 0.69 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.25 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

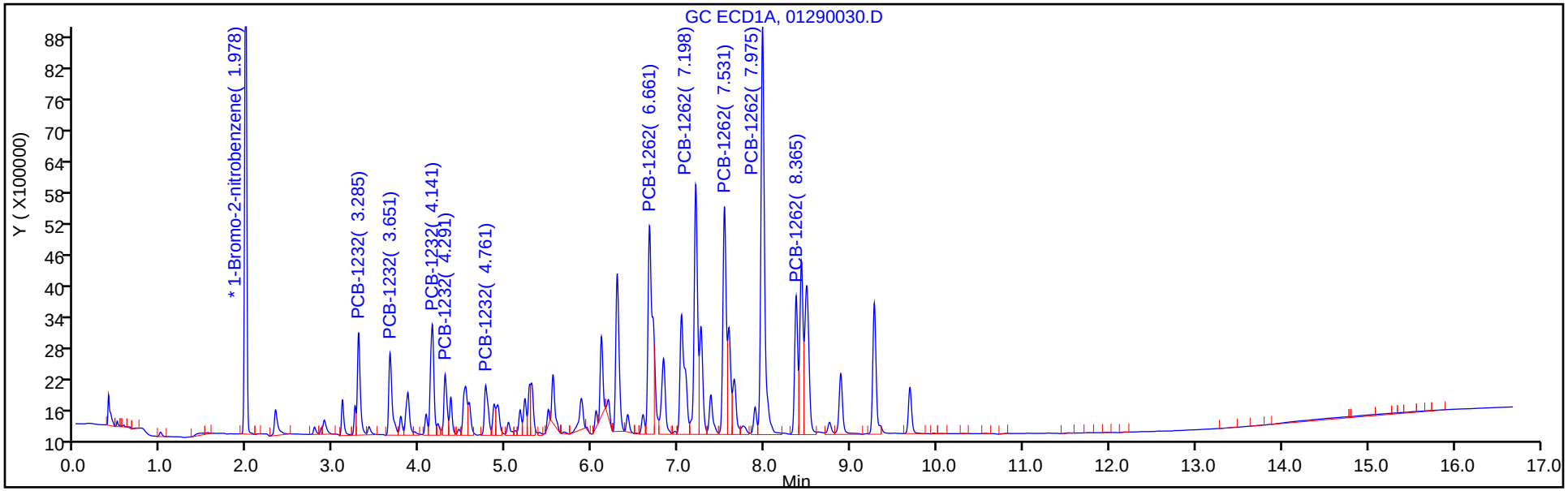
Report Date: 30-Jan-2019 14:58:55 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

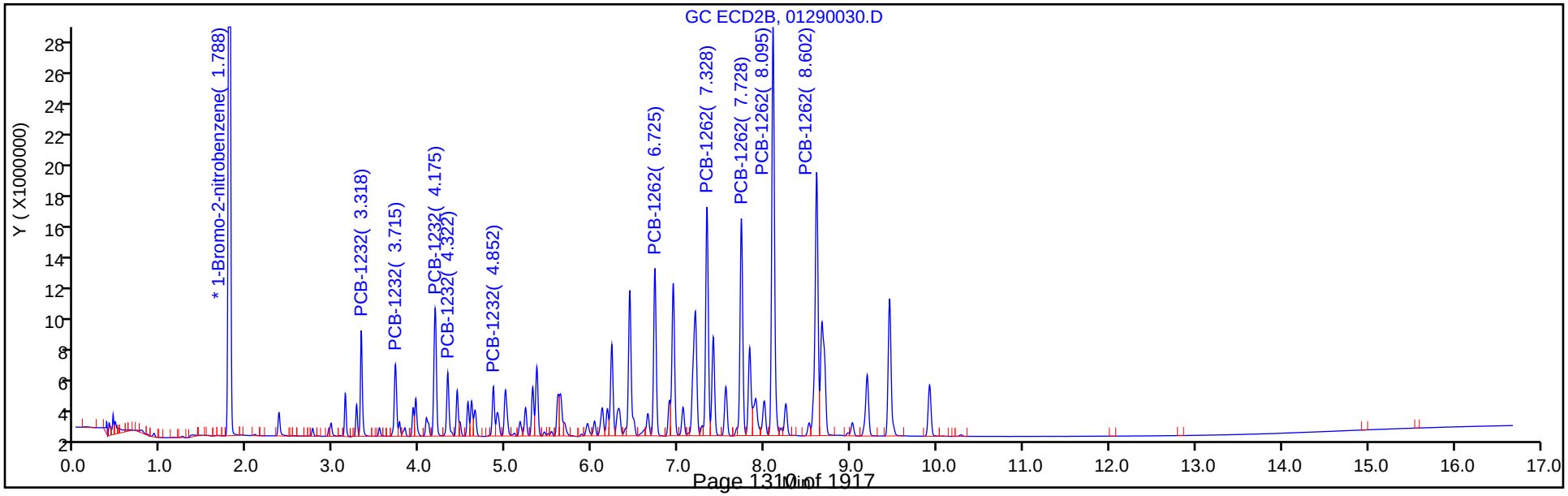
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290030.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 00:23:27 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD4 | | | Worklist Smp#: | 30 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 30 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290031.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Jan-2019 00:44:48 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0078470-031
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:53 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:17:09

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.979 | 1.979 | 0.000 | 18503197 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 101555118 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | M |
| 1 | 3.285 | 3.285 | 0.000 | 9022765 | 500.0 | 510.7 | |
| 1 | 3.652 | 3.652 | 0.000 | 8322978 | 500.0 | 504.3 | |
| 1 | 4.142 | 4.142 | 0.000 | 12795158 | 500.0 | 501.3 | |
| 1 | 4.292 | 4.292 | 0.000 | 5689339 | 500.0 | 498.2 | |
| 1 | 4.762 | 4.762 | 0.000 | 5757161 | 500.0 | 504.2 | |
| | | Average of Peak Amounts = | | | | 503.7 | |
| 2 | 3.319 | 3.319 | 0.000 | 19890713 | 500.0 | 509.2 | M |
| 2 | 3.712 | 3.712 | 0.000 | 16824422 | 500.0 | 509.6 | M |
| 2 | 4.176 | 4.176 | 0.000 | 33406438 | 500.0 | 508.7 | M |
| 2 | 4.322 | 4.322 | 0.000 | 15015730 | 500.0 | 510.2 | M |
| 2 | 4.852 | 4.852 | 0.000 | 10657721 | 500.0 | 484.5 | M |
| | | Average of Peak Amounts = | | | | 504.4 | |
| | | | | | | RPD = 0.14 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.665 | 6.665 | 0.000 | 31665893 | 500.0 | 512.5 | |
| 1 | 7.202 | 7.202 | 0.000 | 26099961 | 500.0 | 495.1 | |
| 1 | 7.535 | 7.535 | 0.000 | 23061459 | 500.0 | 492.6 | |
| 1 | 7.975 | 7.975 | 0.000 | 46682586 | 500.0 | 490.7 | |
| 1 | 8.365 | 8.365 | 0.000 | 13233559 | 500.0 | 488.1 | |
| | | Average of Peak Amounts = | | | | 495.8 | |
| 2 | 6.726 | 6.726 | 0.000 | 42240800 | 500.0 | 497.8 | |
| 2 | 7.329 | 7.329 | 0.000 | 60041530 | 500.0 | 496.8 | |
| 2 | 7.729 | 7.729 | 0.000 | 57508699 | 500.0 | 495.3 | |
| 2 | 8.096 | 8.096 | 0.000 | 112291389 | 500.0 | 492.6 | |
| 2 | 8.602 | 8.602 | 0.000 | 79435986 | 500.0 | 491.8 | |
| | | Average of Peak Amounts = | | | | 494.9 | |
| | | | | | | RPD = 0.19 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.50 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

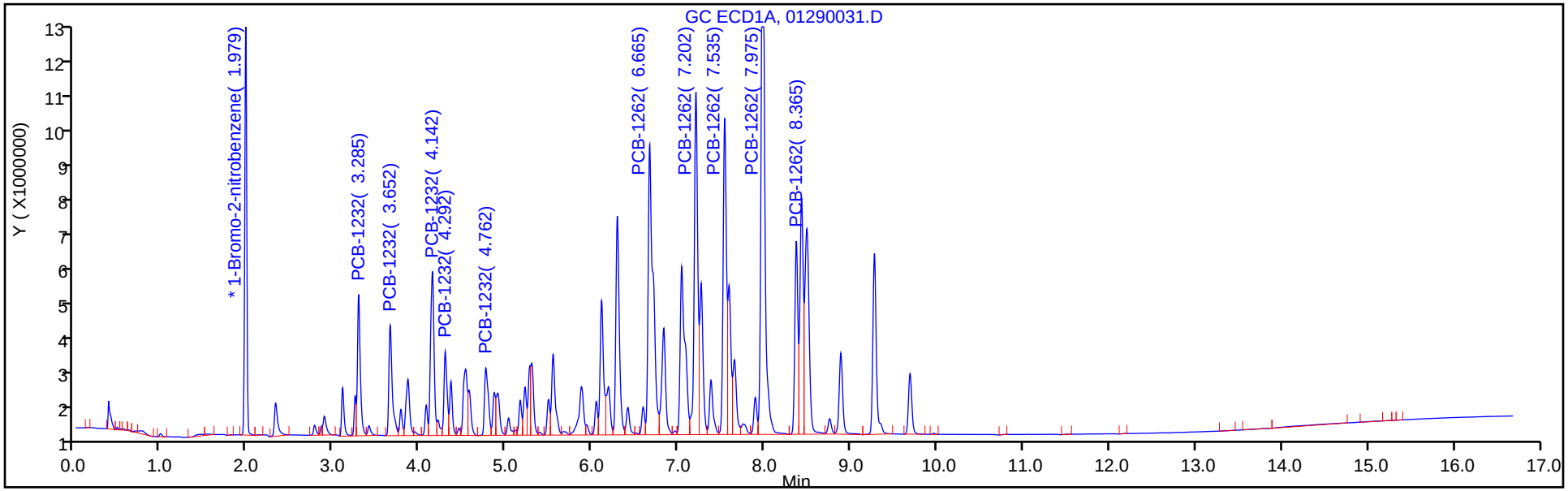
Report Date: 30-Jan-2019 14:58:53 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

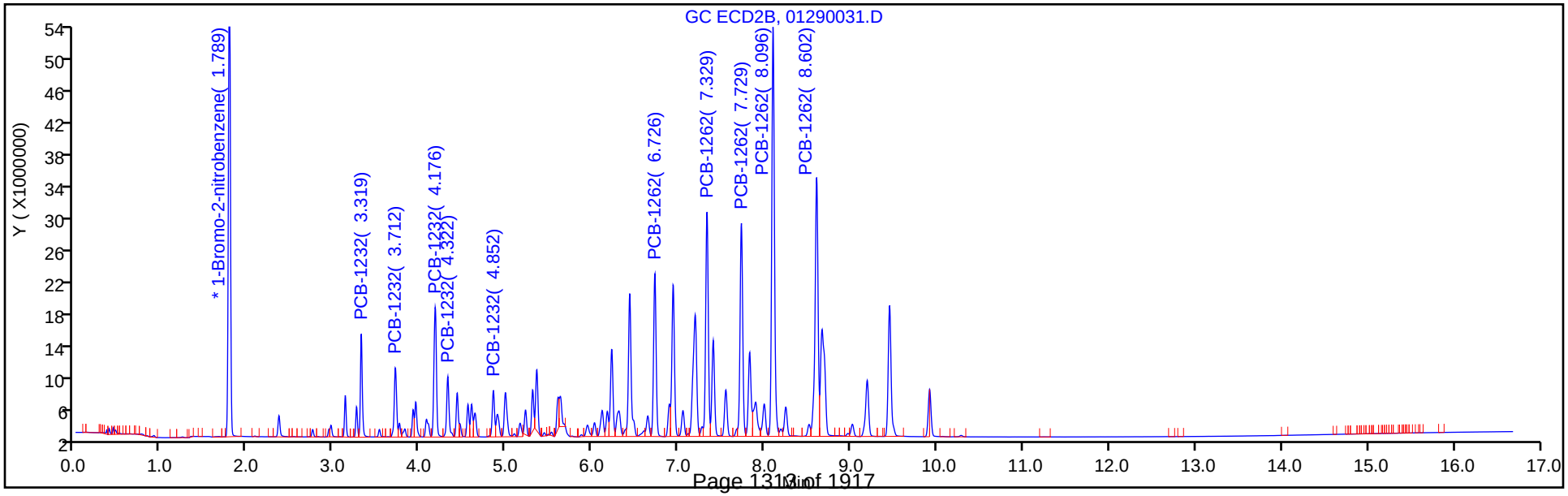
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290031.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 00:44:48 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD5 | | | Worklist Smp#: | 31 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 31 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:58:53 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290031.D

Injection Date: 30-Jan-2019 00:44:48 Instrument ID: SGC_J

Lims ID: STD5

Client ID:

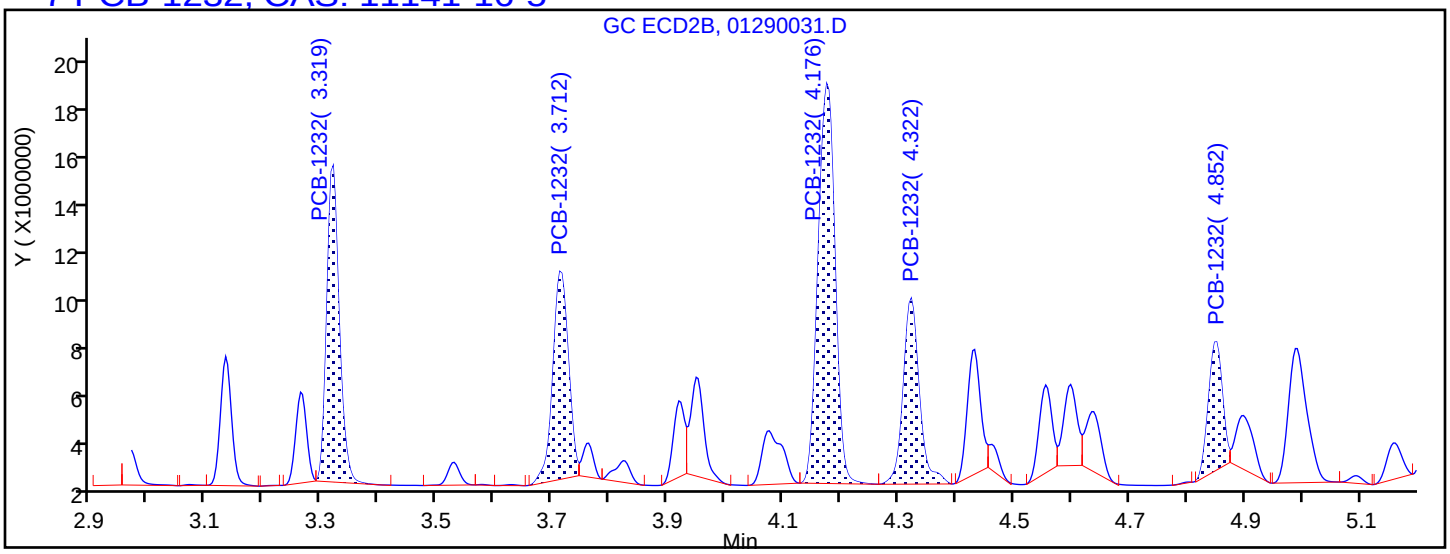
Operator ID: TEM ALS Bottle#: 31 Worklist Smp#: 31

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

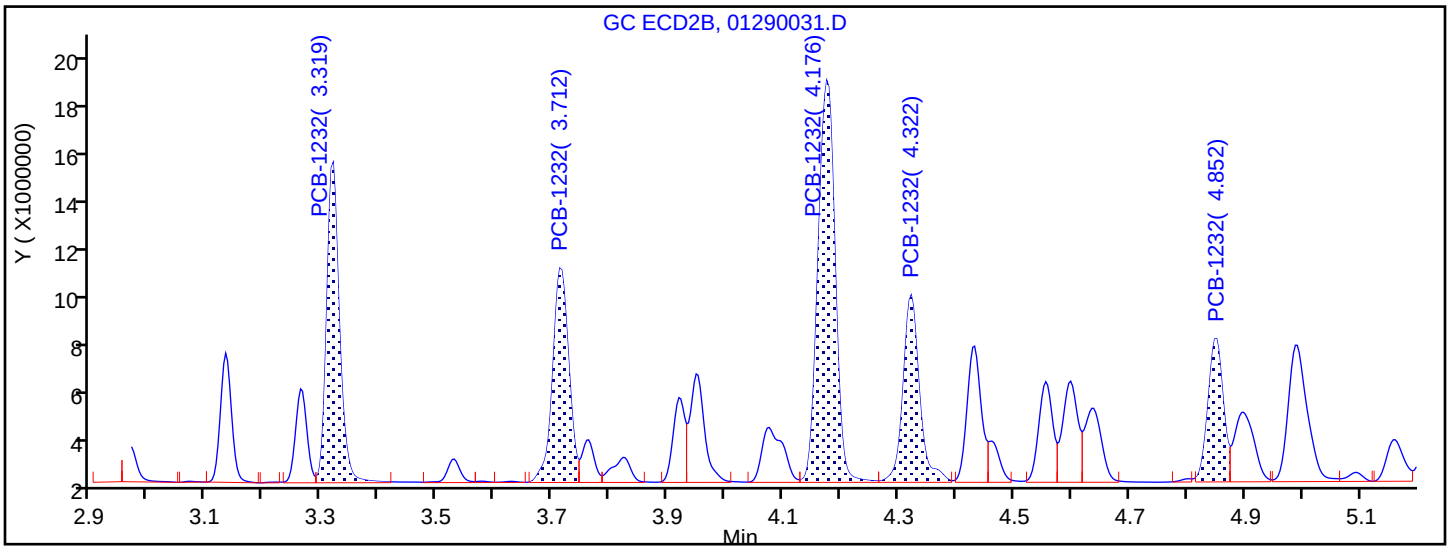
Column: CLP2 Pesticides Column 2 ( 0.32 mm) Detector GC ECD2B

## 7 PCB-1232, CAS: 11141-16-5




Processing Integration Results

| | |
|---|---|
| 3.319 | Response = 19019418 |
| 3.712 | Response = 15749148 |
| 4.176 | Response = 32752340 |
| 4.322 | Response = 14546707 |
| 4.852 | Response = 8772505 |




Manual Integration Results

| | | |
|---|---|---|
| 3.319 | Response = 19890713 | M |
| 3.712 | Response = 16824422 | M |
| 4.176 | Response = 33406438 | M |
| 4.322 | Response = 15015730 | M |
| 4.852 | Response = 10657721 | M |

Reviewer: mooret, 30-Jan-2019 14:39:12

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290032.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Jan-2019 01:05:50 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0078470-032
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:51 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.974 | 0.001 | 18812752 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.788 | 0.000 | 103158822 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | |
| 1 | 3.285 | 3.285 | 0.000 | 12676511 | 750.0 | 712.3 | |
| 1 | 3.651 | 3.652 | -0.001 | 11929931 | 750.0 | 718.2 | |
| 1 | 4.141 | 4.142 | -0.001 | 18782266 | 750.0 | 724.9 | |
| 1 | 4.291 | 4.292 | -0.001 | 8317170 | 750.0 | 719.9 | |
| 1 | 4.761 | 4.762 | -0.001 | 8301972 | 750.0 | 717.9 | |
| | | Average of Peak Amounts = | | | | 718.6 | |
| 2 | 3.318 | 3.319 | -0.001 | 28136423 | 750.0 | 716.4 | |
| 2 | 3.715 | 3.712 | 0.003 | 23589575 | 750.0 | 711.0 | |
| 2 | 4.175 | 4.176 | -0.001 | 47384099 | 750.0 | 717.1 | |
| 2 | 4.321 | 4.322 | -0.001 | 21054657 | 750.0 | 711.8 | |
| 2 | 4.851 | 4.852 | -0.001 | 14563335 | 750.0 | 691.9 | |
| | | Average of Peak Amounts = | | | | 709.6 | |
| | | | | | | RPD = 1.26 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.661 | 6.665 | -0.004 | 46035892 | 750.0 | 728.9 | |
| 1 | 7.198 | 7.202 | -0.004 | 38341756 | 750.0 | 718.7 | |
| 1 | 7.531 | 7.535 | -0.004 | 34157747 | 750.0 | 719.9 | |
| 1 | 7.975 | 7.975 | 0.000 | 69084143 | 750.0 | 714.4 | |
| 1 | 8.365 | 8.365 | 0.000 | 19726998 | 750.0 | 717.0 | |
| | | Average of Peak Amounts = | | | | 719.8 | |
| 2 | 6.725 | 6.726 | -0.001 | 61101092 | 750.0 | 715.2 | |
| 2 | 7.328 | 7.329 | -0.001 | 86881411 | 750.0 | 713.3 | |
| 2 | 7.728 | 7.729 | -0.001 | 83506182 | 750.0 | 713.6 | |
| 2 | 8.095 | 8.096 | -0.001 | 164230890 | 750.0 | 713.1 | |
| 2 | 8.601 | 8.602 | -0.001 | 115507342 | 750.0 | 709.0 | |
| | | Average of Peak Amounts = | | | | 712.8 | |
| | | | | | | RPD = 0.97 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 1438.4 | |
| 2 | | | | | | 1422.5 | |
| | | | | | | RPD = 1.11 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 0.75 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

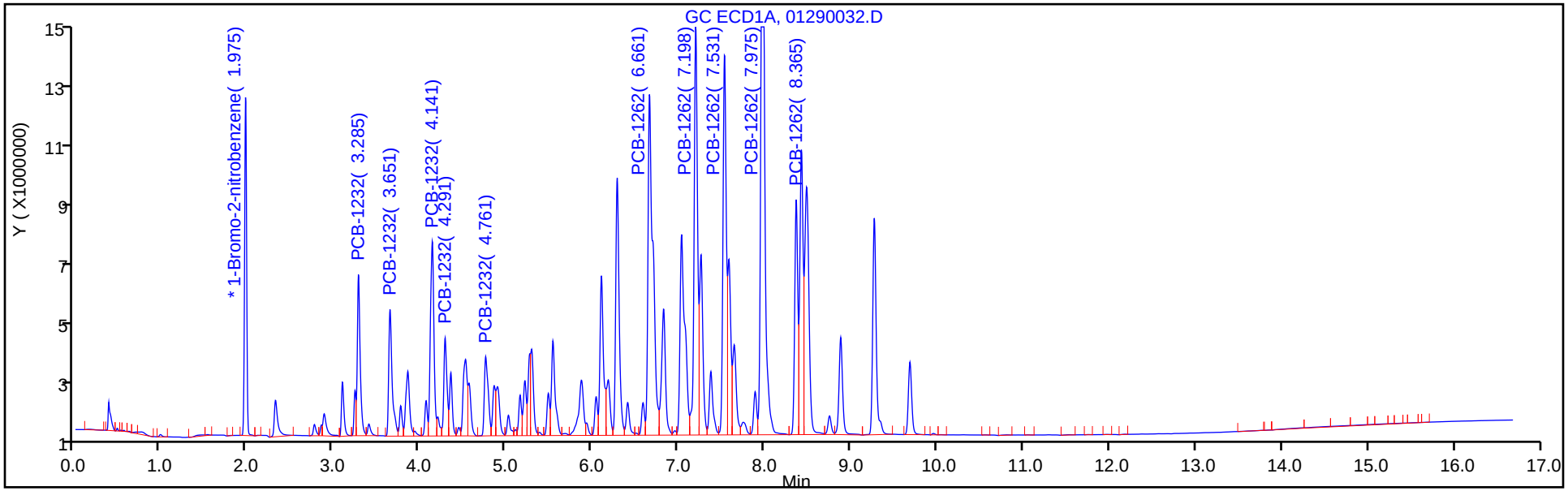
Report Date: 30-Jan-2019 14:58:51 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

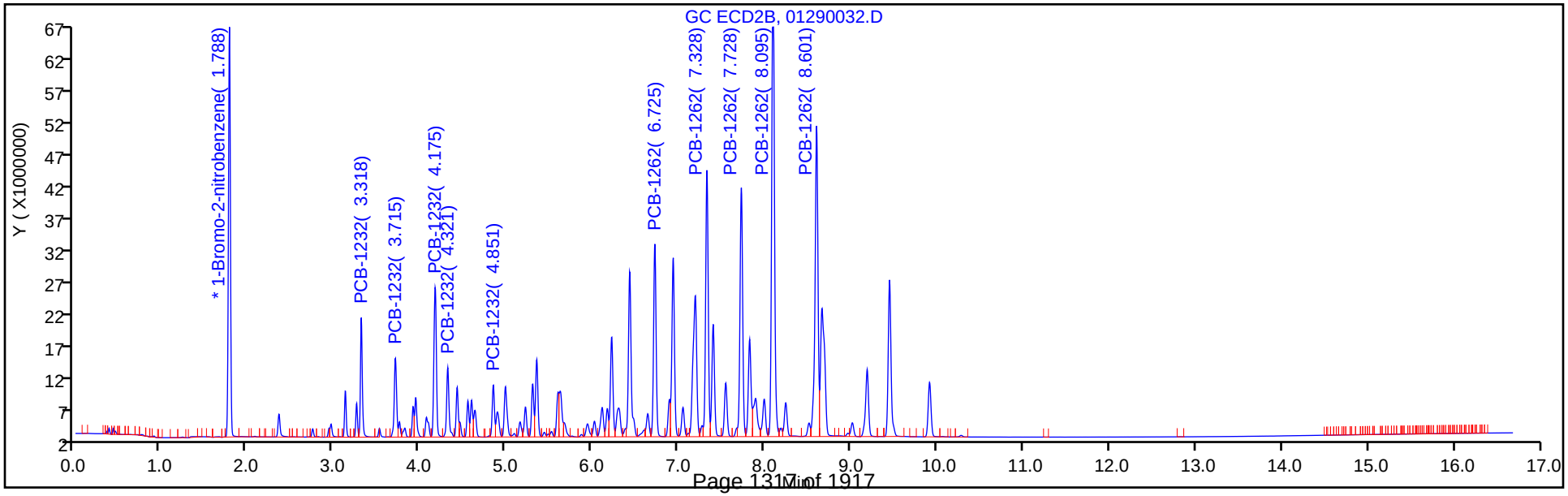
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290032.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 01:05:50 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD6 | | | Worklist Smp#: | 32 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 32 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290033.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 30-Jan-2019 01:26:59 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0078470-033
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:49 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:39:46

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.974 | 0.003 | 17692445 | 100.0 | 100.0 | |
| 2 | 1.787 | 1.788 | -0.001 | 97032804 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | M |
| 1 | 3.287 | 3.285 | 0.002 | 16507067 | 1000.0 | 992.9 | |
| 1 | 3.653 | 3.652 | 0.001 | 15376163 | 1000.0 | 990.8 | |
| 1 | 4.143 | 4.142 | 0.001 | 24725808 | 1000.0 | 1015.7 | |
| 1 | 4.290 | 4.292 | -0.002 | 10885313 | 1000.0 | 1005.1 | |
| 1 | 4.763 | 4.762 | 0.001 | 10827109 | 1000.0 | 998.2 | |
| | | Average of Peak Amounts = | | | | 1000.5 | |
| 2 | 3.317 | 3.319 | -0.002 | 36225380 | 1000.0 | 987.5 | M |
| 2 | 3.714 | 3.712 | 0.002 | 30469249 | 1000.0 | 983.8 | M |
| 2 | 4.174 | 4.176 | -0.002 | 61574579 | 1000.0 | 997.2 | M |
| 2 | 4.320 | 4.322 | -0.002 | 27250311 | 1000.0 | 986.8 | M |
| 2 | 4.850 | 4.852 | -0.002 | 19038677 | 1000.0 | 1060.0 | M |
| | | Average of Peak Amounts = | | | | 1003.1 | |
| | | | | | | RPD = 0.25 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.663 | 6.665 | -0.002 | 60805698 | 1000.0 | 1020.1 | |
| 1 | 7.200 | 7.202 | -0.002 | 50241058 | 1000.0 | 1004.3 | |
| 1 | 7.533 | 7.535 | -0.002 | 44863477 | 1000.0 | 1007.4 | |
| 1 | 7.973 | 7.975 | -0.002 | 93284117 | 1000.0 | 1025.9 | |
| 1 | 8.367 | 8.365 | 0.002 | 26303379 | 1000.0 | 1017.7 | |
| | | Average of Peak Amounts = | | | | 1015.1 | |
| 2 | 6.723 | 6.726 | -0.003 | 80102455 | 1000.0 | 1002.8 | |
| 2 | 7.330 | 7.329 | 0.001 | 114854535 | 1000.0 | 1007.8 | |
| 2 | 7.727 | 7.729 | -0.002 | 110434783 | 1000.0 | 1008.4 | |
| 2 | 8.097 | 8.096 | 0.001 | 219516811 | 1000.0 | 1017.0 | |
| 2 | 8.603 | 8.602 | 0.001 | 155377462 | 1000.0 | 1018.8 | |
| | | Average of Peak Amounts = | | | | 1011.0 | |
| | | | | | | RPD = 0.41 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 2015.6 | |
| 2 | | | | | | 2014.0 | |
| | | | | | | RPD = 0.08 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_L7_00018 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

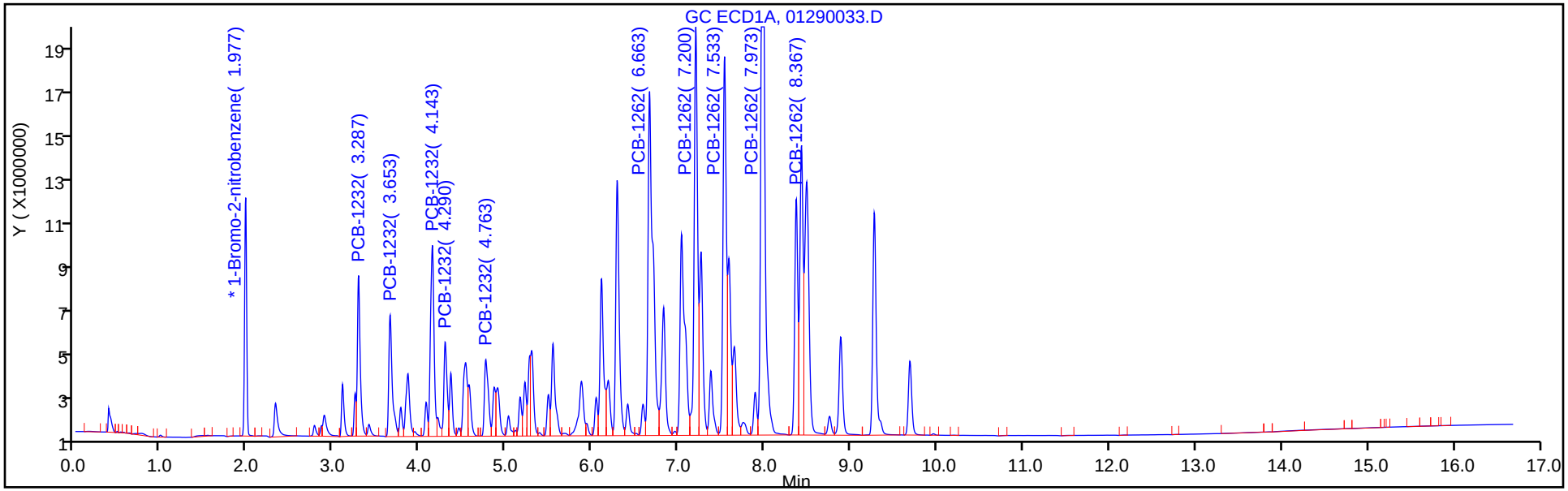
Report Date: 30-Jan-2019 14:58:49 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

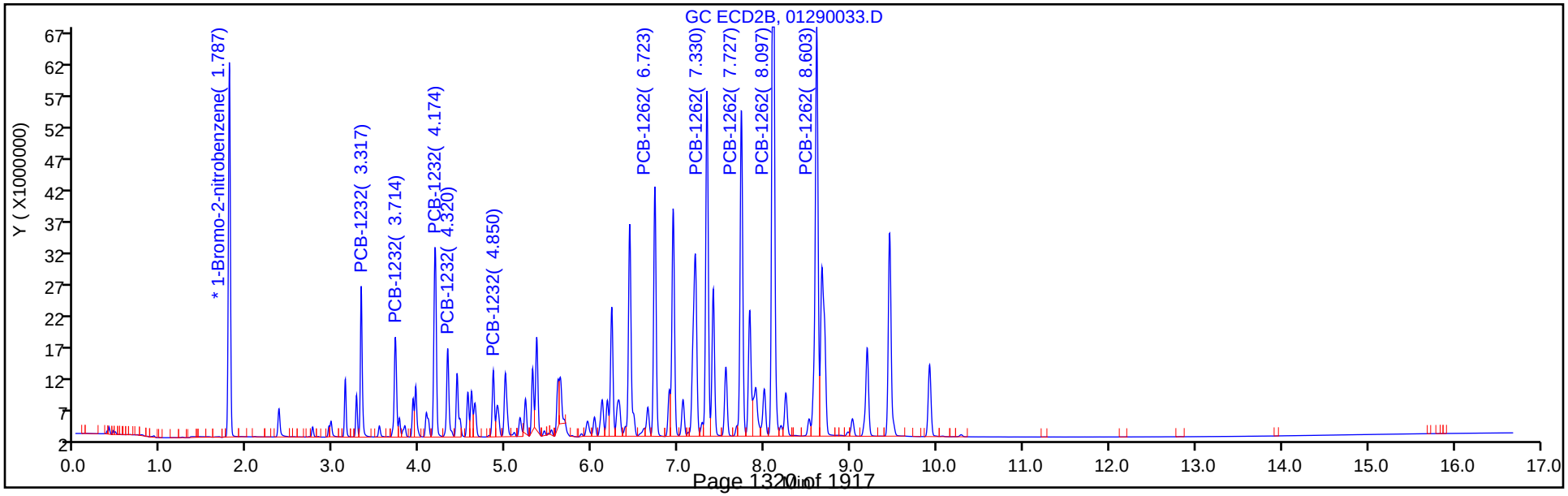
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290033.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 01:26:59 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD7 | | | Worklist Smp#: | 33 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 33 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:58:49 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290033.D

Injection Date: 30-Jan-2019 01:26:59 Instrument ID: SGC_J

Lims ID: STD7

Client ID:

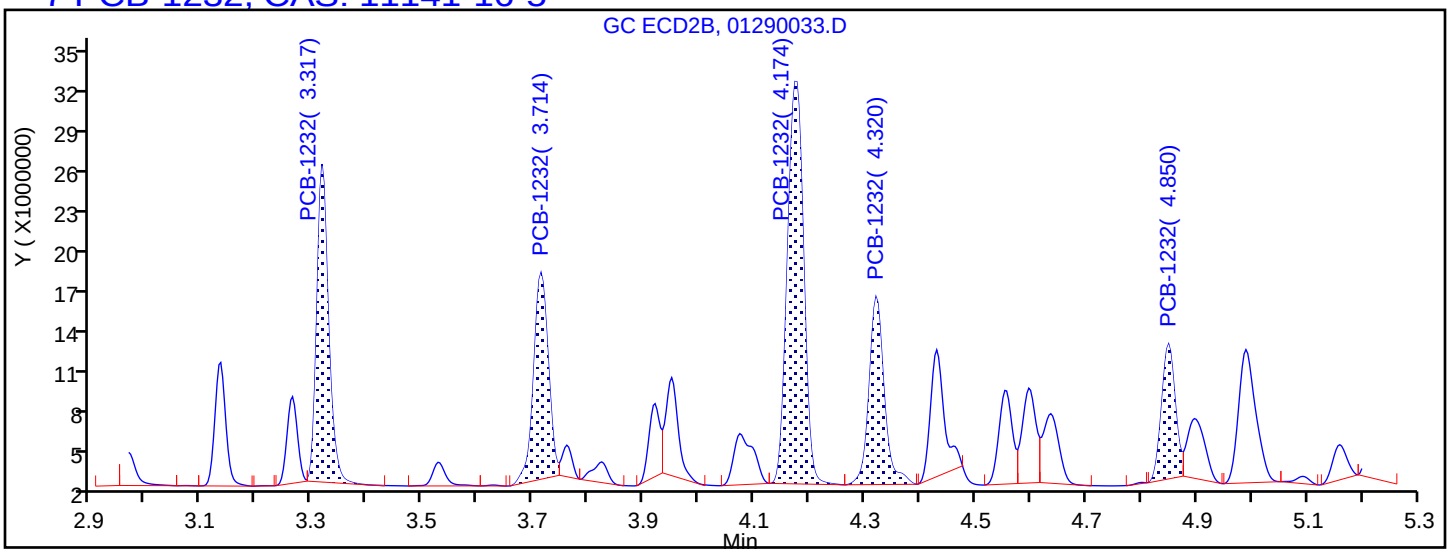
Operator ID: TEM ALS Bottle#: 33 Worklist Smp#: 33

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

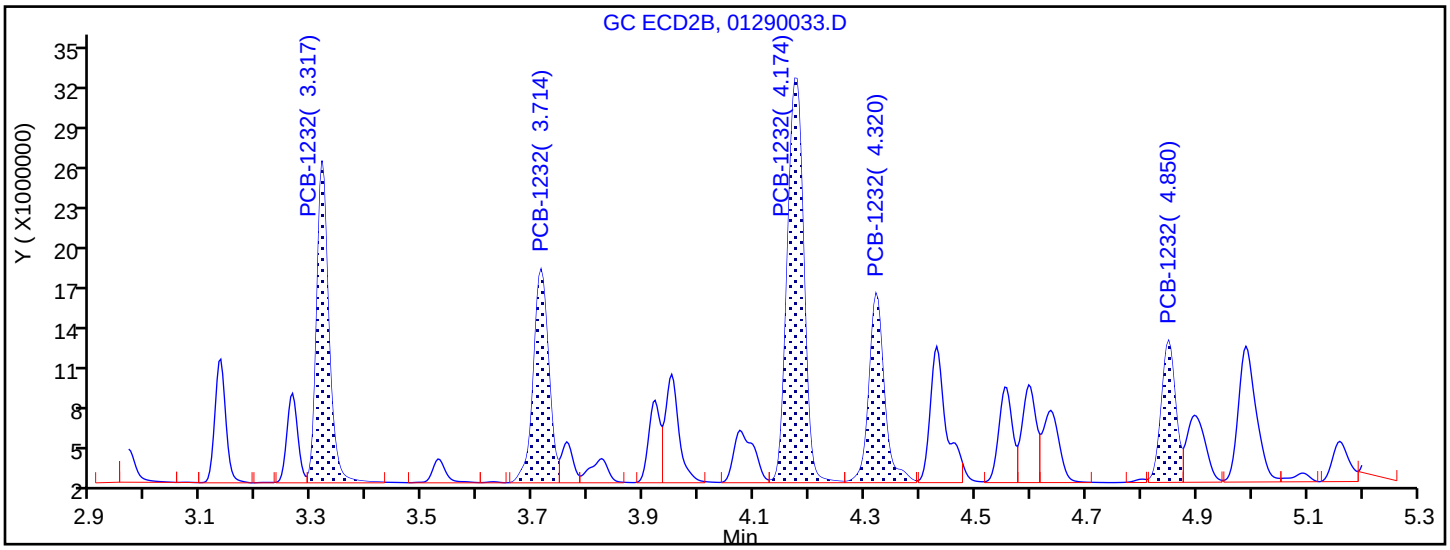
Column: CLP2 Pesticides Column 2 ( 0.32 mm) Detector GC ECD2B

## 7 PCB-1232, CAS: 11141-16-5




Processing Integration Results

| | |
|---|---|
| 3.317 | Response = 34624827 |
| 3.714 | Response = 28283343 |
| 4.174 | Response = 60427526 |
| 4.320 | Response = 26427290 |
| 4.850 | Response = 17283058 |




Manual Integration Results

| | | |
|---|---|---|
| 3.317 | Response = 36225380 | M |
| 3.714 | Response = 30469249 | M |
| 4.174 | Response = 61574579 | M |
| 4.320 | Response = 27250311 | M |
| 4.850 | Response = 19038677 | M |

Reviewer: mooret, 30-Jan-2019 14:39:39

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP1  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2019 02:09  Calibration End Date: 01/30/2019 04:15  Calibration ID: 35079

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/35 | 01290035.D |
| Level 2 | STD2 280-445745/36 | 01290036.D |
| Level 3 | STD3 280-445745/37 | 01290037.D |
| Level 4 | STD4 280-445745/38 | 01290038.D |
| Level 5 | STD5 280-445745/39 | 01290039.D |
| Level 6 | STD6 280-445745/40 | 01290040.D |
| Level 7 | STD7 280-445745/41 | 01290041.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| PCB-1242 Peak 1 | 0.1996<br>0.1473 | 0.1866<br>0.1463 | 0.1753 | 0.1638 | 0.1519 | Lin1 | 1.8240 | 0.1469 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1242 Peak 2 | 0.2630<br>0.2655 | 0.2577<br>0.2691 | 0.2622 | 0.2635 | 0.2622 | Lin1 | -0.281 | 0.2665 | | | | | | | 1.0000 | | 0.9900 |
| PCB-1242 Peak 3 | 0.1409<br>0.1238 | 0.1352<br>0.1243 | 0.1334 | 0.1317 | 0.1254 | Lin1 | 0.5729 | 0.1243 | | | | | | | 1.0000 | | 0.9900 |
| PCB-1242 Peak 4 | 0.0894<br>0.0738 | 0.0819<br>0.0729 | 0.0802 | 0.0708 | 0.0653 | Lin1 | 0.4885 | 0.0709 | | | | | | | 0.9970 | | 0.9900 |
| PCB-1242 Peak 5 | 0.1042<br>0.1022 | 0.1032<br>0.1086 | 0.1032 | 0.1095 | 0.1111 | Lin1 | -0.117 | 0.1073 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1268 Peak 1 | 0.6271<br>0.5148 | 0.5774<br>0.5519 | 0.5676 | 0.5378 | 0.5203 | Lin1 | 2.4104 | 0.5297 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1268 Peak 2 | 0.5962<br>0.5662 | 0.5477<br>0.5835 | 0.5599 | 0.5758 | 0.5739 | Lin1 | -0.330 | 0.5756 | | | | | | | 1.0000 | | 0.9900 |
| PCB-1268 Peak 3 | 0.4990<br>0.4338 | 0.4590<br>0.4583 | 0.4572 | 0.4456 | 0.4381 | Lin1 | 1.0527 | 0.4441 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1268 Peak 4 | 0.1452<br>0.1290 | 0.1395<br>0.1351 | 0.1399 | 0.1404 | 0.1313 | Lin1 | 0.4294 | 0.1324 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1268 Peak 5 | 1.3516<br>1.1920 | 1.2301<br>1.2582 | 1.2613 | 1.2352 | 1.2114 | Lin1 | 2.2543 | 1.2233 | | | | | | | 0.9990 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2019 02:09 Calibration End Date: 01/30/2019 04:15 Calibration ID: 35079

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/35 | 01290035.D |
| Level 2 | STD2 280-445745/36 | 01290036.D |
| Level 3 | STD3 280-445745/37 | 01290037.D |
| Level 4 | STD4 280-445745/38 | 01290038.D |
| Level 5 | STD5 280-445745/39 | 01290039.D |
| Level 6 | STD6 280-445745/40 | 01290040.D |
| Level 7 | STD7 280-445745/41 | 01290041.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1242 Peak 1 | BNB | Lin1 | 890684<br>20436558 | 1727881<br>25682595 | 3097090 | 7523219 | 13850439 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1242 Peak 2 | BNB | Lin1 | 1173772<br>36820339 | 2387021<br>47217057 | 4630602 | 12107353 | 23902080 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1242 Peak 3 | BNB | Lin1 | 628889<br>17174944 | 1252095<br>21818304 | 2356728 | 6049722 | 11429020 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1242 Peak 4 | BNB | Lin1 | 398786<br>10241882 | 758673<br>12792205 | 1416318 | 3252568 | 5955544 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1242 Peak 5 | BNB | Lin1 | 465060<br>14178945 | 955844<br>19049422 | 1822769 | 5028906 | 10127961 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1268 Peak 1 | BNB | Lin1 | 2798591<br>71398443 | 5347927<br>96858701 | 10025616 | 24707685 | 47439190 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1268 Peak 2 | BNB | Lin1 | 2660297<br>78534053 | 5072699<br>102396601 | 9889169 | 26453565 | 52328366 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1268 Peak 3 | BNB | Lin1 | 2226742<br>60169301 | 4250708<br>80428947 | 8075356 | 20470625 | 39942164 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1268 Peak 4 | BNB | Lin1 | 648010<br>17887994 | 1291998<br>23705193 | 2471735 | 6447955 | 11970820 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1268 Peak 5 | BNB | Lin1 | 6031607<br>165330861 | 11392218<br>220805131 | 22278589 | 56746001 | 110452712 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290035.D
Lims ID: STD1 4268
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 30-Jan-2019 02:09:04 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1 4268
Misc. Info.: 280-0078470-035
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:45 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:49:43

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.974 | 0.004 | 17849726 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.788 | 0.001 | 98372823 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | M |
| 1 | 3.652 | 3.651 | 0.001 | 890684 | 25.0 | 21.6 | |
| 1 | 4.142 | 4.141 | 0.001 | 1173772 | 25.0 | 25.7 | M |
| 1 | 4.762 | 4.761 | 0.001 | 628889 | 25.0 | 23.7 | M |
| 1 | 5.272 | 5.274 | -0.002 | 398786 | 25.0 | 24.6 | M |
| 1 | 5.295 | 5.294 | 0.001 | 465060 | 25.0 | 25.4 | M |
| | | Average of Peak Amounts = | | | | 24.2 | |
| 2 | 3.712 | 3.715 | -0.003 | 2053069 | 25.0 | 23.7 | |
| 2 | 4.175 | 4.175 | 0.000 | 4226320 | 25.0 | 23.1 | |
| 2 | 4.322 | 4.321 | 0.001 | 1908586 | 25.0 | 23.7 | |
| 2 | 4.849 | 4.851 | -0.002 | 1763198 | 25.0 | 22.2 | |
| 2 | 4.989 | 4.991 | -0.002 | 1918680 | 25.0 | 23.5 | |
| | | Average of Peak Amounts = | | | | 23.3 | |
| | | | | | | RPD = 4.03 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.425 | 8.428 | -0.003 | 2798591 | 25.0 | 25.0 | |
| 1 | 8.475 | 8.478 | -0.003 | 2660297 | 25.0 | 26.5 | |
| 1 | 8.752 | 8.754 | -0.002 | 2226742 | 25.0 | 25.7 | |
| 1 | 8.872 | 8.874 | -0.002 | 648010 | 25.0 | 24.2 | |
| 1 | 9.685 | 9.684 | 0.001 | 6031607 | 25.0 | 25.8 | |
| | | Average of Peak Amounts = | | | | 25.4 | |
| 2 | 8.599 | 8.601 | -0.002 | 8321833 | 25.0 | 25.2 | |
| 2 | 8.662 | 8.661 | 0.001 | 7880092 | 25.0 | 24.5 | |
| 2 | 9.015 | 9.018 | -0.003 | 6612801 | 25.0 | 25.0 | |
| 2 | 9.159 | 9.158 | 0.001 | 2270836 | 25.0 | 21.5 | |
| 2 | 9.912 | 9.911 | 0.001 | 17846924 | 25.0 | 26.1 | |
| | | Average of Peak Amounts = | | | | 24.5 | |
| | | | | | | RPD = 3.96 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 49.6 | |
| 2 | | | | | | 47.7 | |
| | | | | | | RPD = 3.99 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.03 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

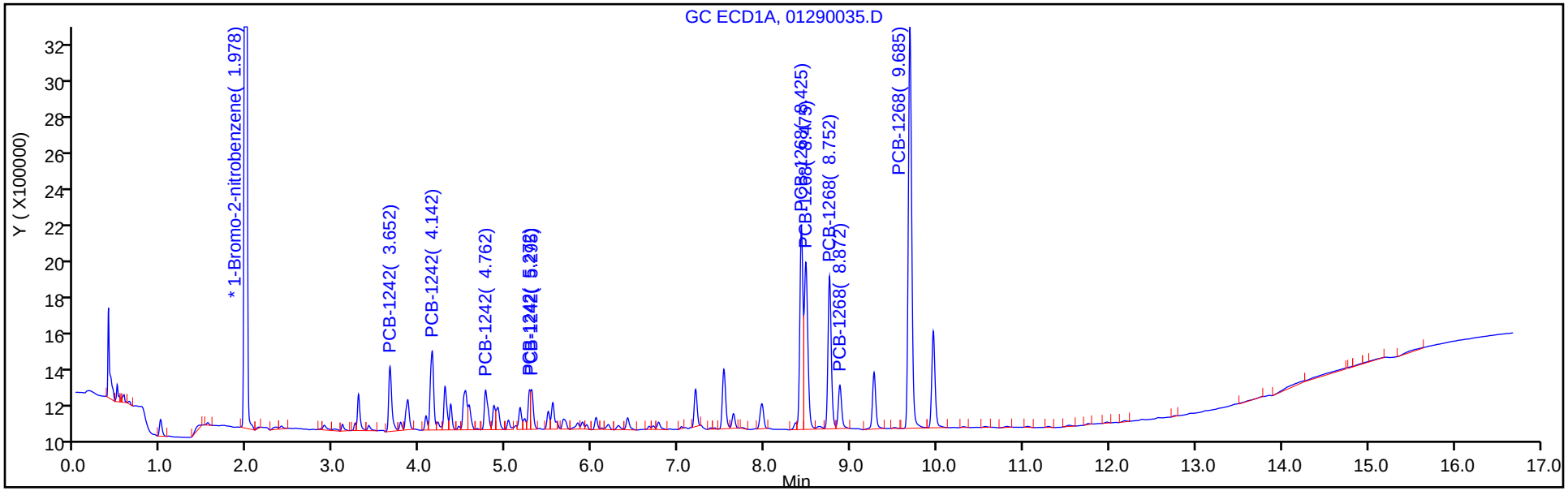
Report Date: 30-Jan-2019 14:58:45 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

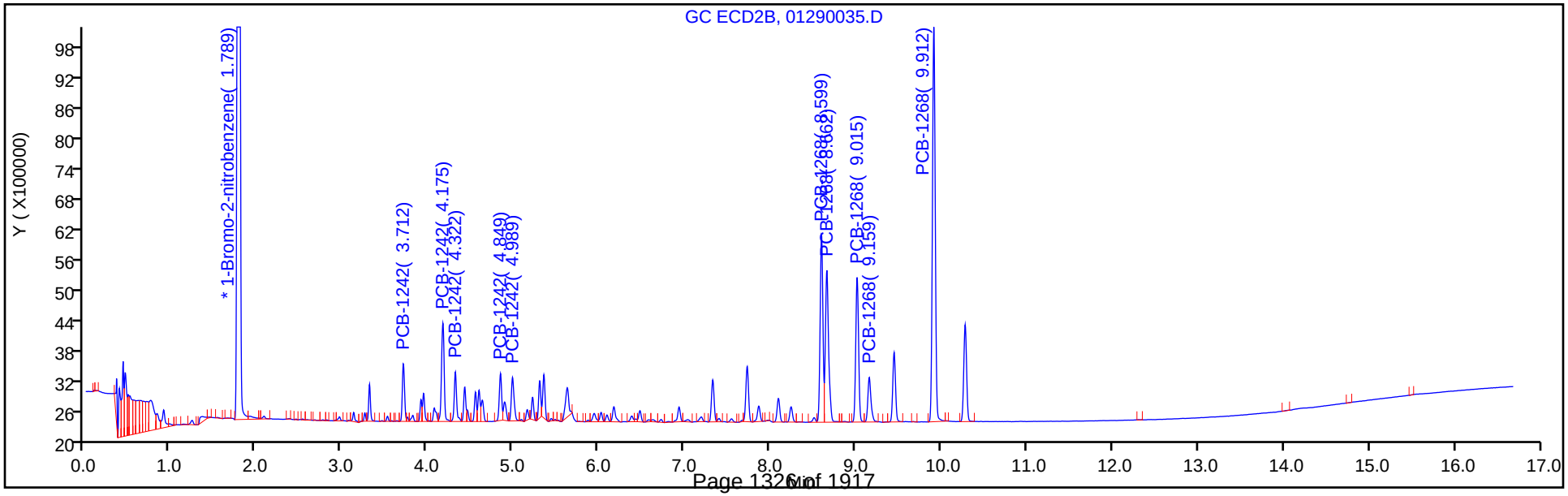
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290035.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 02:09:04 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD1 4268 | | | Worklist Smp#: | 35 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 35 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:58:45 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290035.D

Injection Date: 30-Jan-2019 02:09:04 Instrument ID: SGC_J

Lims ID: STD1 4268

Client ID:

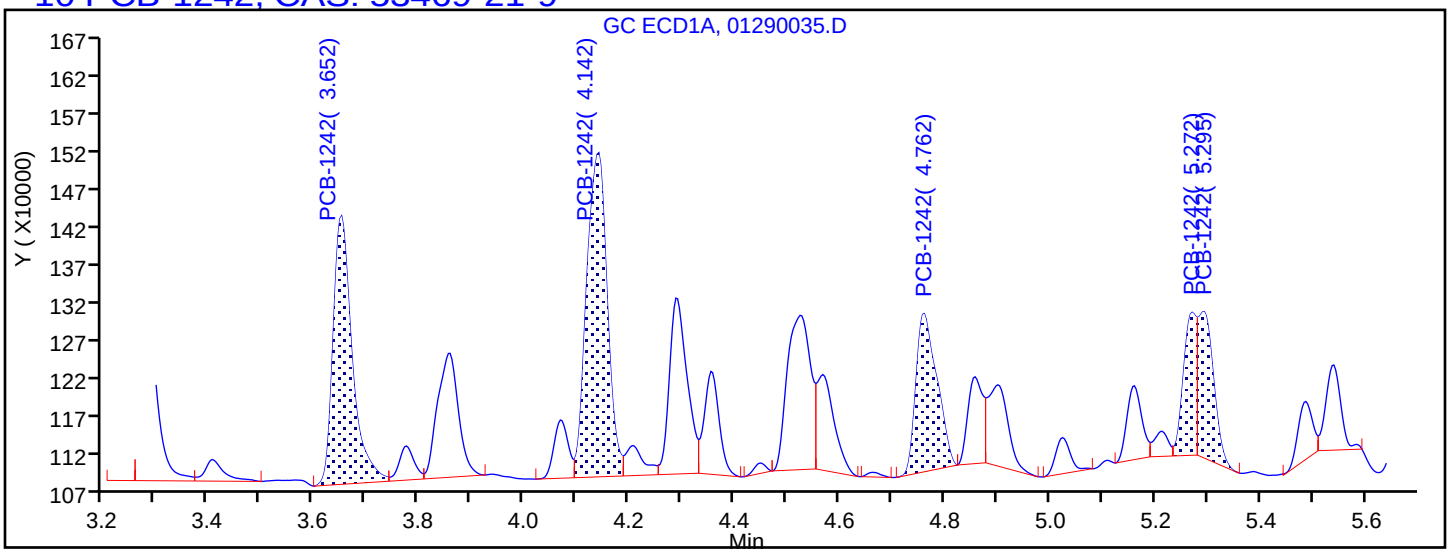
Operator ID: TEM ALS Bottle#: 35 Worklist Smp#: 35

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

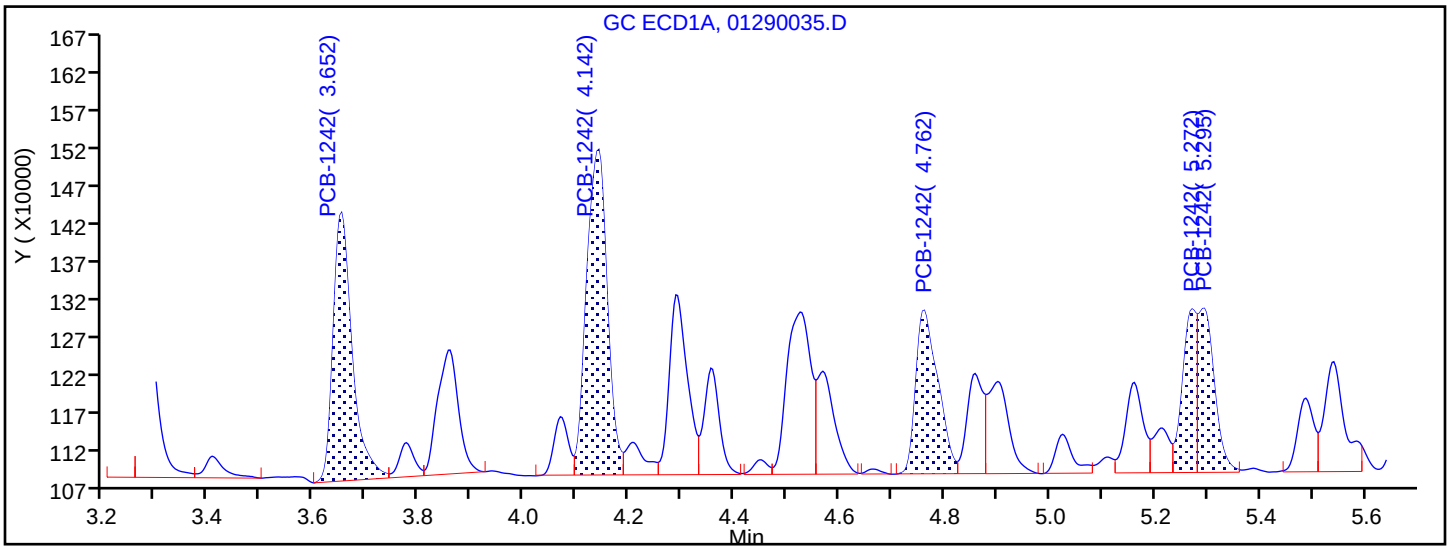
Column: CLP1 Pesticides Column 1 ( 0.32 mm) Detector GC ECD1A

## 10 PCB-1242, CAS: 53469-21-9




Processing Integration Results

| | |
|---|---|
| 3.652 | Response = 890684 |
| 4.142 | Response = 1163183 |
| 4.762 | Response = 574888 |
| 5.272 | Response = 323774 |
| 5.295 | Response = 392853 |




Manual Integration Results

| | | |
|---|---|---|
| 3.652 | Response = 890684 | |
| 4.142 | Response = 1173772 | M |
| 4.762 | Response = 628889 | M |
| 5.272 | Response = 398786 | M |
| 5.295 | Response = 465060 | M |

Reviewer: mooret, 30-Jan-2019 14:49:39

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290036.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Jan-2019 02:30:14 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0078470-036
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:43 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.974 | 0.001 | 18523014 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.788 | 0.000 | 101851657 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | |
| 1 | 3.651 | 3.651 | 0.000 | 1727881 | 50.0 | 51.1 | |
| 1 | 4.141 | 4.141 | 0.000 | 2387021 | 50.0 | 49.4 | |
| 1 | 4.761 | 4.761 | 0.000 | 1252095 | 50.0 | 49.8 | |
| 1 | 5.271 | 5.274 | -0.003 | 758673 | 50.0 | 50.9 | |
| 1 | 5.295 | 5.294 | 0.001 | 955844 | 50.0 | 49.2 | |
| | | Average of Peak Amounts = | | | | 50.1 | |
| 2 | 3.712 | 3.715 | -0.003 | 3764385 | 50.0 | 52.7 | |
| 2 | 4.175 | 4.175 | 0.000 | 7598379 | 50.0 | 50.3 | |
| 2 | 4.322 | 4.321 | 0.001 | 3480963 | 50.0 | 52.6 | |
| 2 | 4.848 | 4.851 | -0.003 | 3145414 | 50.0 | 52.6 | |
| 2 | 4.988 | 4.991 | -0.003 | 3461851 | 50.0 | 53.3 | |
| | | Average of Peak Amounts = | | | | 52.3 | |
| | | | | | | RPD = 4.35 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.425 | 8.428 | -0.003 | 5347927 | 50.0 | 50.0 | |
| 1 | 8.478 | 8.478 | 0.000 | 5072699 | 50.0 | 48.2 | |
| 1 | 8.751 | 8.754 | -0.003 | 4250708 | 50.0 | 49.3 | |
| 1 | 8.871 | 8.874 | -0.003 | 1291998 | 50.0 | 49.4 | |
| 1 | 9.685 | 9.684 | 0.001 | 11392218 | 50.0 | 48.4 | |
| | | Average of Peak Amounts = | | | | 49.1 | |
| 2 | 8.598 | 8.601 | -0.003 | 14853251 | 50.0 | 49.1 | |
| 2 | 8.662 | 8.661 | 0.001 | 13908255 | 50.0 | 48.7 | |
| 2 | 9.015 | 9.018 | -0.003 | 11807955 | 50.0 | 49.1 | |
| 2 | 9.158 | 9.158 | 0.000 | 4168802 | 50.0 | 50.6 | |
| 2 | 9.912 | 9.911 | 0.001 | 32446855 | 50.0 | 48.7 | |
| | | Average of Peak Amounts = | | | | 49.2 | |
| | | | | | | RPD = 0.34 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 99.1 | |
| 2 | | | | | | 101.5 | |
| | | | | | | RPD = 2.39 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.05 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

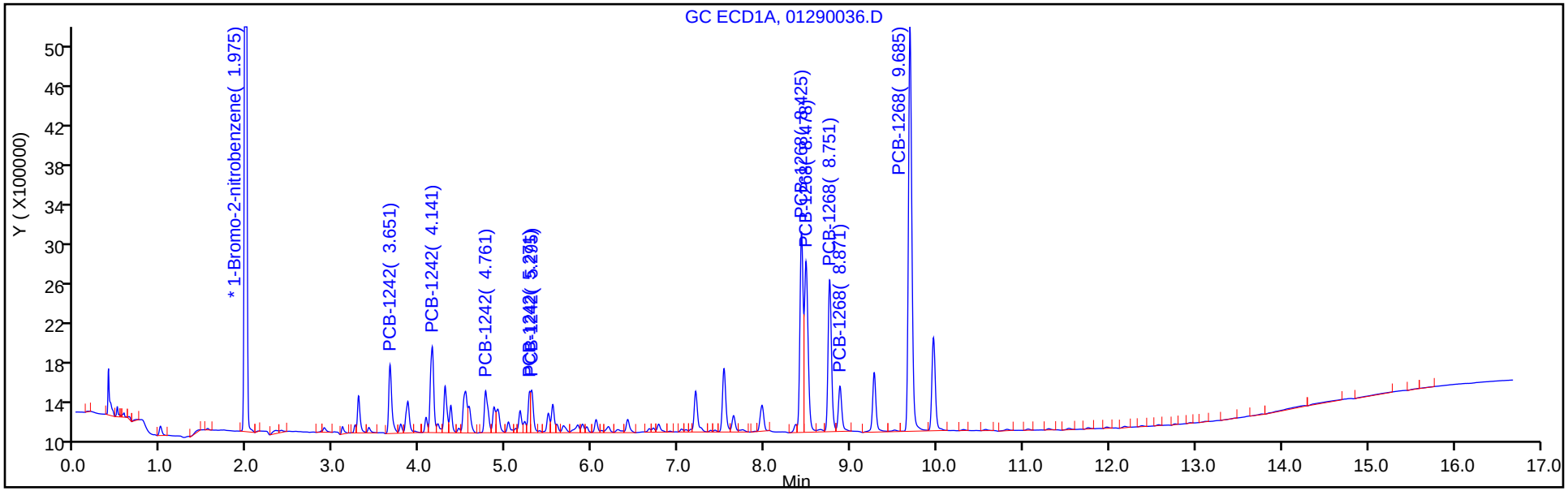
Report Date: 30-Jan-2019 14:58:44 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

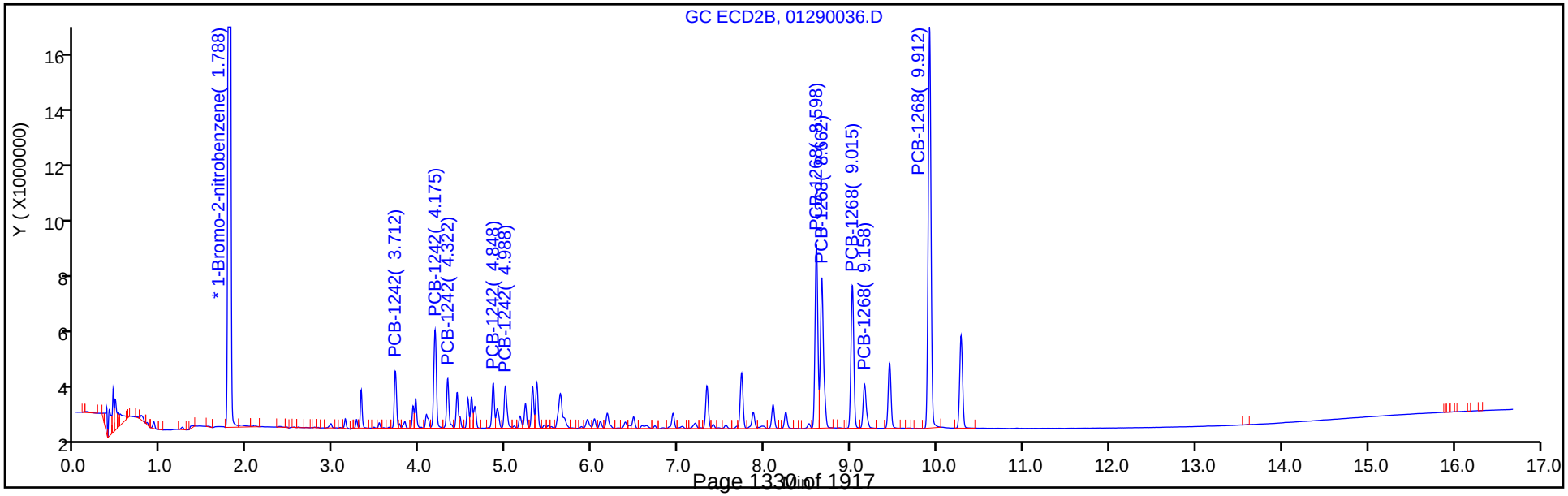
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290036.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 02:30:14 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD2 | | | Worklist Smp#: | 36 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 36 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290037.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Jan-2019 02:51:17 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0078470-037
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:41 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:50:09

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.974 | 1.974 | 0.000 | 17663648 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.788 | 0.000 | 96450940 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | M |
| 1 | 3.651 | 3.651 | 0.000 | 3097090 | 100.0 | 107.0 | |
| 1 | 4.141 | 4.141 | 0.000 | 4630602 | 100.0 | 99.4 | M |
| 1 | 4.761 | 4.761 | 0.000 | 2356728 | 100.0 | 102.8 | M |
| 1 | 5.274 | 5.274 | 0.000 | 1416318 | 100.0 | 106.3 | M |
| 1 | 5.294 | 5.294 | 0.000 | 1822769 | 100.0 | 97.3 | M |
| | | Average of Peak Amounts = | | | | 102.5 | |
| 2 | 3.715 | 3.715 | 0.000 | 6646160 | 100.0 | 110.3 | |
| 2 | 4.175 | 4.175 | 0.000 | 13380929 | 100.0 | 105.5 | |
| 2 | 4.321 | 4.321 | 0.000 | 6186577 | 100.0 | 111.0 | |
| 2 | 4.851 | 4.851 | 0.000 | 5210508 | 100.0 | 107.6 | |
| 2 | 4.991 | 4.991 | 0.000 | 5992567 | 100.0 | 111.3 | |
| | | Average of Peak Amounts = | | | | 109.2 | |
| | | | | | | RPD = 6.25 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.428 | 8.428 | 0.000 | 10025616 | 100.0 | 102.6 | |
| 1 | 8.478 | 8.478 | 0.000 | 9889169 | 100.0 | 97.8 | |
| 1 | 8.754 | 8.754 | 0.000 | 8075356 | 100.0 | 100.6 | |
| 1 | 8.874 | 8.874 | 0.000 | 2471735 | 100.0 | 102.5 | |
| 1 | 9.684 | 9.684 | 0.000 | 22278589 | 100.0 | 101.3 | |
| | | Average of Peak Amounts = | | | | 100.9 | |
| 2 | 8.601 | 8.601 | 0.000 | 27302807 | 100.0 | 102.6 | |
| 2 | 8.661 | 8.661 | 0.000 | 25792195 | 100.0 | 104.8 | |
| 2 | 9.018 | 9.018 | 0.000 | 21737104 | 100.0 | 103.2 | |
| 2 | 9.158 | 9.158 | 0.000 | 7519864 | 100.0 | 111.0 | |
| 2 | 9.911 | 9.911 | 0.000 | 60590316 | 100.0 | 99.6 | |
| | | Average of Peak Amounts = | | | | 104.3 | |
| | | | | | | RPD = 3.23 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 203.5 | |
| 2 | | | | | | 213.4 | |
| | | | | | | RPD = 4.77 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.10 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

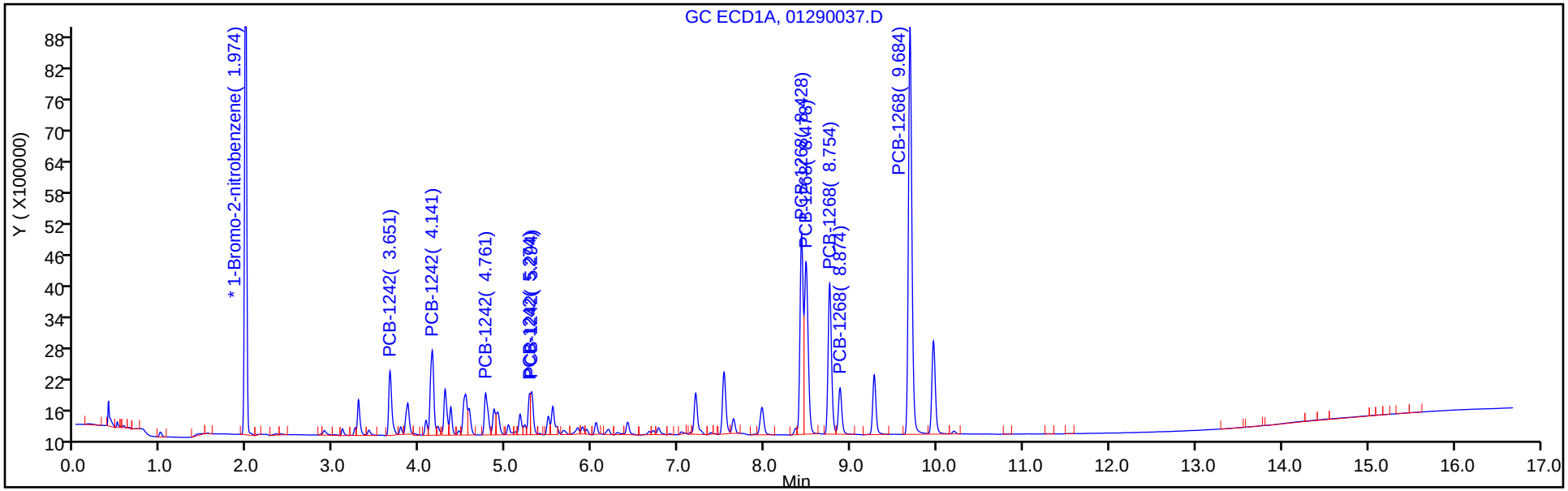
Report Date: 30-Jan-2019 14:58:42 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

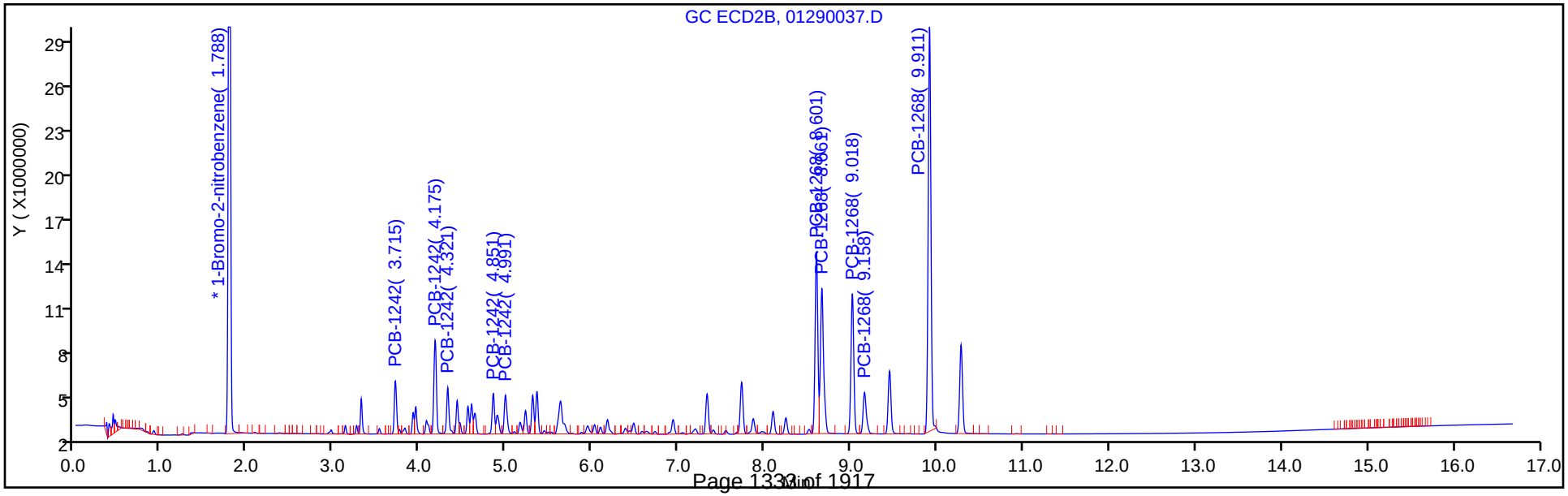
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290037.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 02:51:17 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD3 | | | Worklist Smp#: | 37 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 37 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:58:42 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290037.D

Injection Date: 30-Jan-2019 02:51:17 Instrument ID: SGC_J

Lims ID: STD3

Client ID:

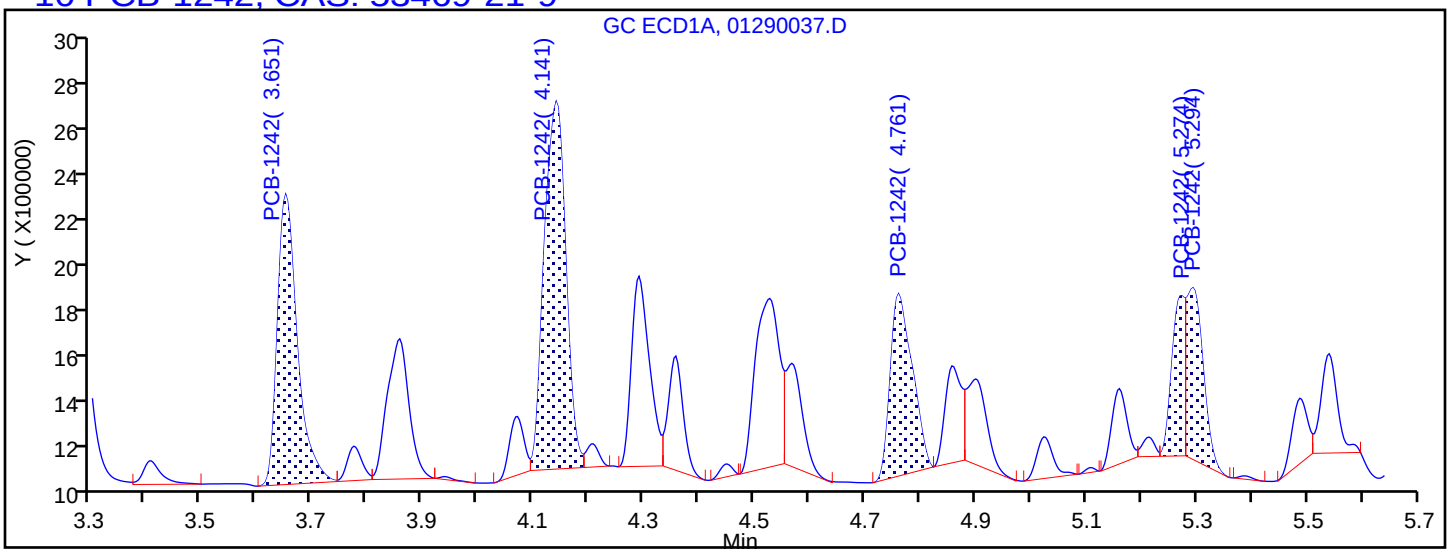
Operator ID: TEM ALS Bottle#: 37 Worklist Smp#: 37

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

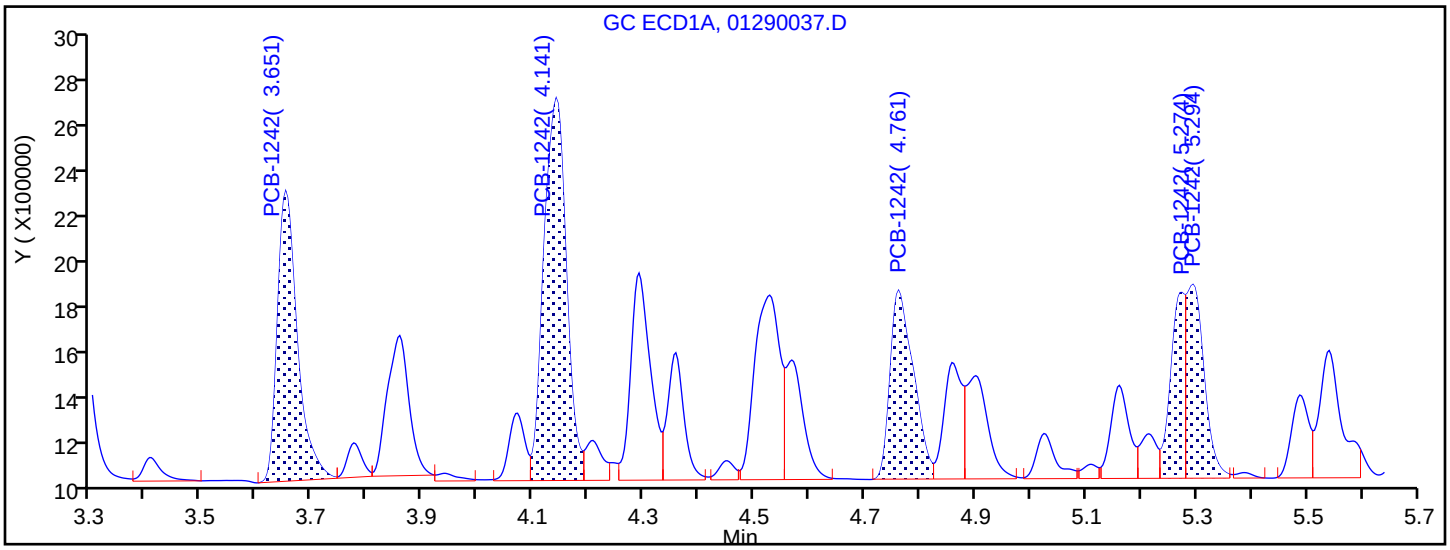
Column: CLP1 Pesticides Column 1 ( 0.32 mm) Detector GC ECD1A

## 10 PCB-1242, CAS: 53469-21-9




Processing Integration Results

| | |
|---|---|
| 3.651 | Response = 3097090 |
| 4.141 | Response = 4263931 |
| 4.761 | Response = 2144331 |
| 5.274 | Response = 1110895 |
| 5.294 | Response = 1522870 |




Manual Integration Results

| | | |
|---|---|---|
| 3.651 | Response = 3097090 | |
| 4.141 | Response = 4630602 | M |
| 4.761 | Response = 2356728 | M |
| 5.274 | Response = 1416318 | M |
| 5.294 | Response = 1822769 | M |

Reviewer: mooret, 30-Jan-2019 14:50:04

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290038.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Jan-2019 03:12:20 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0078470-038
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:40 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:54:39

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.975 | 0.001 | 18375903 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 100433048 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | M |
| 1 | 3.653 | 3.652 | 0.001 | 7523219 | 250.0 | 266.4 | |
| 1 | 4.143 | 4.142 | 0.001 | 12107353 | 250.0 | 248.3 | |
| 1 | 4.763 | 4.762 | 0.001 | 6049722 | 250.0 | 260.3 | |
| 1 | 5.276 | 5.279 | -0.003 | 3252568 | 250.0 | 242.9 | |
| 1 | 5.296 | 5.295 | 0.001 | 5028906 | 250.0 | 256.1 | |
| | | Average of Peak Amounts = | | | | 254.8 | |
| 2 | 3.713 | 3.712 | 0.001 | 15218217 | 250.0 | 259.4 | M |
| 2 | 4.176 | 4.175 | 0.001 | 31390564 | 250.0 | 255.0 | |
| 2 | 4.319 | 4.322 | -0.003 | 13736592 | 250.0 | 252.7 | |
| 2 | 4.849 | 4.849 | 0.000 | 11327610 | 250.0 | 252.5 | M |
| 2 | 4.989 | 4.989 | 0.000 | 13455405 | 250.0 | 259.4 | M |
| | | Average of Peak Amounts = | | | | 255.8 | |
| | | | | | | RPD = 0.39 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.426 | 8.425 | 0.001 | 24707685 | 250.0 | 249.3 | |
| 1 | 8.479 | 8.479 | 0.000 | 26453565 | 250.0 | 250.7 | |
| 1 | 8.753 | 8.752 | 0.001 | 20470625 | 250.0 | 248.5 | |
| 1 | 8.873 | 8.875 | -0.002 | 6447955 | 250.0 | 261.8 | |
| 1 | 9.686 | 9.685 | 0.001 | 56746001 | 250.0 | 250.6 | |
| | | Average of Peak Amounts = | | | | 252.2 | |
| 2 | 8.599 | 8.599 | 0.000 | 66072977 | 250.0 | 248.8 | |
| 2 | 8.659 | 8.662 | -0.003 | 61884354 | 250.0 | 254.4 | |
| 2 | 9.016 | 9.015 | 0.001 | 52553311 | 250.0 | 250.6 | |
| 2 | 9.156 | 9.159 | -0.003 | 17181511 | 250.0 | 262.9 | |
| 2 | 9.913 | 9.912 | 0.001 | 155849809 | 250.0 | 251.7 | |
| | | Average of Peak Amounts = | | | | 253.7 | |
| | | | | | | RPD = 0.60 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 507.0 | |
| 2 | | | | | | 509.5 | |
| | | | | | | RPD = 0.49 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.25 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

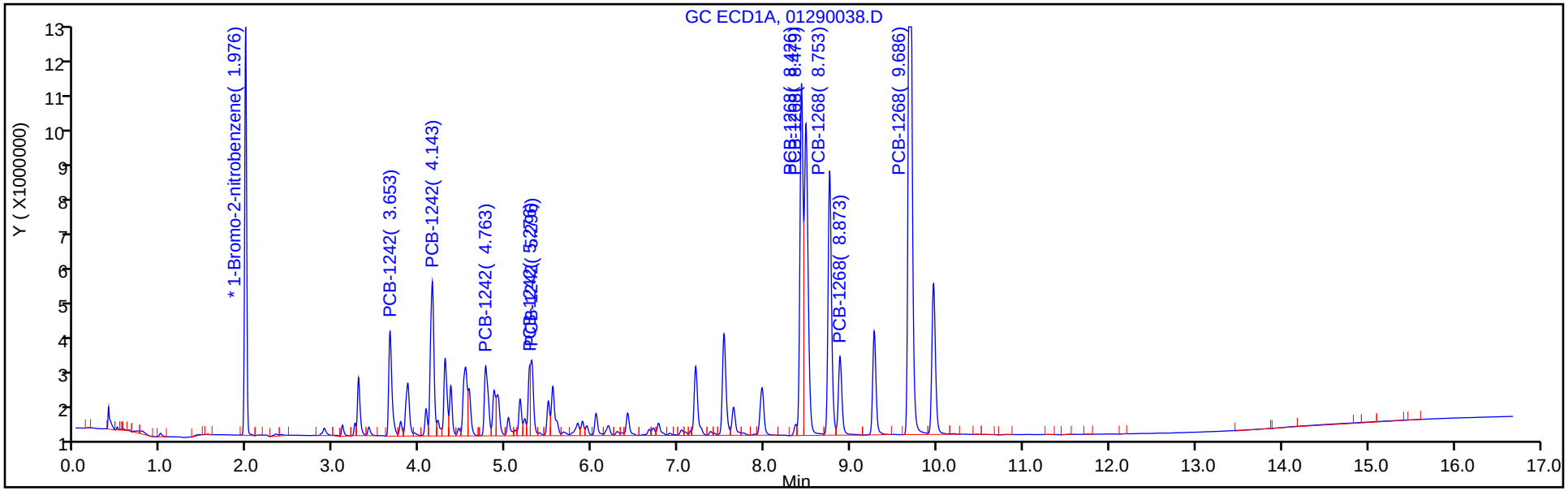
Report Date: 30-Jan-2019 14:58:40 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

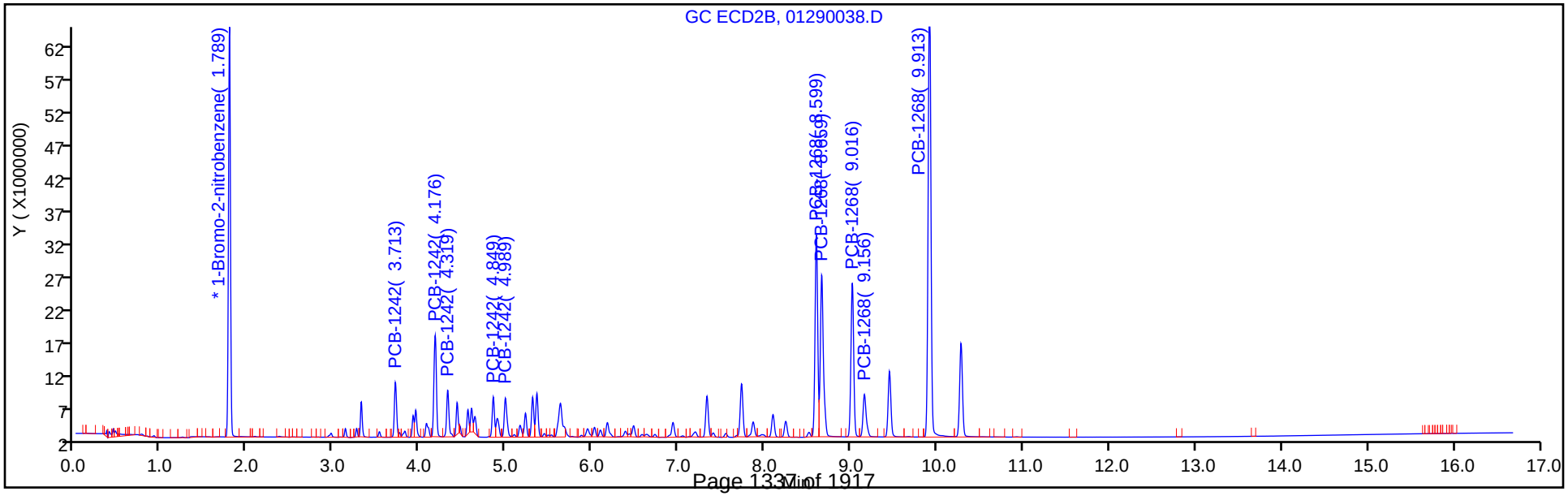
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290038.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 03:12:20 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD4 | | | Worklist Smp#: | 38 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 38 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290039.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Jan-2019 03:33:28 ALS Bottle#: 39 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0078470-039
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:38 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:50:59

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.975 | 0.000 | 18234826 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 99488732 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | Ma |
| 1 | 3.652 | 3.652 | 0.000 | 13850439 | 500.0 | 504.8 | |
| 1 | 4.142 | 4.142 | 0.000 | 23902080 | 500.0 | 493.0 | |
| 1 | 4.762 | 4.762 | 0.000 | 11429020 | 500.0 | 499.8 | |
| 1 | 5.279 | 5.279 | 0.000 | 5955544 | 500.0 | 454.0 | M |
| 1 | 5.295 | 5.295 | 0.000 | 10127961 | 500.0 | 518.7 | M |
| | | Average of Peak Amounts = | | | | 494.0 | |
| 2 | 3.712 | 3.712 | 0.000 | 27633355 | 500.0 | 487.0 | |
| 2 | 4.175 | 4.175 | 0.000 | 59948090 | 500.0 | 504.6 | |
| 2 | 4.322 | 4.322 | 0.000 | 25800424 | 500.0 | 491.8 | |
| 2 | 4.849 | 4.849 | 0.000 | 19982771 | 500.0 | 486.0 | |
| 2 | 4.989 | 4.989 | 0.000 | 24466187 | 500.0 | 490.0 | |
| | | Average of Peak Amounts = | | | | 491.9 | |
| | | | | | | RPD = 0.44 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.425 | 8.425 | 0.000 | 47439190 | 500.0 | 486.6 | |
| 1 | 8.479 | 8.479 | 0.000 | 52328366 | 500.0 | 499.2 | |
| 1 | 8.752 | 8.752 | 0.000 | 39942164 | 500.0 | 490.9 | |
| 1 | 8.875 | 8.875 | 0.000 | 11970820 | 500.0 | 492.6 | |
| 1 | 9.685 | 9.685 | 0.000 | 110452712 | 500.0 | 493.3 | |
| | | Average of Peak Amounts = | | | | 492.5 | |
| 2 | 8.599 | 8.599 | 0.000 | 128201924 | 500.0 | 494.8 | |
| 2 | 8.662 | 8.662 | 0.000 | 117548669 | 500.0 | 496.9 | |
| 2 | 9.015 | 9.015 | 0.000 | 101311192 | 500.0 | 495.4 | |
| 2 | 9.159 | 9.159 | 0.000 | 31603183 | 500.0 | 502.0 | |
| 2 | 9.912 | 9.912 | 0.000 | 298576048 | 500.0 | 490.3 | |
| | | Average of Peak Amounts = | | | | 495.9 | |
| | | | | | | RPD = 0.68 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.50 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

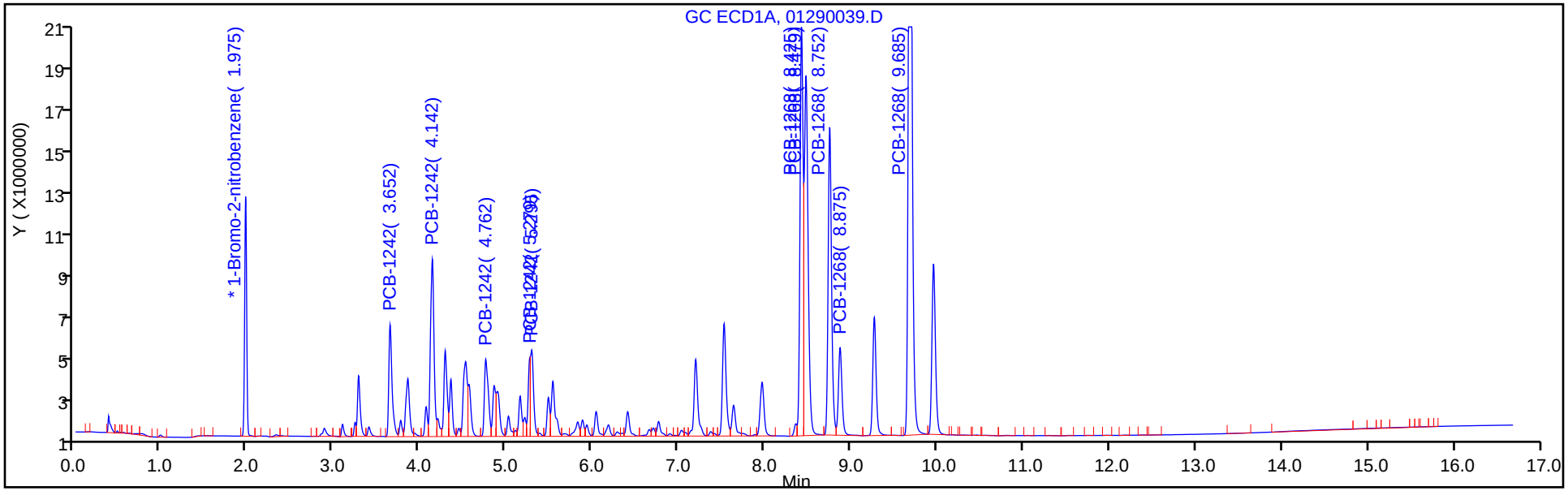
Report Date: 30-Jan-2019 14:58:38 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

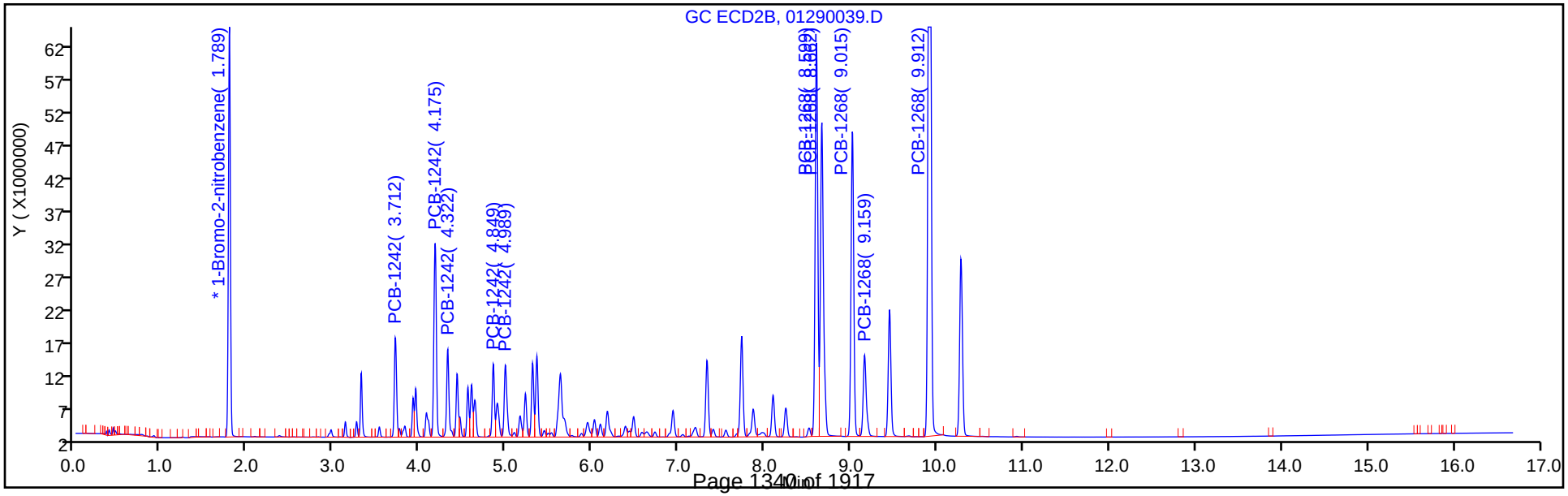
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290039.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 03:33:28 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD5 | | | Worklist Smp#: | 39 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 39 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:58:39 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290039.D

Injection Date: 30-Jan-2019 03:33:28 Instrument ID: SGC_J

Lims ID: STD5

Client ID:

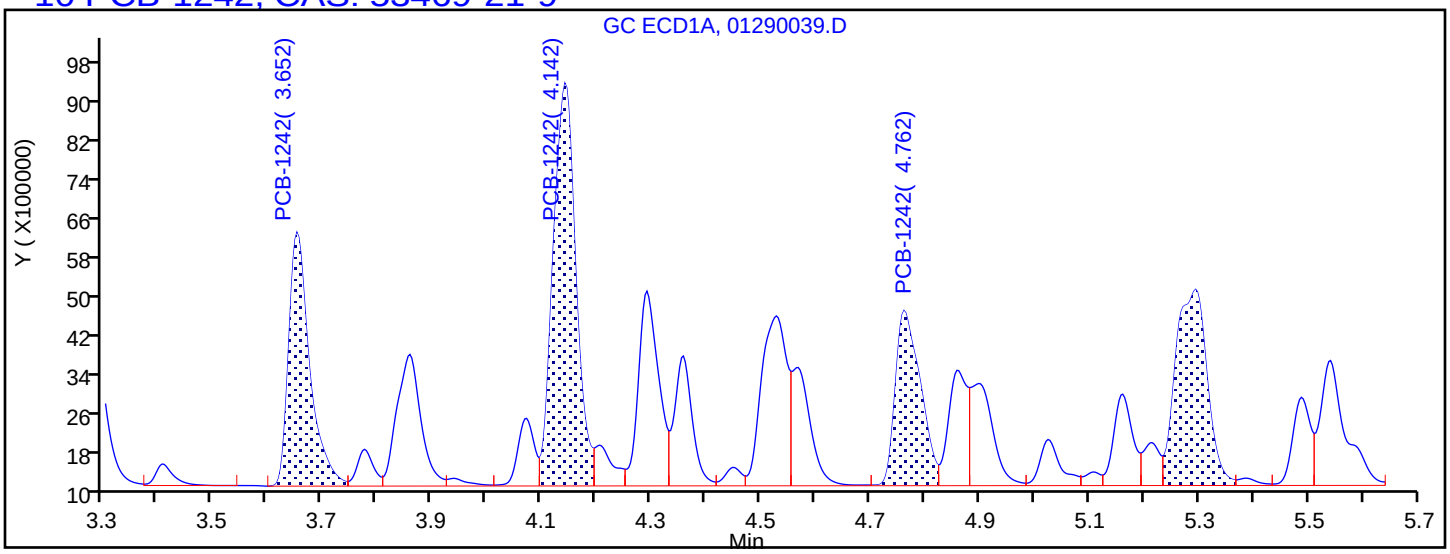
Operator ID: TEM ALS Bottle#: 39 Worklist Smp#: 39

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

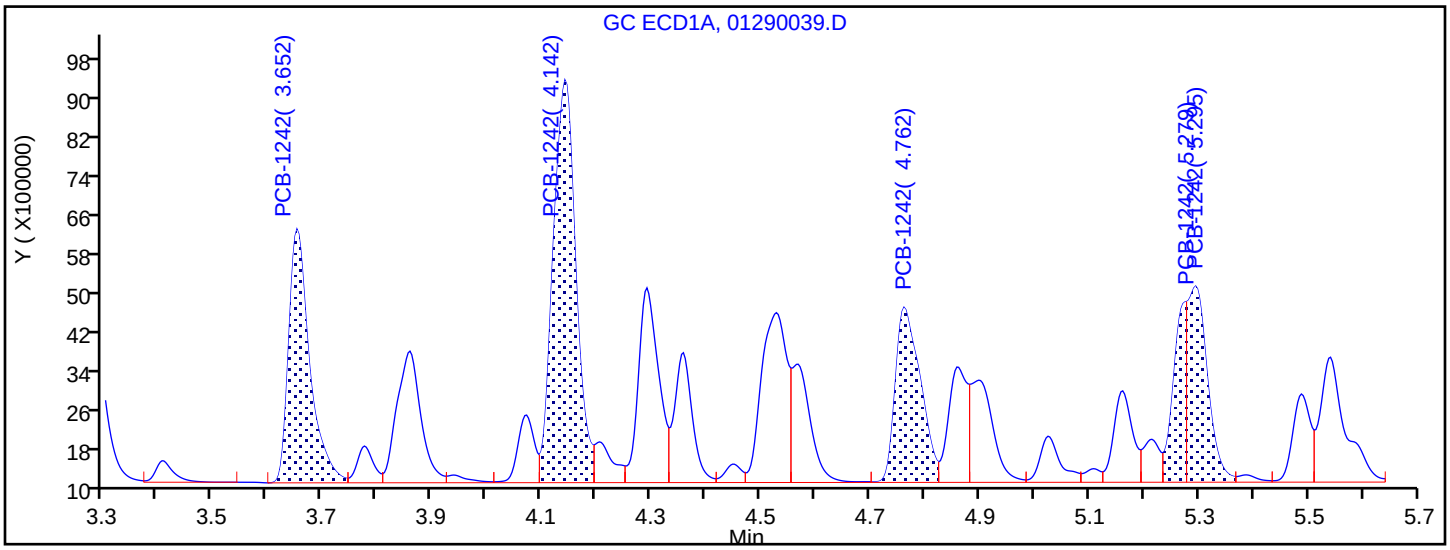
Column: CLP1 Pesticides Column 1 ( 0.32 mm) Detector GC ECD1A

## 10 PCB-1242, CAS: 53469-21-9




Processing Integration Results

| | |
|---|---|
| 3.652 | Response = 13850439 |
| 4.142 | Response = 23902080 |
| 4.762 | Response = 11429020 |
| 5.294 | Response = 0 |
| 5.295 | Response = 16083555 |




Manual Integration Results

| | | |
|---|---|---|
| 3.652 | Response = 13850439 | |
| 4.142 | Response = 23902080 | |
| 4.762 | Response = 11429020 | |
| 5.279 | Response = 5955544 | M |
| 5.295 | Response = 10127961 | M |

Reviewer: mooret, 30-Jan-2019 14:50:45

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290040.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Jan-2019 03:54:30 ALS Bottle#: 40 Worklist Smp#: 40
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0078470-040
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:37 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:52:11

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.975 | 0.001 | 18493251 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 100896616 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | Ma |
| 1 | 3.653 | 3.652 | 0.001 | 20436558 | 750.0 | 740.1 | |
| 1 | 4.143 | 4.142 | 0.001 | 36820339 | 750.0 | 748.3 | |
| 1 | 4.763 | 4.762 | 0.001 | 17174944 | 750.0 | 742.7 | |
| 1 | 5.283 | 5.279 | 0.004 | 10241882 | 750.0 | 774.6 | M |
| 1 | 5.296 | 5.295 | 0.001 | 14178945 | 750.0 | 715.6 | M |
| | | Average of Peak Amounts = | | | | 744.3 | |
| 2 | 3.713 | 3.712 | 0.001 | 40471357 | 750.0 | 709.5 | |
| 2 | 4.176 | 4.175 | 0.001 | 89341350 | 750.0 | 748.0 | |
| 2 | 4.323 | 4.322 | 0.001 | 37797912 | 750.0 | 716.7 | |
| 2 | 4.849 | 4.849 | 0.000 | 28913314 | 750.0 | 737.7 | |
| 2 | 4.989 | 4.989 | 0.000 | 35516837 | 750.0 | 708.6 | |
| | | Average of Peak Amounts = | | | | 724.1 | |
| | | | | | | RPD = 2.75 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.426 | 8.425 | 0.001 | 71398443 | 750.0 | 724.3 | |
| 1 | 8.479 | 8.479 | 0.000 | 78534053 | 750.0 | 738.4 | |
| 1 | 8.753 | 8.752 | 0.001 | 60169301 | 750.0 | 730.3 | |
| 1 | 8.873 | 8.875 | -0.002 | 17887994 | 750.0 | 727.4 | |
| 1 | 9.686 | 9.685 | 0.001 | 165330861 | 750.0 | 729.0 | |
| | | Average of Peak Amounts = | | | | 729.9 | |
| 2 | 8.599 | 8.599 | 0.000 | 190574103 | 750.0 | 728.9 | |
| 2 | 8.663 | 8.662 | 0.001 | 173302179 | 750.0 | 726.9 | |
| 2 | 9.016 | 9.015 | 0.001 | 149272844 | 750.0 | 723.5 | |
| 2 | 9.159 | 9.159 | 0.000 | 44905318 | 750.0 | 709.9 | |
| 2 | 9.913 | 9.912 | 0.001 | 445890342 | 750.0 | 723.7 | |
| | | Average of Peak Amounts = | | | | 722.6 | |
| | | | | | | RPD = 1.00 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 1474.1 | |
| 2 | | | | | | 1446.7 | |
| | | | | | | RPD = 1.88 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.75 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

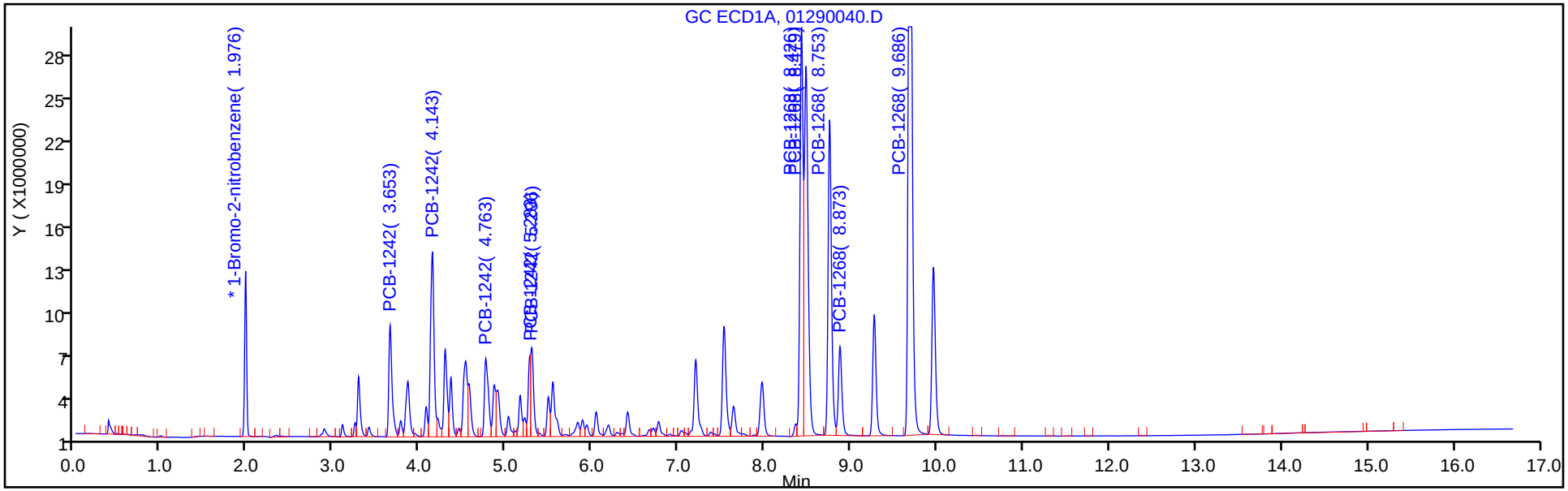
Report Date: 30-Jan-2019 14:58:37 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

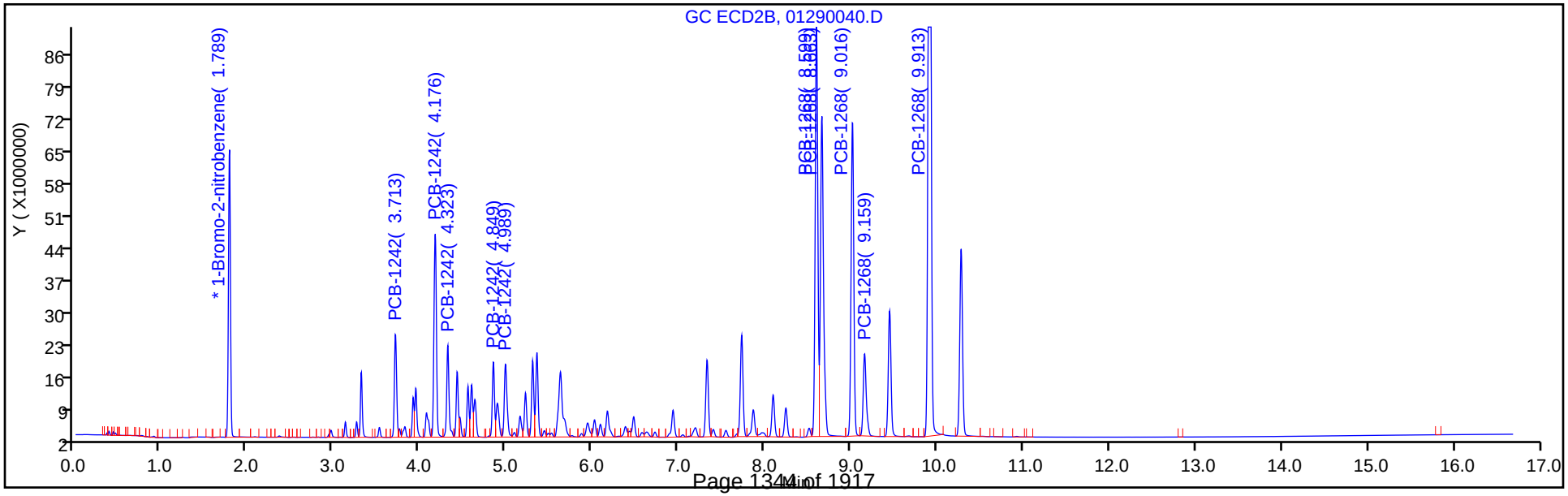
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290040.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 03:54:30 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD6 | | | Worklist Smp#: | 40 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 40 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:58:37 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290040.D

Injection Date: 30-Jan-2019 03:54:30 Instrument ID: SGC_J

Lims ID: STD6

Client ID:

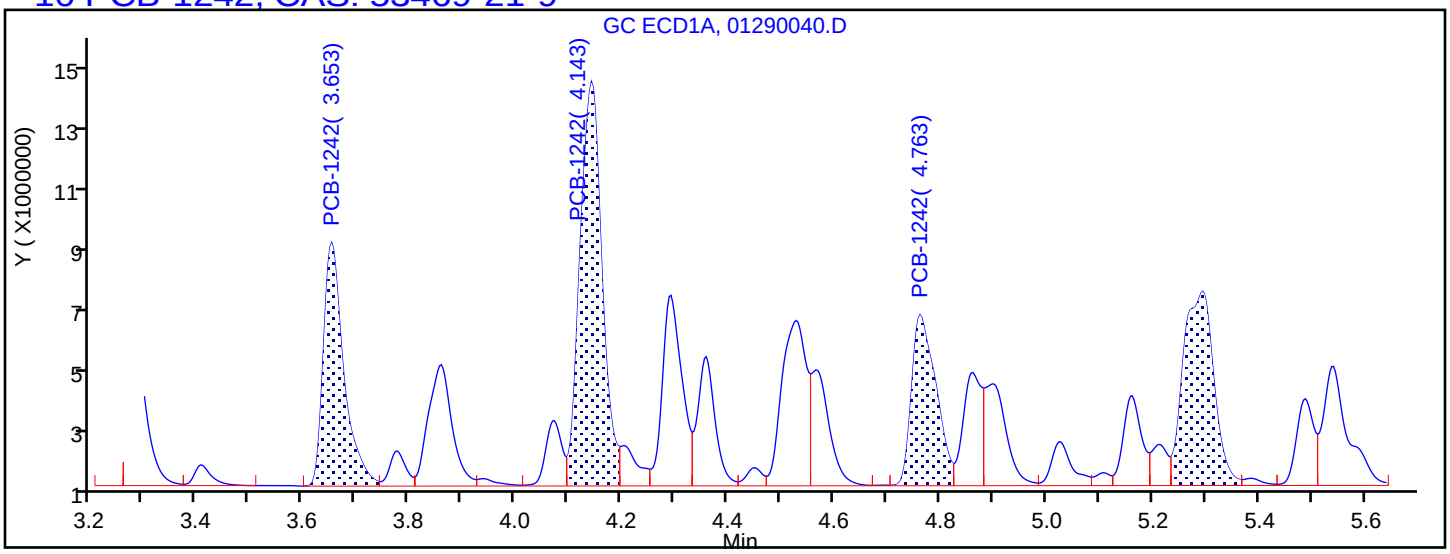
Operator ID: TEM ALS Bottle#: 40 Worklist Smp#: 40

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

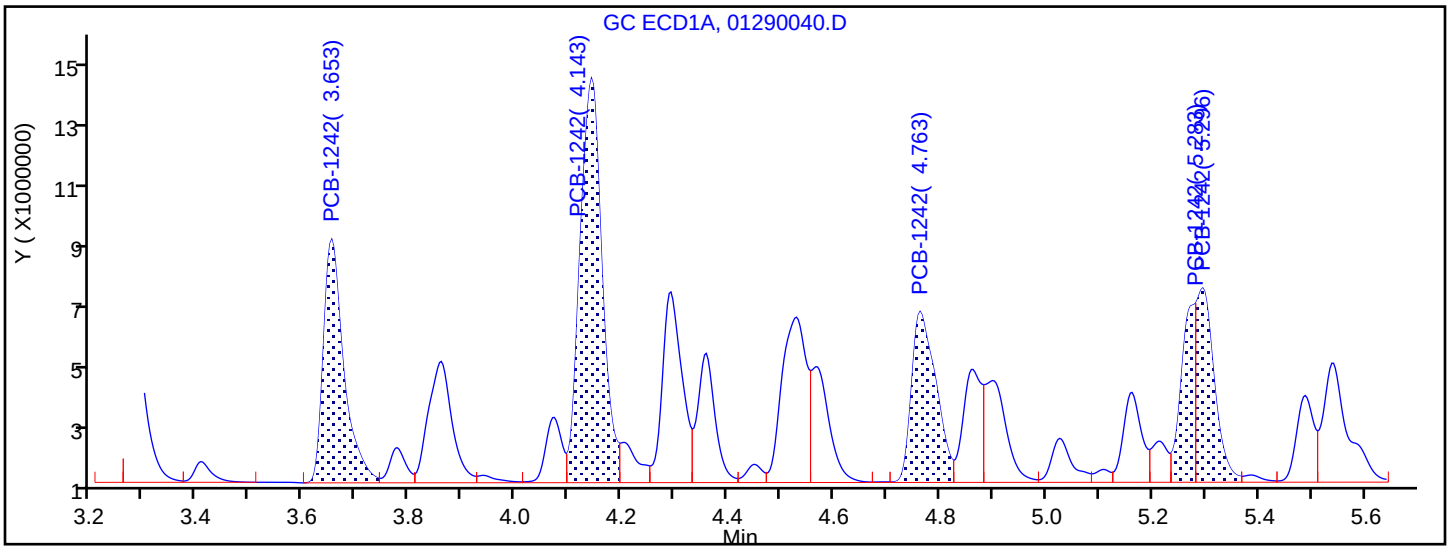
Column: CLP1 Pesticides Column 1 ( 0.32 mm) Detector GC ECD1A

10 PCB-1242, CAS: 53469-21-9




Processing Integration Results

| | |
|---|---|
| 3.653 | Response = 20436558 |
| 4.143 | Response = 36820339 |
| 4.763 | Response = 17174944 |
| 5.295 | Response = 0 |
| 5.296 | Response = 24420790 |




Manual Integration Results

| | | |
|---|---|---|
| 3.653 | Response = 20436558 | |
| 4.143 | Response = 36820339 | |
| 4.763 | Response = 17174944 | |
| 5.283 | Response = 10241882 | M |
| 5.296 | Response = 14178945 | M |

Reviewer: mooret, 30-Jan-2019 14:51:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 30-Jan-2019 04:15:34 ALS Bottle#: 41 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0078470-041
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:35 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:52:40

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.975 | 0.000 | 17548982 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.789 | -0.001 | 95395643 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | Ma |
| 1 | 3.652 | 3.652 | 0.000 | 25682595 | 1000.0 | 984.1 | |
| 1 | 4.142 | 4.142 | 0.000 | 47217057 | 1000.0 | 1010.8 | |
| 1 | 4.762 | 4.762 | 0.000 | 21818304 | 1000.0 | 995.9 | |
| 1 | 5.282 | 5.279 | 0.003 | 12792205 | 1000.0 | 1021.7 | M |
| 1 | 5.295 | 5.295 | 0.000 | 19049422 | 1000.0 | 1012.7 | M |
| | | Average of Peak Amounts = | | | | 1005.1 | |
| 2 | 3.715 | 3.712 | 0.003 | 50291519 | 1000.0 | 936.9 | |
| 2 | 4.175 | 4.175 | 0.000 | 111142815 | 1000.0 | 988.5 | |
| 2 | 4.322 | 4.322 | 0.000 | 46600766 | 1000.0 | 938.9 | |
| 2 | 4.852 | 4.849 | 0.003 | 35357888 | 1000.0 | 1017.4 | |
| 2 | 4.992 | 4.989 | 0.003 | 43289708 | 1000.0 | 918.3 | |
| | | Average of Peak Amounts = | | | | 960.0 | |
| | | | | | | RPD = 4.59 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.428 | 8.425 | 0.003 | 96858701 | 1000.0 | 1037.3 | |
| 1 | 8.478 | 8.479 | -0.001 | 102396601 | 1000.0 | 1014.3 | |
| 1 | 8.755 | 8.752 | 0.003 | 80428947 | 1000.0 | 1029.7 | |
| 1 | 8.875 | 8.875 | 0.000 | 23705193 | 1000.0 | 1017.1 | |
| 1 | 9.685 | 9.685 | 0.000 | 220805131 | 1000.0 | 1026.7 | |
| | | Average of Peak Amounts = | | | | 1025.0 | |
| 2 | 8.598 | 8.599 | -0.001 | 252691663 | 1000.0 | 1025.4 | |
| 2 | 8.662 | 8.662 | 0.000 | 228773239 | 1000.0 | 1018.8 | |
| 2 | 9.015 | 9.015 | 0.000 | 199897377 | 1000.0 | 1028.2 | |
| 2 | 9.158 | 9.159 | -0.001 | 60429111 | 1000.0 | 1017.2 | |
| 2 | 9.912 | 9.912 | 0.000 | 601966686 | 1000.0 | 1035.0 | |
| | | Average of Peak Amounts = | | | | 1024.9 | |
| | | | | | | RPD = 0.01 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 2030.1 | |
| 2 | | | | | | 1984.9 | |
| | | | | | | RPD = 2.25 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

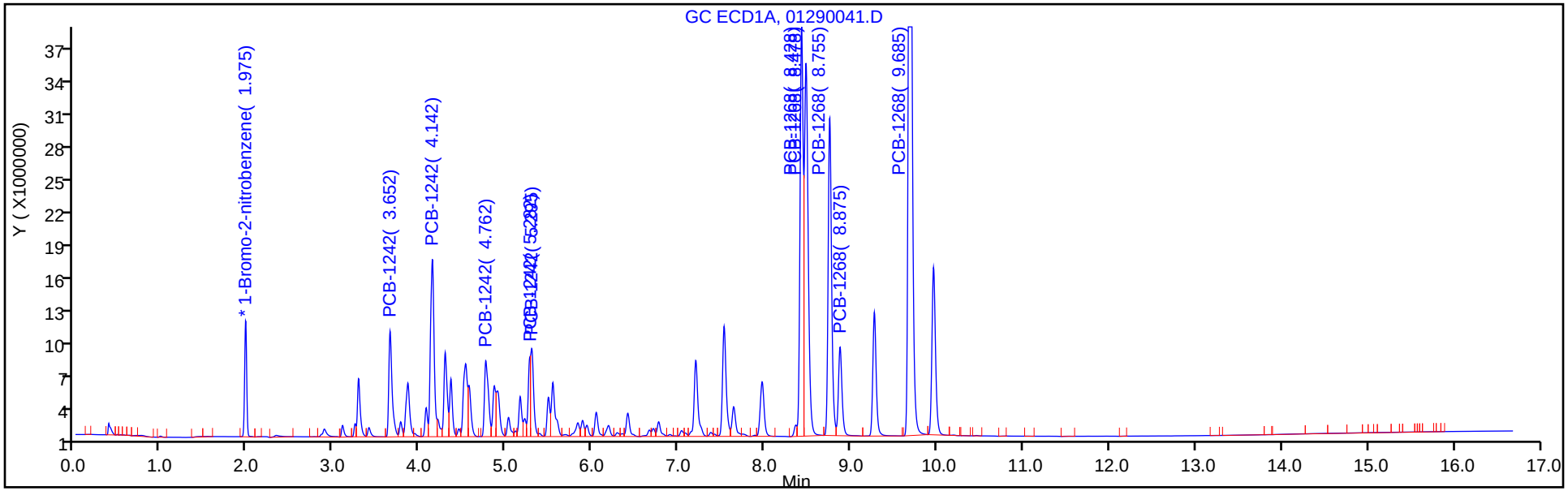
Report Date: 30-Jan-2019 14:58:35 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

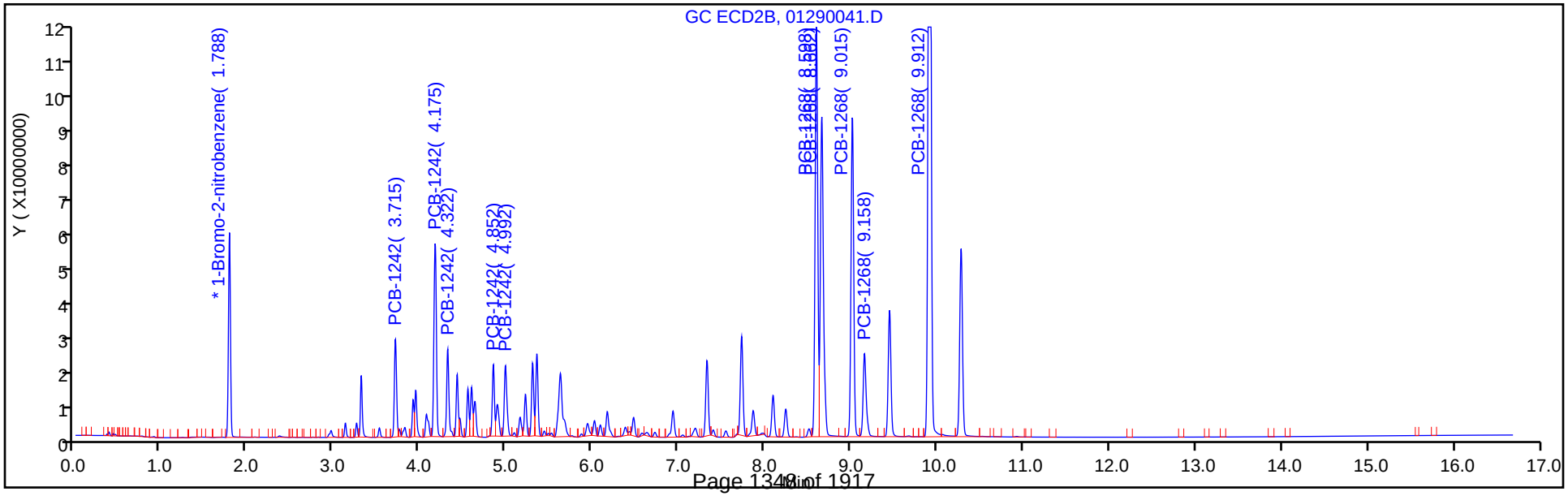
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 04:15:34 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD7 | | | Worklist Smp#: | 41 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 41 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:58:35 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Injection Date: 30-Jan-2019 04:15:34 Instrument ID: SGC_J

Lims ID: STD7

Client ID:

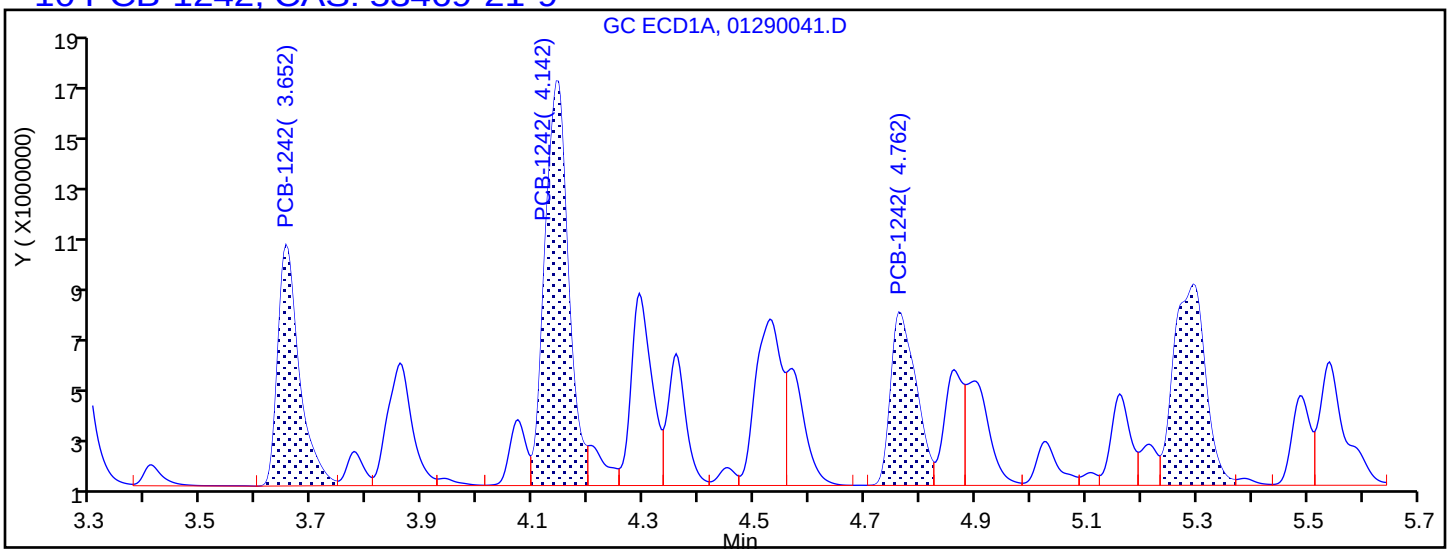
Operator ID: TEM ALS Bottle#: 41 Worklist Smp#: 41

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

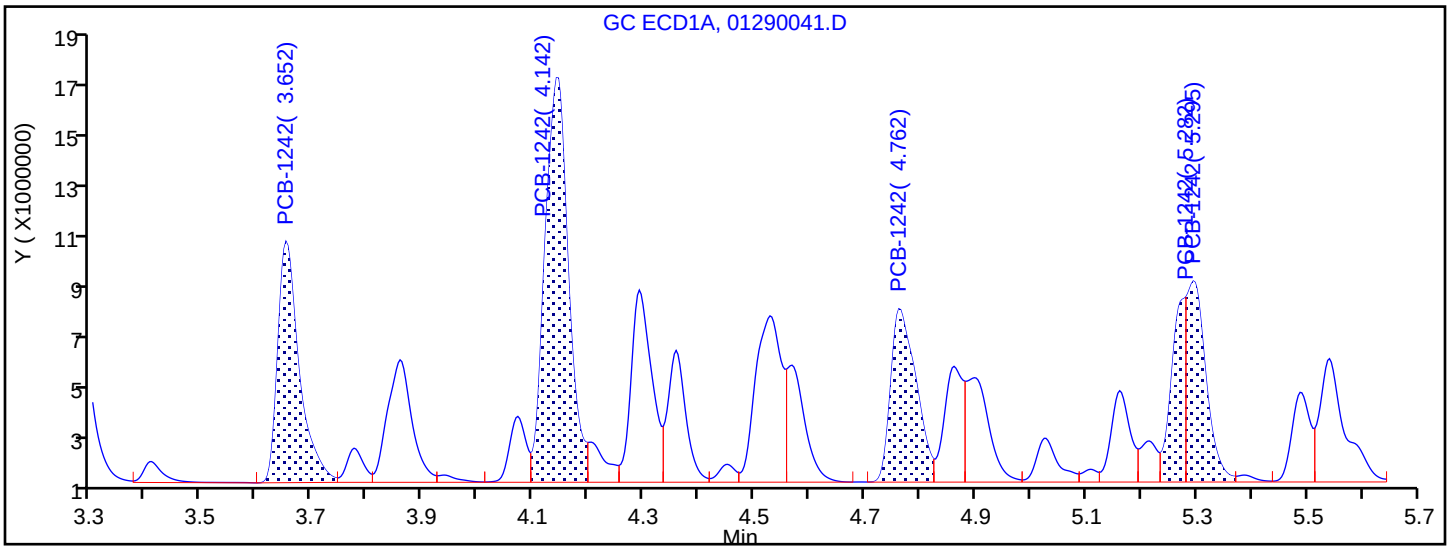
Column: CLP1 Pesticides Column 1 ( 0.32 mm) Detector GC ECD1A

10 PCB-1242, CAS: 53469-21-9




Processing Integration Results

| | |
|---|---|
| 3.652 | Response = 25682595 |
| 4.142 | Response = 47217057 |
| 4.762 | Response = 21818304 |
| 5.295 | Response = 0 |
| 5.295 | Response = 31841601 |




Manual Integration Results

| | | |
|---|---|---|
| 3.652 | Response = 25682595 | |
| 4.142 | Response = 47217057 | |
| 4.762 | Response = 21818304 | |
| 5.282 | Response = 12792205 | M |
| 5.295 | Response = 19049422 | M |

Reviewer: mooret, 30-Jan-2019 14:52:28

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver  Job No.: 160-32649-1  Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J  GC Column: CLP2  ID: 0.32(mm)  Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2019 02:09  Calibration End Date: 01/30/2019 04:15  Calibration ID: 35080

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/35 | 01290035.D |
| Level 2 | STD2 280-445745/36 | 01290036.D |
| Level 3 | STD3 280-445745/37 | 01290037.D |
| Level 4 | STD4 280-445745/38 | 01290038.D |
| Level 5 | STD5 280-445745/39 | 01290039.D |
| Level 6 | STD6 280-445745/40 | 01290040.D |
| Level 7 | STD7 280-445745/41 | 01290041.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| PCB-1242 Peak 1 | 0.0835<br>0.0535 | 0.0739<br>0.0527 | 0.0689 | 0.0606 | 0.0556 | Lin2 | 0.7731 | 0.0554 | | | | | | | 0.9940 | | 0.9900 |
| PCB-1242 Peak 2 | 0.1718<br>0.1181 | 0.1492<br>0.1165 | 0.1387 | 0.1250 | 0.1205 | Lin1 | 1.6123 | 0.1162 | | | | | | | 1.0000 | | 0.9900 |
| PCB-1242 Peak 3 | 0.0776<br>0.0499 | 0.0684<br>0.0488 | 0.0641 | 0.0547 | 0.0519 | Lin2 | 0.7233 | 0.0513 | | | | | | | 0.9940 | | 0.9900 |
| PCB-1242 Peak 4 | 0.0717<br>0.0382 | 0.0618<br>0.0371 | 0.0540 | 0.0451 | 0.0402 | Qua1 | 0.8337 | 0.0433 | -0.000008 | | | | | | 0.9990 | | 0.9900 |
| PCB-1242 Peak 5 | 0.0780<br>0.0469 | 0.0680<br>0.0454 | 0.0621 | 0.0536 | 0.0492 | Lin2 | 0.8105 | 0.0485 | | | | | | | 0.9920 | | 0.9900 |
| PCB-1268 Peak 1 | 0.3384<br>0.2518 | 0.2917<br>0.2649 | 0.2831 | 0.2632 | 0.2577 | Lin1 | 1.9920 | 0.2564 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1268 Peak 2 | 0.3204<br>0.2290 | 0.2731<br>0.2398 | 0.2674 | 0.2465 | 0.2363 | Lin1 | 2.3064 | 0.2331 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1268 Peak 3 | 0.2689<br>0.1973 | 0.2319<br>0.2095 | 0.2254 | 0.2093 | 0.2037 | Lin1 | 1.6679 | 0.2022 | | | | | | | 0.9990 | | 0.9900 |
| PCB-1268 Peak 4 | 0.0923<br>0.0593 | 0.0819<br>0.0633 | 0.0780 | 0.0684 | 0.0635 | Lin1 | 0.9920 | 0.0613 | | | | | | | 0.9980 | | 0.9900 |
| PCB-1268 Peak 5 | 0.7257<br>0.5892 | 0.6371<br>0.6310 | 0.6282 | 0.6207 | 0.6002 | Lin1 | 2.2971 | 0.6075 | | | | | | | 0.9990 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 160-32649-1 Analy Batch No.: 445745

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2019 02:09 Calibration End Date: 01/30/2019 04:15 Calibration ID: 35080

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD1 280-445745/35 | 01290035.D |
| Level 2 | STD2 280-445745/36 | 01290036.D |
| Level 3 | STD3 280-445745/37 | 01290037.D |
| Level 4 | STD4 280-445745/38 | 01290038.D |
| Level 5 | STD5 280-445745/39 | 01290039.D |
| Level 6 | STD6 280-445745/40 | 01290040.D |
| Level 7 | STD7 280-445745/41 | 01290041.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| PCB-1242 Peak 1 | BNB | Lin2 | 2053069<br>40471357 | 3764385<br>50291519 | 6646160 | 15218217 | 27633355 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1242 Peak 2 | BNB | Lin1 | 4226320<br>89341350 | 7598379<br>111142815 | 13380929 | 31390564 | 59948090 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1242 Peak 3 | BNB | Lin2 | 1908586<br>37797912 | 3480963<br>46600766 | 6186577 | 13736592 | 25800424 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1242 Peak 4 | BNB | Qua1 | 1763198<br>28913314 | 3145414<br>35357888 | 5210508 | 11327610 | 19982771 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1242 Peak 5 | BNB | Lin2 | 1918680<br>35516837 | 3461851<br>43289708 | 5992567 | 13455405 | 24466187 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1268 Peak 1 | BNB | Lin1 | 8321833<br>190574103 | 14853251<br>252691663 | 27302807 | 66072977 | 128201924 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1268 Peak 2 | BNB | Lin1 | 7880092<br>173302179 | 13908255<br>228773239 | 25792195 | 61884354 | 117548669 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1268 Peak 3 | BNB | Lin1 | 6612801<br>149272844 | 11807955<br>199897377 | 21737104 | 52553311 | 101311192 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1268 Peak 4 | BNB | Lin1 | 2270836<br>44905318 | 4168802<br>60429111 | 7519864 | 17181511 | 31603183 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |
| PCB-1268 Peak 5 | BNB | Lin1 | 17846924<br>445890342 | 32446855<br>601966686 | 60590316 | 155849809 | 298576048 | 25.0<br>750 | 50.0<br>1000 | 100 | 250 | 500 |

Curve Type Legend:

Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua1 = Quadratic 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290035.D
Lims ID: STD1 4268
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 30-Jan-2019 02:09:04 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1 4268
Misc. Info.: 280-0078470-035
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:45 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:49:43

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.974 | 0.004 | 17849726 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.788 | 0.001 | 98372823 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | M |
| 1 | 3.652 | 3.651 | 0.001 | 890684 | 25.0 | 21.6 | |
| 1 | 4.142 | 4.141 | 0.001 | 1173772 | 25.0 | 25.7 | M |
| 1 | 4.762 | 4.761 | 0.001 | 628889 | 25.0 | 23.7 | M |
| 1 | 5.272 | 5.274 | -0.002 | 398786 | 25.0 | 24.6 | M |
| 1 | 5.295 | 5.294 | 0.001 | 465060 | 25.0 | 25.4 | M |
| | | Average of Peak Amounts = | | | | 24.2 | |
| 2 | 3.712 | 3.715 | -0.003 | 2053069 | 25.0 | 23.7 | |
| 2 | 4.175 | 4.175 | 0.000 | 4226320 | 25.0 | 23.1 | |
| 2 | 4.322 | 4.321 | 0.001 | 1908586 | 25.0 | 23.7 | |
| 2 | 4.849 | 4.851 | -0.002 | 1763198 | 25.0 | 22.2 | |
| 2 | 4.989 | 4.991 | -0.002 | 1918680 | 25.0 | 23.5 | |
| | | Average of Peak Amounts = | | | | 23.3 | |
| | | | | | | RPD = 4.03 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.425 | 8.428 | -0.003 | 2798591 | 25.0 | 25.0 | |
| 1 | 8.475 | 8.478 | -0.003 | 2660297 | 25.0 | 26.5 | |
| 1 | 8.752 | 8.754 | -0.002 | 2226742 | 25.0 | 25.7 | |
| 1 | 8.872 | 8.874 | -0.002 | 648010 | 25.0 | 24.2 | |
| 1 | 9.685 | 9.684 | 0.001 | 6031607 | 25.0 | 25.8 | |
| | | Average of Peak Amounts = | | | | 25.4 | |
| 2 | 8.599 | 8.601 | -0.002 | 8321833 | 25.0 | 25.2 | |
| 2 | 8.662 | 8.661 | 0.001 | 7880092 | 25.0 | 24.5 | |
| 2 | 9.015 | 9.018 | -0.003 | 6612801 | 25.0 | 25.0 | |
| 2 | 9.159 | 9.158 | 0.001 | 2270836 | 25.0 | 21.5 | |
| 2 | 9.912 | 9.911 | 0.001 | 17846924 | 25.0 | 26.1 | |
| | | Average of Peak Amounts = | | | | 24.5 | |
| | | | | | | RPD = 3.96 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 49.6 | |
| 2 | | | | | | 47.7 | |
| | | | | | | RPD = 3.99 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.03 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

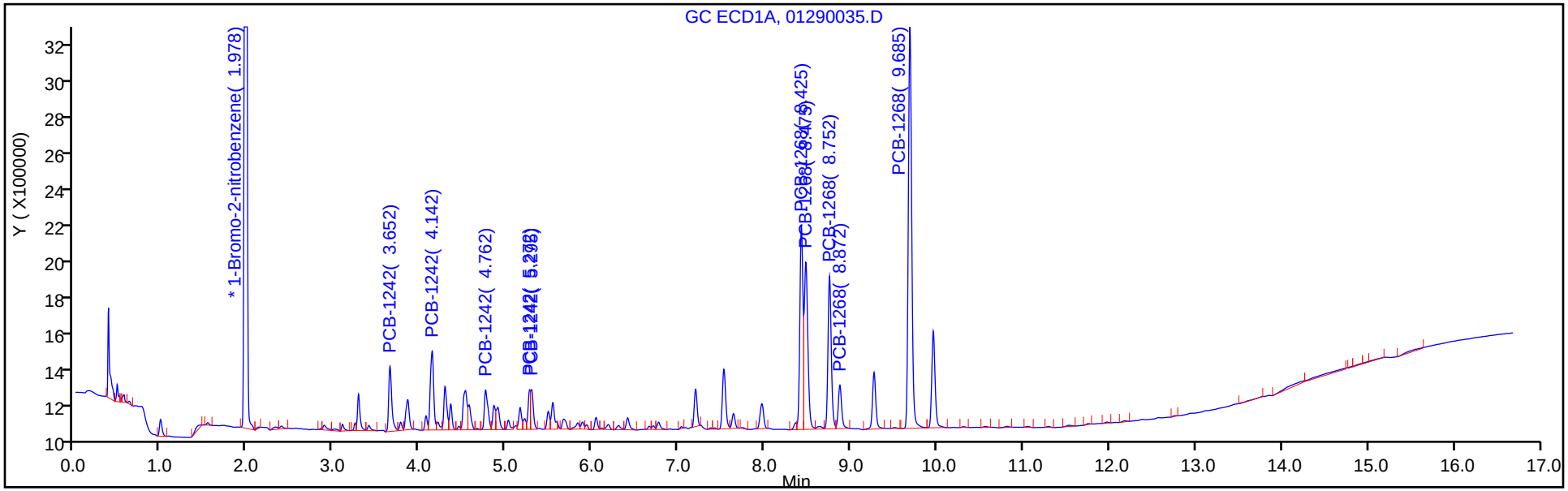
Report Date: 30-Jan-2019 14:58:45 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

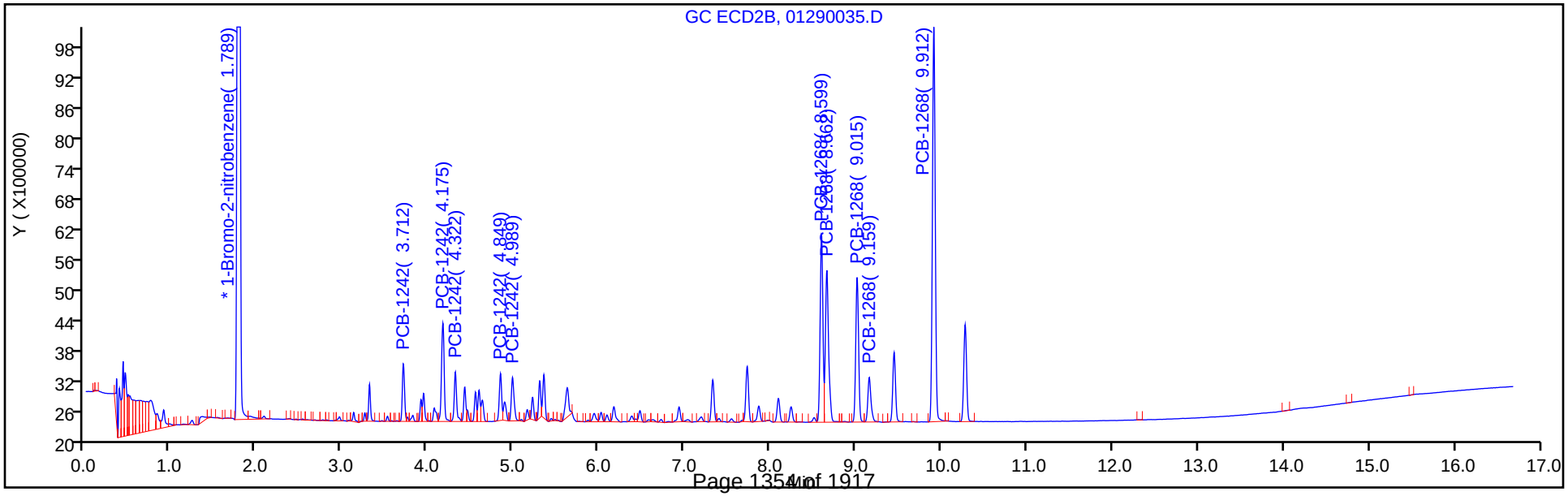
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290035.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 02:09:04 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD1 4268 | | | Worklist Smp#: | 35 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 35 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290036.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Jan-2019 02:30:14 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0078470-036
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:43 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.974 | 0.001 | 18523014 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.788 | 0.000 | 101851657 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | |
| 1 | 3.651 | 3.651 | 0.000 | 1727881 | 50.0 | 51.1 | |
| 1 | 4.141 | 4.141 | 0.000 | 2387021 | 50.0 | 49.4 | |
| 1 | 4.761 | 4.761 | 0.000 | 1252095 | 50.0 | 49.8 | |
| 1 | 5.271 | 5.274 | -0.003 | 758673 | 50.0 | 50.9 | |
| 1 | 5.295 | 5.294 | 0.001 | 955844 | 50.0 | 49.2 | |
| | | Average of Peak Amounts = | | | | 50.1 | |
| 2 | 3.712 | 3.715 | -0.003 | 3764385 | 50.0 | 52.7 | |
| 2 | 4.175 | 4.175 | 0.000 | 7598379 | 50.0 | 50.3 | |
| 2 | 4.322 | 4.321 | 0.001 | 3480963 | 50.0 | 52.6 | |
| 2 | 4.848 | 4.851 | -0.003 | 3145414 | 50.0 | 52.6 | |
| 2 | 4.988 | 4.991 | -0.003 | 3461851 | 50.0 | 53.3 | |
| | | Average of Peak Amounts = | | | | 52.3 | |
| | | | | | | RPD = 4.35 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.425 | 8.428 | -0.003 | 5347927 | 50.0 | 50.0 | |
| 1 | 8.478 | 8.478 | 0.000 | 5072699 | 50.0 | 48.2 | |
| 1 | 8.751 | 8.754 | -0.003 | 4250708 | 50.0 | 49.3 | |
| 1 | 8.871 | 8.874 | -0.003 | 1291998 | 50.0 | 49.4 | |
| 1 | 9.685 | 9.684 | 0.001 | 11392218 | 50.0 | 48.4 | |
| | | Average of Peak Amounts = | | | | 49.1 | |
| 2 | 8.598 | 8.601 | -0.003 | 14853251 | 50.0 | 49.1 | |
| 2 | 8.662 | 8.661 | 0.001 | 13908255 | 50.0 | 48.7 | |
| 2 | 9.015 | 9.018 | -0.003 | 11807955 | 50.0 | 49.1 | |
| 2 | 9.158 | 9.158 | 0.000 | 4168802 | 50.0 | 50.6 | |
| 2 | 9.912 | 9.911 | 0.001 | 32446855 | 50.0 | 48.7 | |
| | | Average of Peak Amounts = | | | | 49.2 | |
| | | | | | | RPD = 0.34 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 99.1 | |
| 2 | | | | | | 101.5 | |
| | | | | | | RPD = 2.39 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.05 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

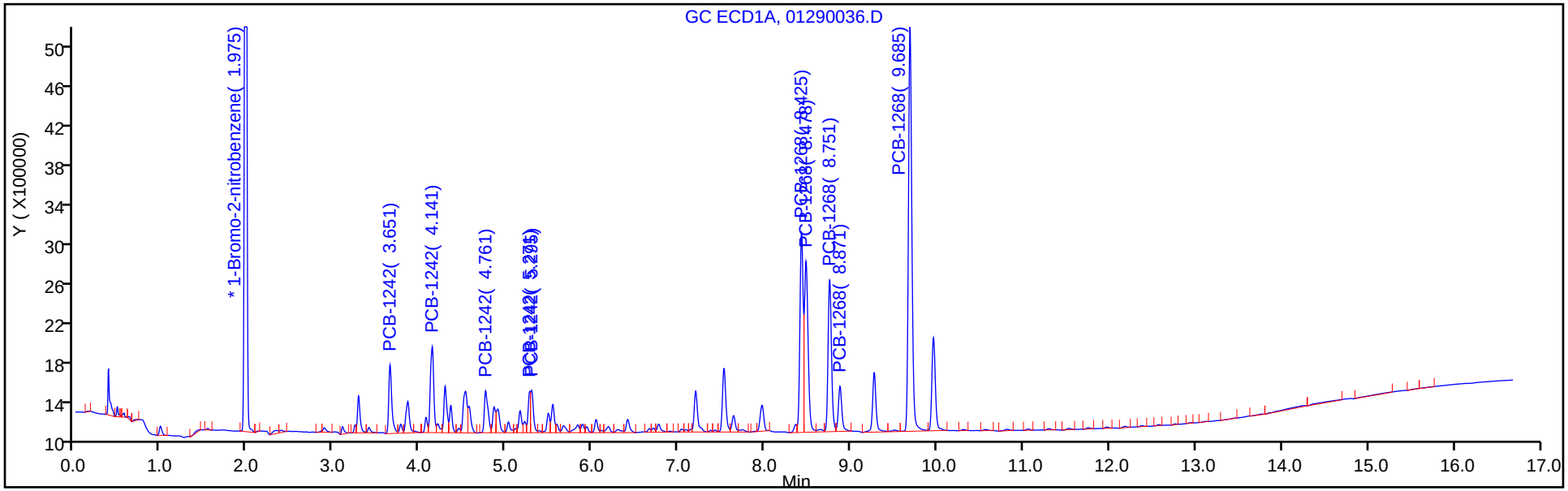
Report Date: 30-Jan-2019 14:58:44 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

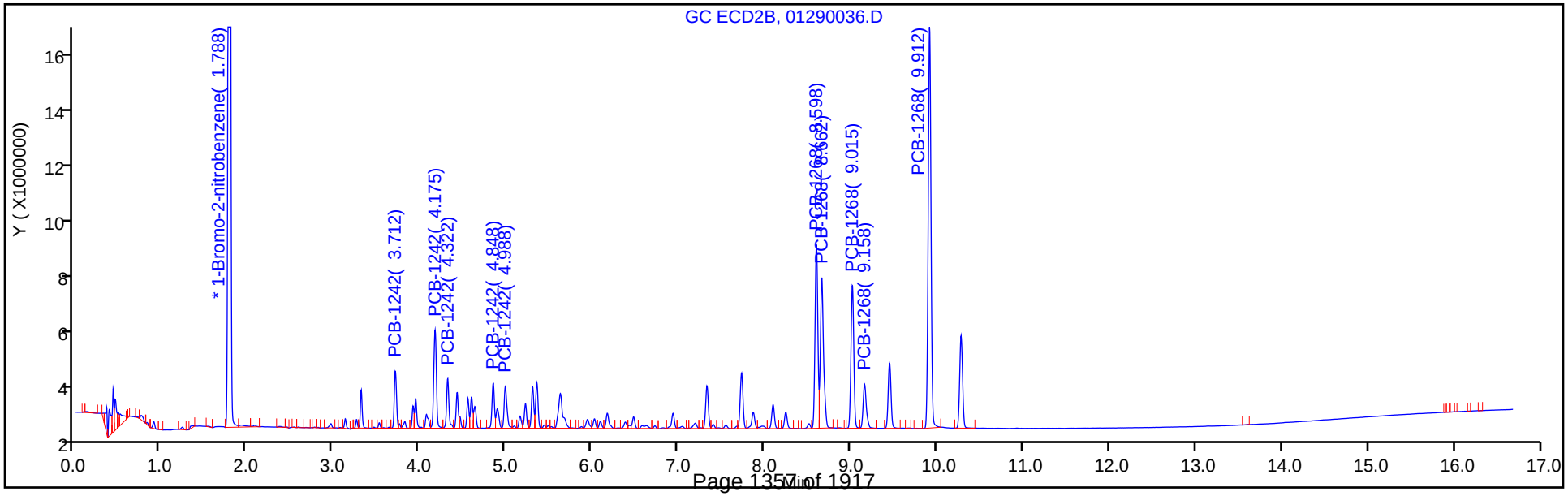
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290036.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 02:30:14 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD2 | | | Worklist Smp#: | 36 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 36 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290037.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Jan-2019 02:51:17 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0078470-037
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:41 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:50:09

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.974 | 1.974 | 0.000 | 17663648 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.788 | 0.000 | 96450940 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | M |
| 1 | 3.651 | 3.651 | 0.000 | 3097090 | 100.0 | 107.0 | |
| 1 | 4.141 | 4.141 | 0.000 | 4630602 | 100.0 | 99.4 | M |
| 1 | 4.761 | 4.761 | 0.000 | 2356728 | 100.0 | 102.8 | M |
| 1 | 5.274 | 5.274 | 0.000 | 1416318 | 100.0 | 106.3 | M |
| 1 | 5.294 | 5.294 | 0.000 | 1822769 | 100.0 | 97.3 | M |
| | | Average of Peak Amounts = | | | | 102.5 | |
| 2 | 3.715 | 3.715 | 0.000 | 6646160 | 100.0 | 110.3 | |
| 2 | 4.175 | 4.175 | 0.000 | 13380929 | 100.0 | 105.5 | |
| 2 | 4.321 | 4.321 | 0.000 | 6186577 | 100.0 | 111.0 | |
| 2 | 4.851 | 4.851 | 0.000 | 5210508 | 100.0 | 107.6 | |
| 2 | 4.991 | 4.991 | 0.000 | 5992567 | 100.0 | 111.3 | |
| | | Average of Peak Amounts = | | | | 109.2 | |
| | | | | | | RPD = 6.25 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.428 | 8.428 | 0.000 | 10025616 | 100.0 | 102.6 | |
| 1 | 8.478 | 8.478 | 0.000 | 9889169 | 100.0 | 97.8 | |
| 1 | 8.754 | 8.754 | 0.000 | 8075356 | 100.0 | 100.6 | |
| 1 | 8.874 | 8.874 | 0.000 | 2471735 | 100.0 | 102.5 | |
| 1 | 9.684 | 9.684 | 0.000 | 22278589 | 100.0 | 101.3 | |
| | | Average of Peak Amounts = | | | | 100.9 | |
| 2 | 8.601 | 8.601 | 0.000 | 27302807 | 100.0 | 102.6 | |
| 2 | 8.661 | 8.661 | 0.000 | 25792195 | 100.0 | 104.8 | |
| 2 | 9.018 | 9.018 | 0.000 | 21737104 | 100.0 | 103.2 | |
| 2 | 9.158 | 9.158 | 0.000 | 7519864 | 100.0 | 111.0 | |
| 2 | 9.911 | 9.911 | 0.000 | 60590316 | 100.0 | 99.6 | |
| | | Average of Peak Amounts = | | | | 104.3 | |
| | | | | | | RPD = 3.23 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 203.5 | |
| 2 | | | | | | 213.4 | |
| | | | | | | RPD = 4.77 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.10 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

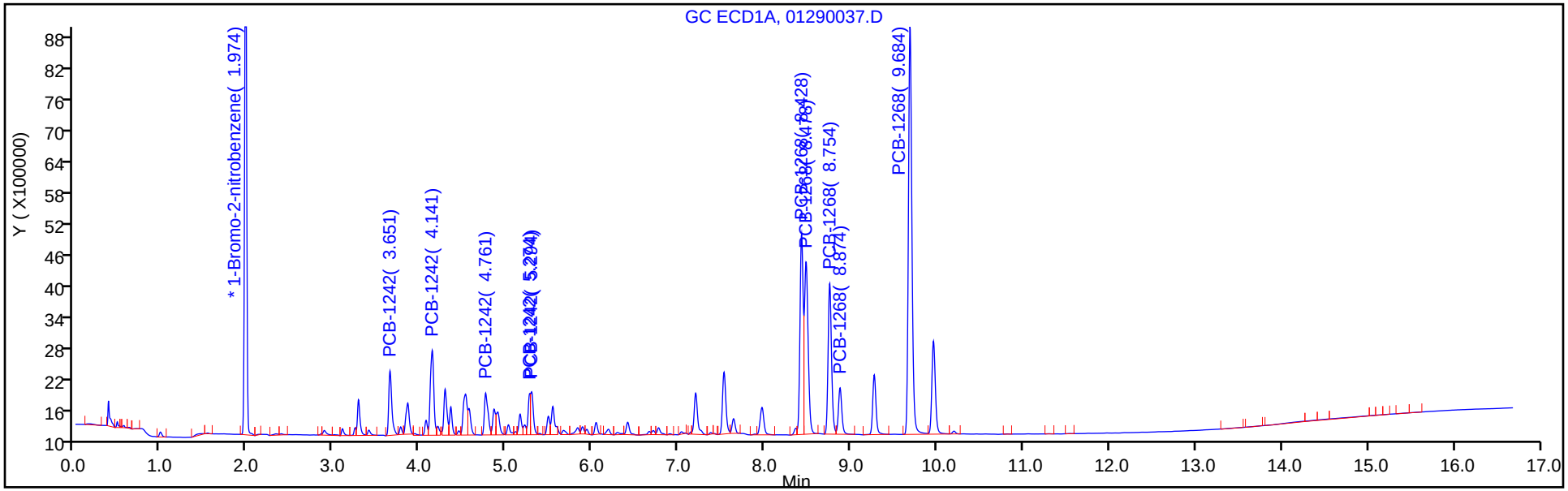
Report Date: 30-Jan-2019 14:58:42 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

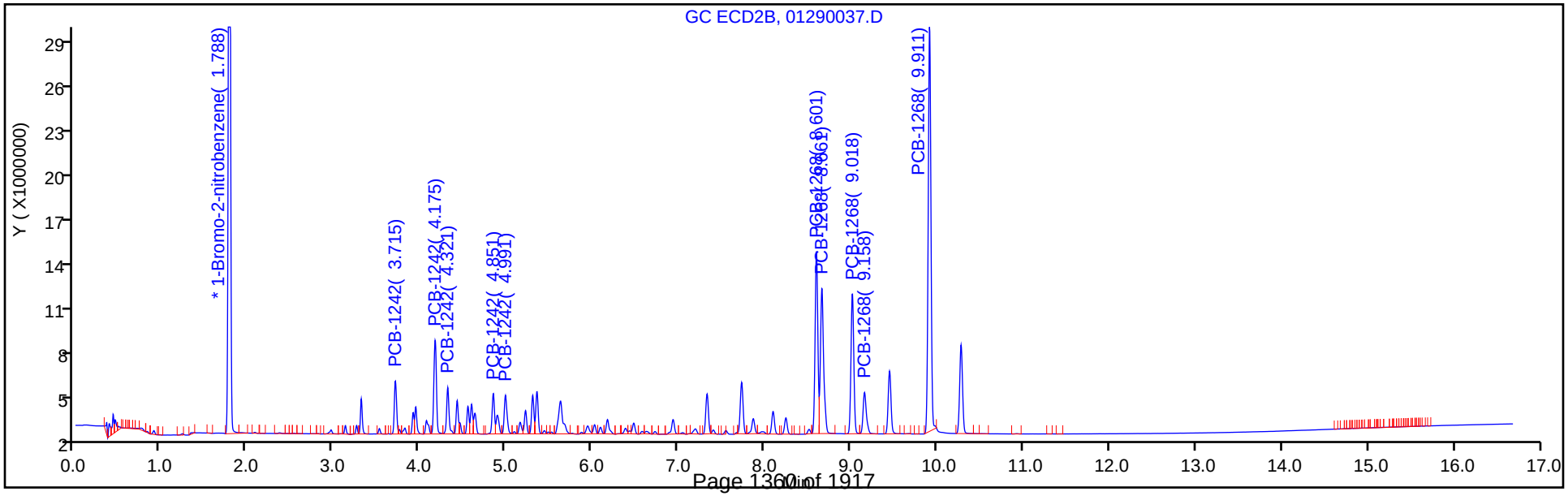
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290037.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 02:51:17 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD3 | | | Worklist Smp#: | 37 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 37 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290038.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Jan-2019 03:12:20 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0078470-038
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:40 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:54:39

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.975 | 0.001 | 18375903 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 100433048 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | M |
| 1 | 3.653 | 3.652 | 0.001 | 7523219 | 250.0 | 266.4 | |
| 1 | 4.143 | 4.142 | 0.001 | 12107353 | 250.0 | 248.3 | |
| 1 | 4.763 | 4.762 | 0.001 | 6049722 | 250.0 | 260.3 | |
| 1 | 5.276 | 5.279 | -0.003 | 3252568 | 250.0 | 242.9 | |
| 1 | 5.296 | 5.295 | 0.001 | 5028906 | 250.0 | 256.1 | |
| | | Average of Peak Amounts = | | | | 254.8 | |
| 2 | 3.713 | 3.712 | 0.001 | 15218217 | 250.0 | 259.4 | M |
| 2 | 4.176 | 4.175 | 0.001 | 31390564 | 250.0 | 255.0 | |
| 2 | 4.319 | 4.322 | -0.003 | 13736592 | 250.0 | 252.7 | |
| 2 | 4.849 | 4.849 | 0.000 | 11327610 | 250.0 | 252.5 | M |
| 2 | 4.989 | 4.989 | 0.000 | 13455405 | 250.0 | 259.4 | M |
| | | Average of Peak Amounts = | | | | 255.8 | |
| | | | | | | RPD = 0.39 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.426 | 8.425 | 0.001 | 24707685 | 250.0 | 249.3 | |
| 1 | 8.479 | 8.479 | 0.000 | 26453565 | 250.0 | 250.7 | |
| 1 | 8.753 | 8.752 | 0.001 | 20470625 | 250.0 | 248.5 | |
| 1 | 8.873 | 8.875 | -0.002 | 6447955 | 250.0 | 261.8 | |
| 1 | 9.686 | 9.685 | 0.001 | 56746001 | 250.0 | 250.6 | |
| | | Average of Peak Amounts = | | | | 252.2 | |
| 2 | 8.599 | 8.599 | 0.000 | 66072977 | 250.0 | 248.8 | |
| 2 | 8.659 | 8.662 | -0.003 | 61884354 | 250.0 | 254.4 | |
| 2 | 9.016 | 9.015 | 0.001 | 52553311 | 250.0 | 250.6 | |
| 2 | 9.156 | 9.159 | -0.003 | 17181511 | 250.0 | 262.9 | |
| 2 | 9.913 | 9.912 | 0.001 | 155849809 | 250.0 | 251.7 | |
| | | Average of Peak Amounts = | | | | 253.7 | |
| | | | | | | RPD = 0.60 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 507.0 | |
| 2 | | | | | | 509.5 | |
| | | | | | | RPD = 0.49 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.25 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

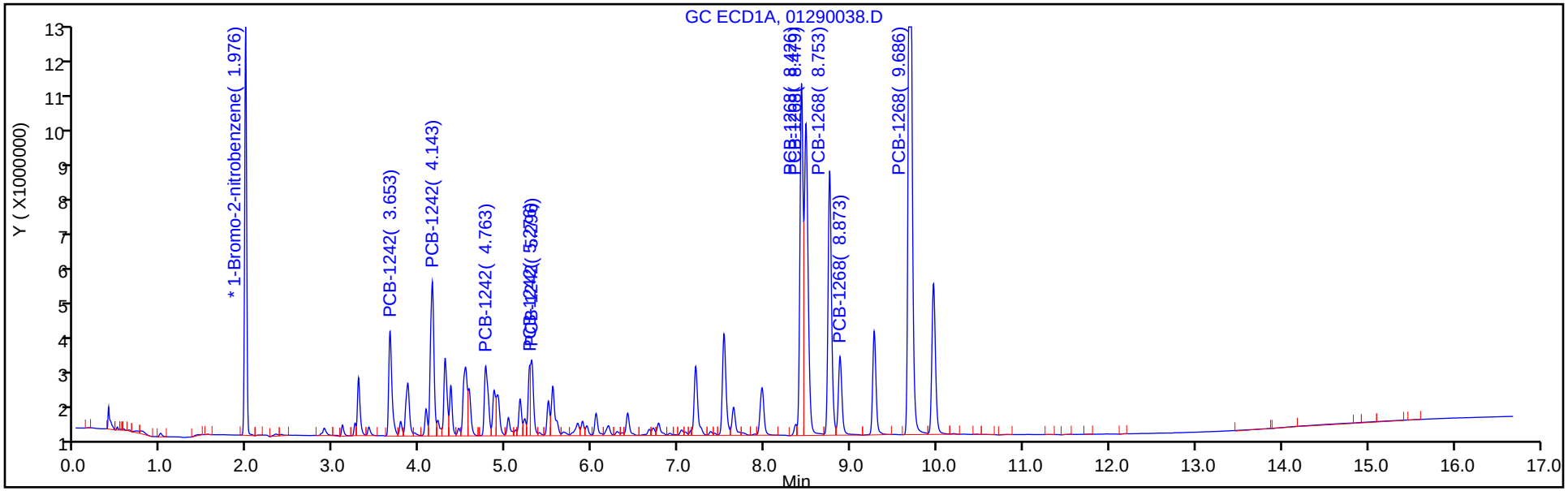
Report Date: 30-Jan-2019 14:58:40 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

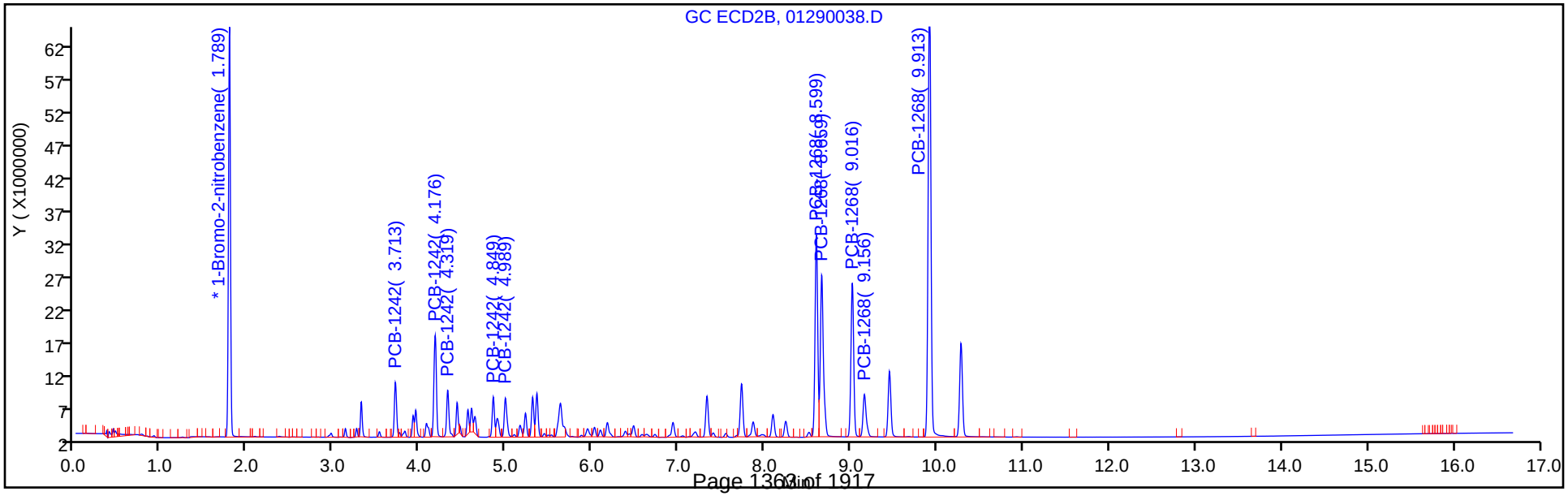
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290038.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 03:12:20 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD4 | | | Worklist Smp#: | 38 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 38 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:58:40 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290038.D

Injection Date: 30-Jan-2019 03:12:20 Instrument ID: SGC_J

Lims ID: STD4

Client ID:

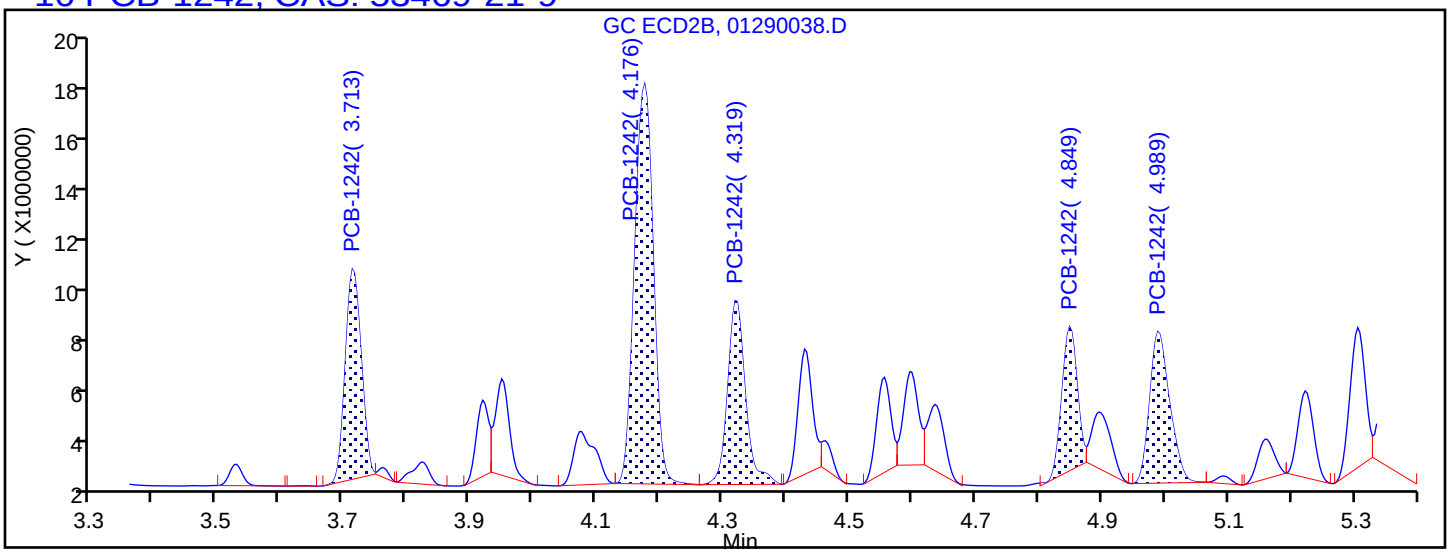
Operator ID: TEM ALS Bottle#: 38 Worklist Smp#: 38

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

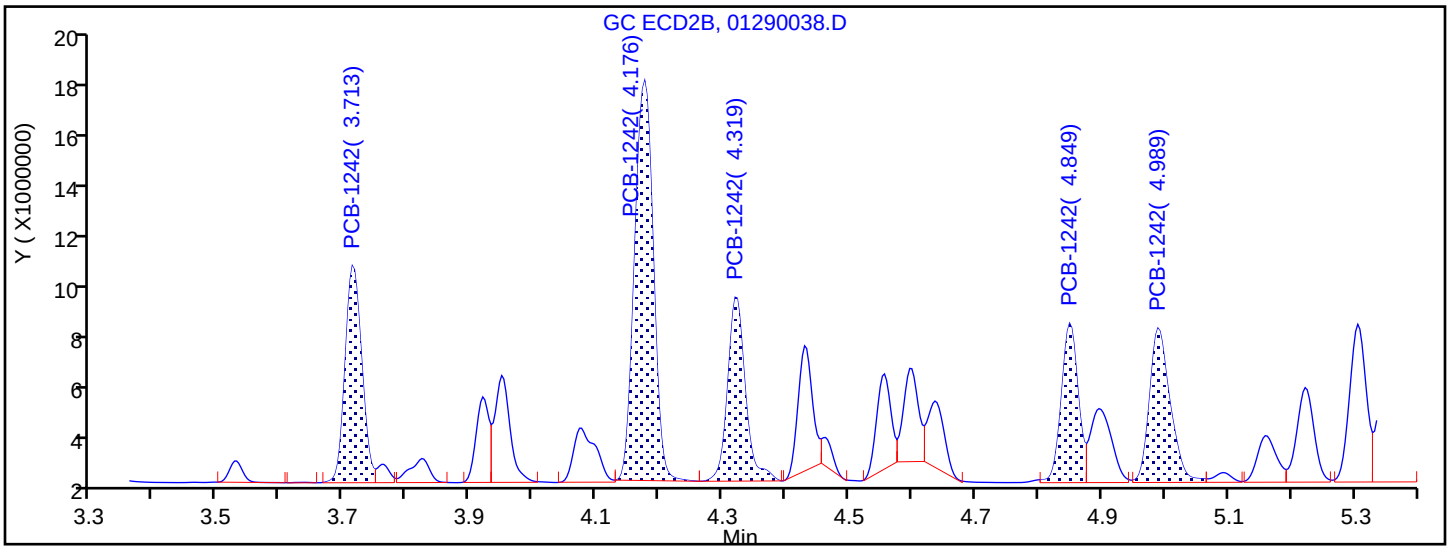
Column: CLP2 Pesticides Column 2 ( 0.32 mm) Detector GC ECD2B

10 PCB-1242, CAS: 53469-21-9




Processing Integration Results

| | |
|---|---|
| 3.713 | Response = 14061462 |
| 4.176 | Response = 31390564 |
| 4.319 | Response = 13736592 |
| 4.849 | Response = 9302045 |
| 4.989 | Response = 12685758 |




Manual Integration Results

| | | |
|---|---|---|
| 3.713 | Response = 15218217 | M |
| 4.176 | Response = 31390564 | |
| 4.319 | Response = 13736592 | |
| 4.849 | Response = 11327610 | M |
| 4.989 | Response = 13455405 | M |

Reviewer: mooret, 30-Jan-2019 14:54:31

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290039.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Jan-2019 03:33:28 ALS Bottle#: 39 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0078470-039
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:38 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:50:59

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.975 | 0.000 | 18234826 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 99488732 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | Ma |
| 1 | 3.652 | 3.652 | 0.000 | 13850439 | 500.0 | 504.8 | |
| 1 | 4.142 | 4.142 | 0.000 | 23902080 | 500.0 | 493.0 | |
| 1 | 4.762 | 4.762 | 0.000 | 11429020 | 500.0 | 499.8 | |
| 1 | 5.279 | 5.279 | 0.000 | 5955544 | 500.0 | 454.0 | M |
| 1 | 5.295 | 5.295 | 0.000 | 10127961 | 500.0 | 518.7 | M |
| | | Average of Peak Amounts = | | | | 494.0 | |
| 2 | 3.712 | 3.712 | 0.000 | 27633355 | 500.0 | 487.0 | |
| 2 | 4.175 | 4.175 | 0.000 | 59948090 | 500.0 | 504.6 | |
| 2 | 4.322 | 4.322 | 0.000 | 25800424 | 500.0 | 491.8 | |
| 2 | 4.849 | 4.849 | 0.000 | 19982771 | 500.0 | 486.0 | |
| 2 | 4.989 | 4.989 | 0.000 | 24466187 | 500.0 | 490.0 | |
| | | Average of Peak Amounts = | | | | 491.9 | |
| | | | | | | RPD = 0.44 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.425 | 8.425 | 0.000 | 47439190 | 500.0 | 486.6 | |
| 1 | 8.479 | 8.479 | 0.000 | 52328366 | 500.0 | 499.2 | |
| 1 | 8.752 | 8.752 | 0.000 | 39942164 | 500.0 | 490.9 | |
| 1 | 8.875 | 8.875 | 0.000 | 11970820 | 500.0 | 492.6 | |
| 1 | 9.685 | 9.685 | 0.000 | 110452712 | 500.0 | 493.3 | |
| | | Average of Peak Amounts = | | | | 492.5 | |
| 2 | 8.599 | 8.599 | 0.000 | 128201924 | 500.0 | 494.8 | |
| 2 | 8.662 | 8.662 | 0.000 | 117548669 | 500.0 | 496.9 | |
| 2 | 9.015 | 9.015 | 0.000 | 101311192 | 500.0 | 495.4 | |
| 2 | 9.159 | 9.159 | 0.000 | 31603183 | 500.0 | 502.0 | |
| 2 | 9.912 | 9.912 | 0.000 | 298576048 | 500.0 | 490.3 | |
| | | Average of Peak Amounts = | | | | 495.9 | |
| | | | | | | RPD = 0.68 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.50 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

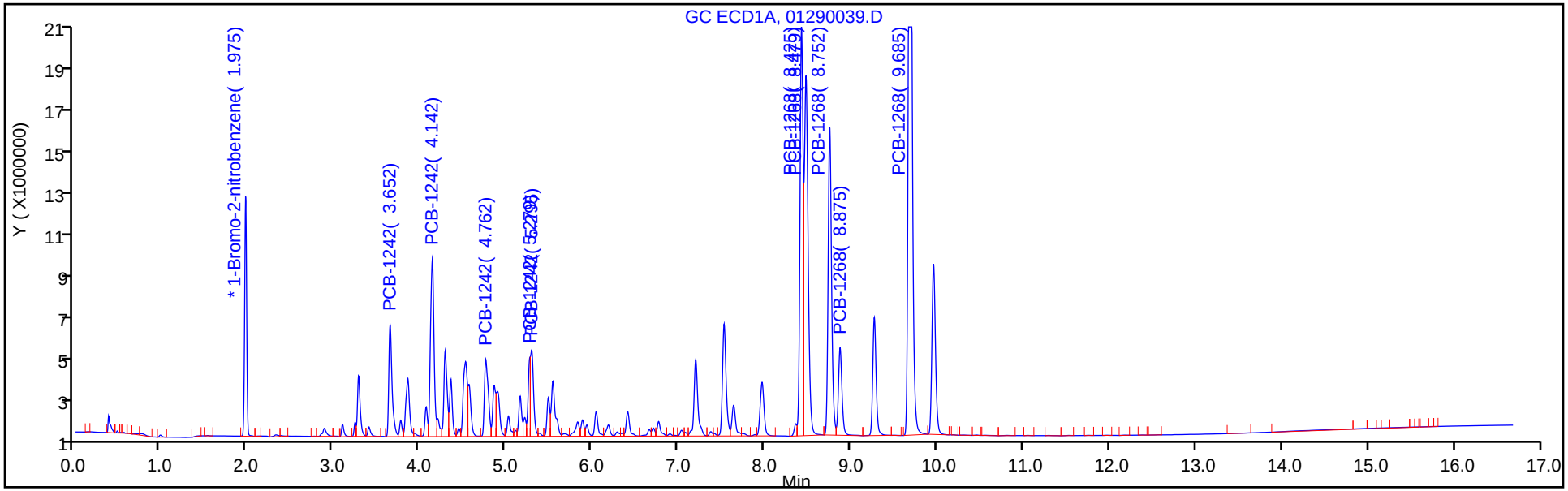
Report Date: 30-Jan-2019 14:58:39 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

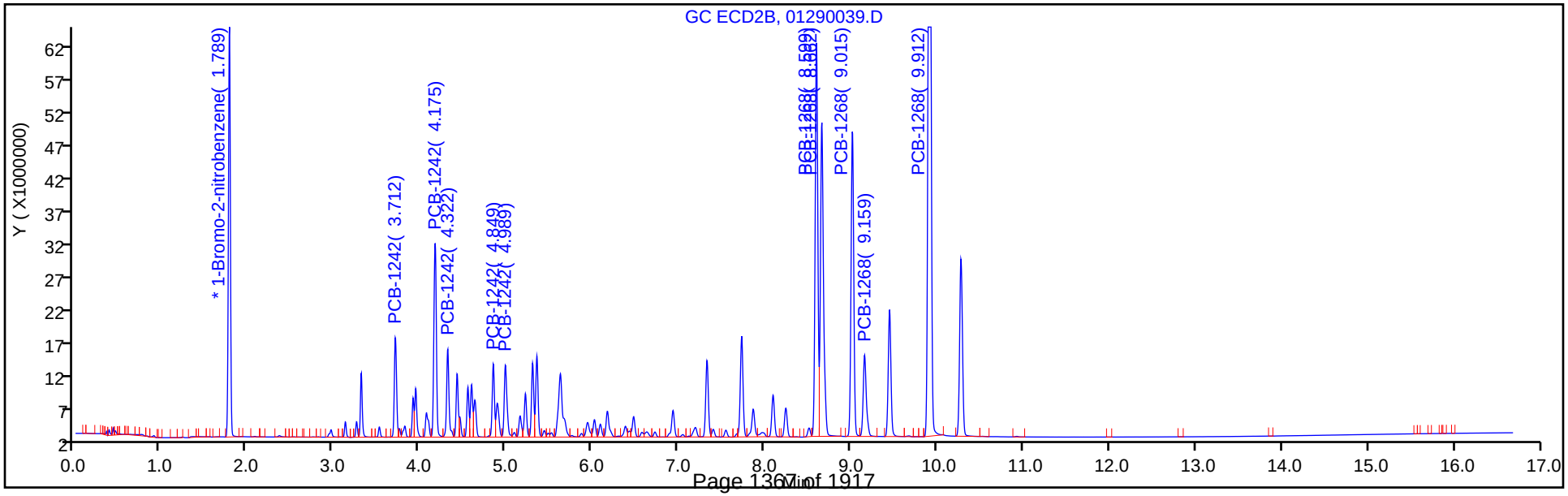
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290039.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 03:33:28 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD5 | | | Worklist Smp#: | 39 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 39 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290040.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Jan-2019 03:54:30 ALS Bottle#: 40 Worklist Smp#: 40
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0078470-040
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:37 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:52:11

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.975 | 0.001 | 18493251 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.789 | 0.000 | 100896616 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | Ma |
| 1 | 3.653 | 3.652 | 0.001 | 20436558 | 750.0 | 740.1 | |
| 1 | 4.143 | 4.142 | 0.001 | 36820339 | 750.0 | 748.3 | |
| 1 | 4.763 | 4.762 | 0.001 | 17174944 | 750.0 | 742.7 | |
| 1 | 5.283 | 5.279 | 0.004 | 10241882 | 750.0 | 774.6 | M |
| 1 | 5.296 | 5.295 | 0.001 | 14178945 | 750.0 | 715.6 | M |
| | | Average of Peak Amounts = | | | | 744.3 | |
| 2 | 3.713 | 3.712 | 0.001 | 40471357 | 750.0 | 709.5 | |
| 2 | 4.176 | 4.175 | 0.001 | 89341350 | 750.0 | 748.0 | |
| 2 | 4.323 | 4.322 | 0.001 | 37797912 | 750.0 | 716.7 | |
| 2 | 4.849 | 4.849 | 0.000 | 28913314 | 750.0 | 737.7 | |
| 2 | 4.989 | 4.989 | 0.000 | 35516837 | 750.0 | 708.6 | |
| | | Average of Peak Amounts = | | | | 724.1 | |
| | | | | | | RPD = 2.75 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.426 | 8.425 | 0.001 | 71398443 | 750.0 | 724.3 | |
| 1 | 8.479 | 8.479 | 0.000 | 78534053 | 750.0 | 738.4 | |
| 1 | 8.753 | 8.752 | 0.001 | 60169301 | 750.0 | 730.3 | |
| 1 | 8.873 | 8.875 | -0.002 | 17887994 | 750.0 | 727.4 | |
| 1 | 9.686 | 9.685 | 0.001 | 165330861 | 750.0 | 729.0 | |
| | | Average of Peak Amounts = | | | | 729.9 | |
| 2 | 8.599 | 8.599 | 0.000 | 190574103 | 750.0 | 728.9 | |
| 2 | 8.663 | 8.662 | 0.001 | 173302179 | 750.0 | 726.9 | |
| 2 | 9.016 | 9.015 | 0.001 | 149272844 | 750.0 | 723.5 | |
| 2 | 9.159 | 9.159 | 0.000 | 44905318 | 750.0 | 709.9 | |
| 2 | 9.913 | 9.912 | 0.001 | 445890342 | 750.0 | 723.7 | |
| | | Average of Peak Amounts = | | | | 722.6 | |
| | | | | | | RPD = 1.00 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 1474.1 | |
| 2 | | | | | | 1446.7 | |
| | | | | | | RPD = 1.88 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 0.75 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

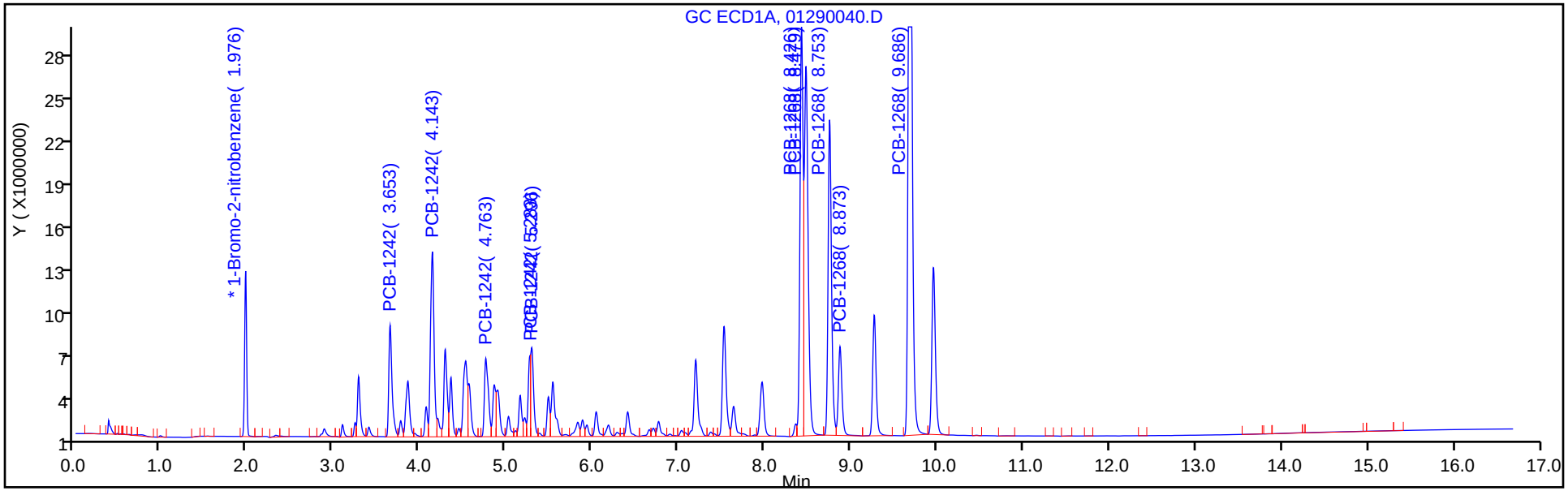
Report Date: 30-Jan-2019 14:58:37 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

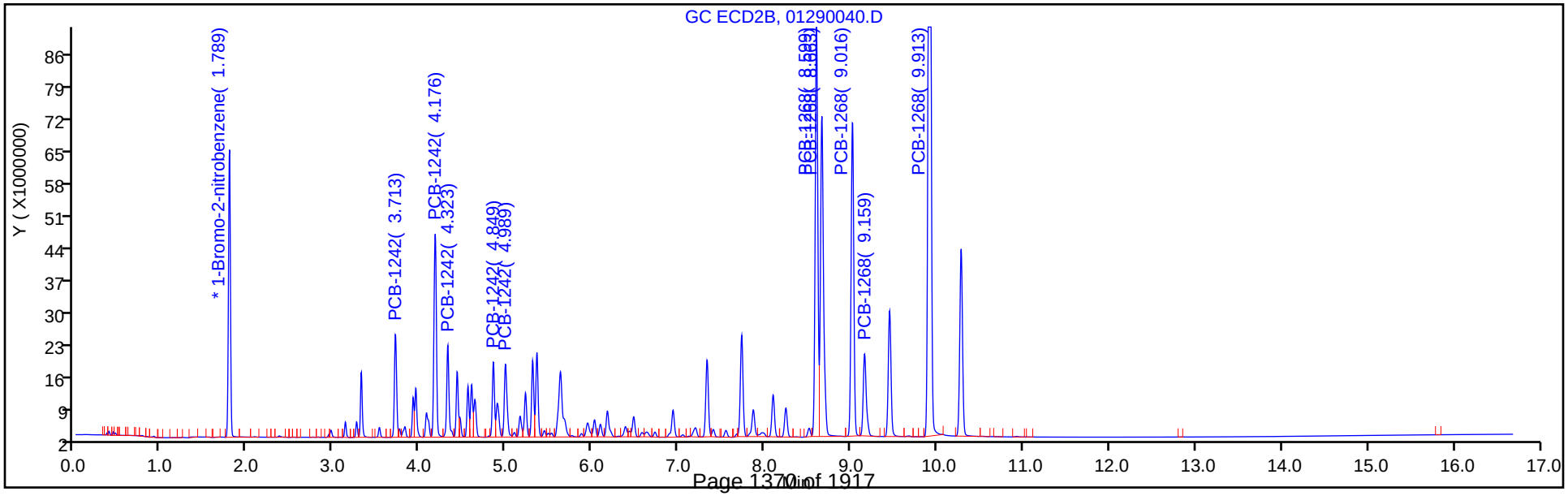
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290040.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 03:54:30 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD6 | | | Worklist Smp#: | 40 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 40 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 30-Jan-2019 04:15:34 ALS Bottle#: 41 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0078470-041
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:35 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:52:40

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.975 | 0.000 | 17548982 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.789 | -0.001 | 95395643 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | Ma |
| 1 | 3.652 | 3.652 | 0.000 | 25682595 | 1000.0 | 984.1 | |
| 1 | 4.142 | 4.142 | 0.000 | 47217057 | 1000.0 | 1010.8 | |
| 1 | 4.762 | 4.762 | 0.000 | 21818304 | 1000.0 | 995.9 | |
| 1 | 5.282 | 5.279 | 0.003 | 12792205 | 1000.0 | 1021.7 | M |
| 1 | 5.295 | 5.295 | 0.000 | 19049422 | 1000.0 | 1012.7 | M |
| | | Average of Peak Amounts = | | | | 1005.1 | |
| 2 | 3.715 | 3.712 | 0.003 | 50291519 | 1000.0 | 936.9 | |
| 2 | 4.175 | 4.175 | 0.000 | 111142815 | 1000.0 | 988.5 | |
| 2 | 4.322 | 4.322 | 0.000 | 46600766 | 1000.0 | 938.9 | |
| 2 | 4.852 | 4.849 | 0.003 | 35357888 | 1000.0 | 1017.4 | |
| 2 | 4.992 | 4.989 | 0.003 | 43289708 | 1000.0 | 918.3 | |
| | | Average of Peak Amounts = | | | | 960.0 | |
| | | | | | | RPD = 4.59 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.428 | 8.425 | 0.003 | 96858701 | 1000.0 | 1037.3 | |
| 1 | 8.478 | 8.479 | -0.001 | 102396601 | 1000.0 | 1014.3 | |
| 1 | 8.755 | 8.752 | 0.003 | 80428947 | 1000.0 | 1029.7 | |
| 1 | 8.875 | 8.875 | 0.000 | 23705193 | 1000.0 | 1017.1 | |
| 1 | 9.685 | 9.685 | 0.000 | 220805131 | 1000.0 | 1026.7 | |
| | | Average of Peak Amounts = | | | | 1025.0 | |
| 2 | 8.598 | 8.599 | -0.001 | 252691663 | 1000.0 | 1025.4 | |
| 2 | 8.662 | 8.662 | 0.000 | 228773239 | 1000.0 | 1018.8 | |
| 2 | 9.015 | 9.015 | 0.000 | 199897377 | 1000.0 | 1028.2 | |
| 2 | 9.158 | 9.159 | -0.001 | 60429111 | 1000.0 | 1017.2 | |
| 2 | 9.912 | 9.912 | 0.000 | 601966686 | 1000.0 | 1035.0 | |
| | | Average of Peak Amounts = | | | | 1024.9 | |
| | | | | | | RPD = 0.01 | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | | | | | 2030.1 | |
| 2 | | | | | | 1984.9 | |
| | | | | | | RPD = 2.25 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_L7_00017 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

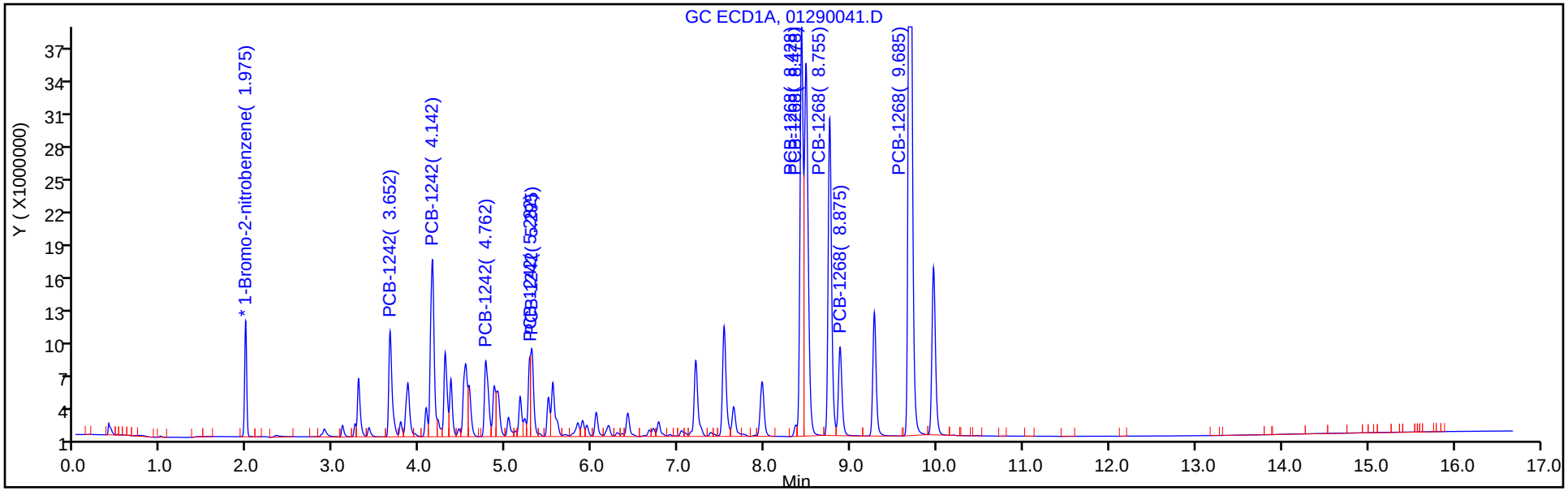
Report Date: 30-Jan-2019 14:58:35 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

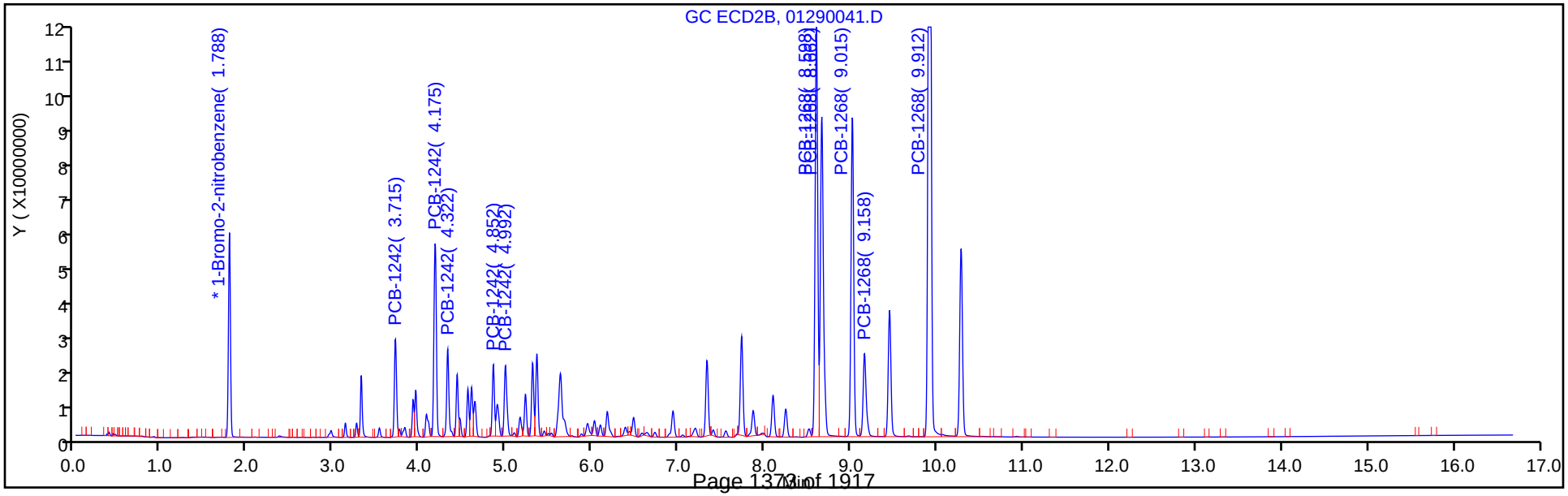
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 04:15:34 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | STD7 | | | Worklist Smp#: | 41 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 41 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/10  Calibration Date: 01/29/2019 17:21

Instrument ID: SGC_J  Calib Start Date: 01/29/2019 14:54

GC Column: CLP1  ID: 0.32(mm)  Calib End Date: 01/29/2019 17:00

Lab File ID: 01290010.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1248 Peak 1 | Lin1 | | 0.2238 | | 265 | 250 | 5.8 | 20.0 |
| PCB-1248 Peak 2 | Lin1 | | 0.2059 | | 266 | 250 | 6.3 | 20.0 |
| PCB-1248 Peak 3 | Lin1 | | 0.1177 | | 274 | 250 | 9.5 | 20.0 |
| PCB-1248 Peak 4 | Lin1 | | 0.1308 | | 253 | 250 | 1.1 | 20.0 |
| PCB-1248 Peak 5 | Lin1 | | 0.0912 | | 262 | 250 | 4.8 | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/10 Calibration Date: 01/29/2019 17:21

Instrument ID: SGC_J Calib Start Date: 01/29/2019 14:54

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 01/29/2019 17:00

Lab File ID: 01290010.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1248 Peak 1 | 4.53 | 4.28 | 4.78 |
| PCB-1248 Peak 2 | 4.76 | 4.51 | 5.01 |
| PCB-1248 Peak 3 | 4.86 | 4.61 | 5.11 |
| PCB-1248 Peak 4 | 5.54 | 5.29 | 5.79 |
| PCB-1248 Peak 5 | 6.05 | 5.80 | 6.30 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290010.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 29-Jan-2019 17:21:57 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0078470-010
Operator ID: TEM Instrument ID: SGC_J
Sublist:

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:33 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:33:58

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.977 | -0.002 | 18185848 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.791 | -0.003 | 105428216 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | |
| 1 | 4.528 | 4.528 | 0.000 | 10176463 | 250.0 | 264.6 | |
| 1 | 4.761 | 4.761 | 0.000 | 9360400 | 250.0 | 265.7 | |
| 1 | 4.858 | 4.861 | -0.003 | 5352975 | 250.0 | 273.8 | |
| 1 | 5.541 | 5.541 | 0.000 | 5946524 | 250.0 | 252.9 | |
| 1 | 6.045 | 6.045 | 0.000 | 4148205 | 250.0 | 262.1 | |
| | | Average of Peak Amounts = | | | | 263.8 | |
| 2 | 4.175 | 4.175 | 0.000 | 22148350 | 250.0 | 287.7 | |
| 2 | 4.555 | 4.555 | 0.000 | 11347948 | 250.0 | 255.0 | |
| 2 | 4.851 | 4.851 | 0.000 | 16302160 | 250.0 | 239.5 | |
| 2 | 4.991 | 4.991 | 0.000 | 18975478 | 250.0 | 279.6 | |
| 2 | 6.175 | 6.175 | 0.000 | 10556875 | 250.0 | 241.9 | |
| | | Average of Peak Amounts = | | | | 260.8 | |
| | | | | | | RPD = 1.16 | |

## Reagents:

| | | | |
|---|---|---|---|
| AR_1248_ICV_00014 | Amount Added: 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: 0.10 | Units: mL | Run Reagent |

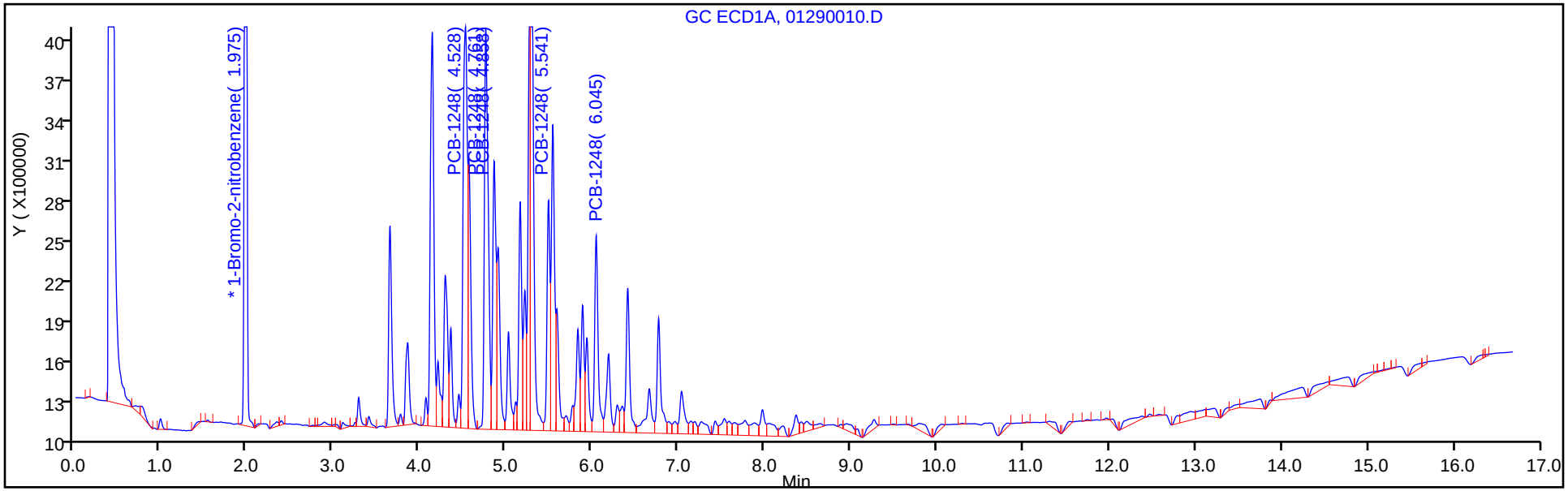
Report Date: 30-Jan-2019 14:59:36 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

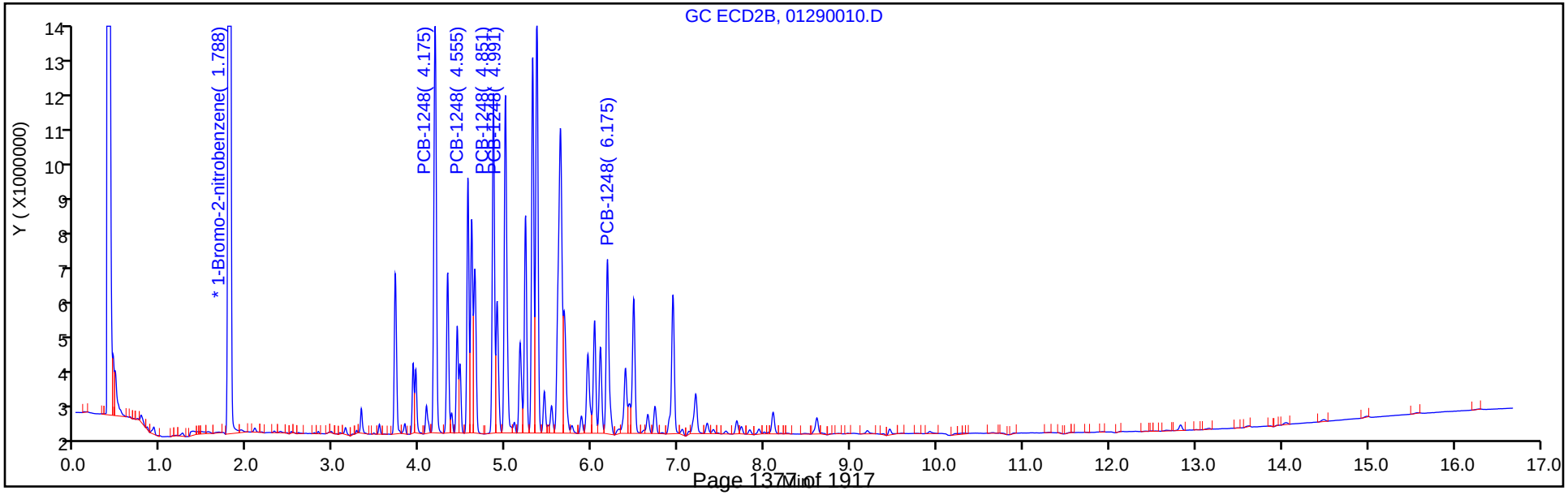
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290010.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 17:21:57 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | ICV | | | Worklist Smp#: | 10 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 10 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/10  Calibration Date: 01/29/2019 17:21

Instrument ID: SGC_J  Calib Start Date: 01/29/2019 14:54

GC Column: CLP2  ID: 0.32(mm)  Calib End Date: 01/29/2019 17:00

Lab File ID: 01290010.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1248 Peak 1 | Lin1 | | 0.0840 | | 288 | 250 | 15.1 | 20.0 |
| PCB-1248 Peak 2 | Lin1 | | 0.0431 | | 255 | 250 | 2.0 | 20.0 |
| PCB-1248 Peak 3 | Qua1 | | 0.0619 | | 239 | 250 | -4.2 | 20.0 |
| PCB-1248 Peak 4 | Lin1 | | 0.0720 | | 280 | 250 | 11.9 | 20.0 |
| PCB-1248 Peak 5 | Lin1 | | 0.0401 | | 242 | 250 | -3.2 | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/10 Calibration Date: 01/29/2019 17:21

Instrument ID: SGC_J Calib Start Date: 01/29/2019 14:54

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 01/29/2019 17:00

Lab File ID: 01290010.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1248 Peak 1 | 4.18 | 3.93 | 4.43 |
| PCB-1248 Peak 2 | 4.56 | 4.31 | 4.81 |
| PCB-1248 Peak 3 | 4.85 | 4.60 | 5.10 |
| PCB-1248 Peak 4 | 4.99 | 4.74 | 5.24 |
| PCB-1248 Peak 5 | 6.18 | 5.93 | 6.43 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290010.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 29-Jan-2019 17:21:57 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0078470-010
Operator ID: TEM Instrument ID: SGC_J
Sublist:

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:33 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:33:58

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.977 | -0.002 | 18185848 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.791 | -0.003 | 105428216 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 4 PCB-1248 | | | | | | | |
| 1 | 4.528 | 4.528 | 0.000 | 10176463 | 250.0 | 264.6 | |
| 1 | 4.761 | 4.761 | 0.000 | 9360400 | 250.0 | 265.7 | |
| 1 | 4.858 | 4.861 | -0.003 | 5352975 | 250.0 | 273.8 | |
| 1 | 5.541 | 5.541 | 0.000 | 5946524 | 250.0 | 252.9 | |
| 1 | 6.045 | 6.045 | 0.000 | 4148205 | 250.0 | 262.1 | |
| | | Average of Peak Amounts = | | | | 263.8 | |
| 2 | 4.175 | 4.175 | 0.000 | 22148350 | 250.0 | 287.7 | |
| 2 | 4.555 | 4.555 | 0.000 | 11347948 | 250.0 | 255.0 | |
| 2 | 4.851 | 4.851 | 0.000 | 16302160 | 250.0 | 239.5 | |
| 2 | 4.991 | 4.991 | 0.000 | 18975478 | 250.0 | 279.6 | |
| 2 | 6.175 | 6.175 | 0.000 | 10556875 | 250.0 | 241.9 | |
| | | Average of Peak Amounts = | | | | 260.8 | |
| | | | | | | RPD = 1.16 | |

## Reagents:

| | | | |
|---|---|---|---|
| AR_1248_ICV_00014 | Amount Added: 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: 0.10 | Units: mL | Run Reagent |

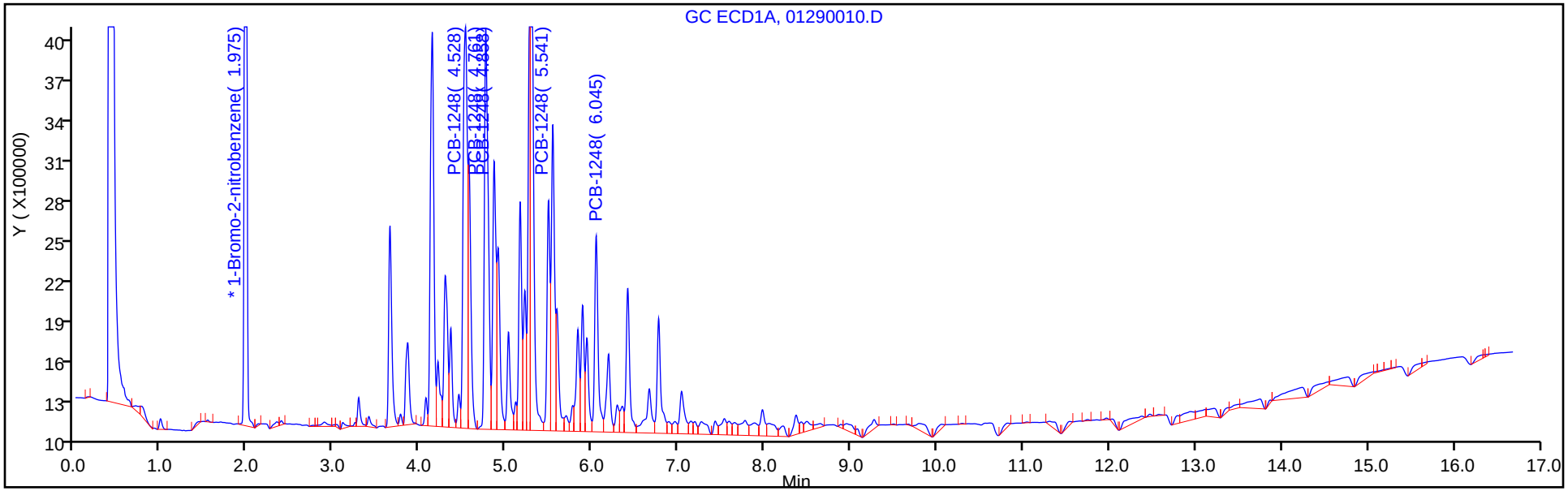
Report Date: 30-Jan-2019 14:59:36 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

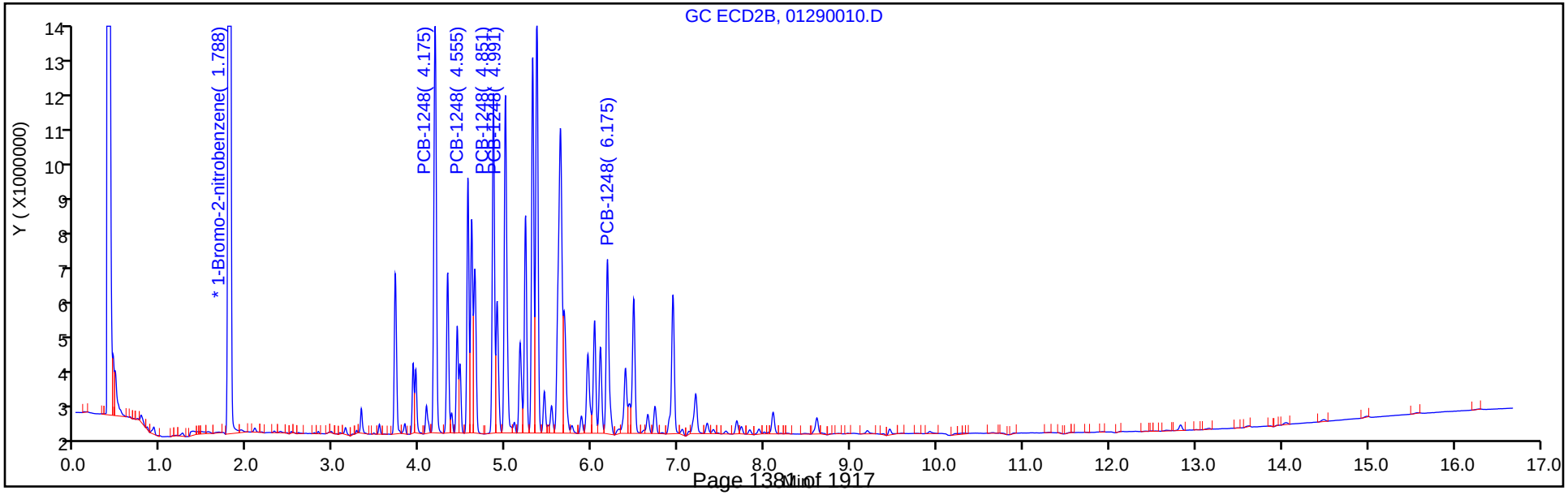
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290010.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 17:21:57 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | ICV | | | Worklist Smp#: | 10 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 10 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/18  Calibration Date: 01/29/2019 20:10

Instrument ID: SGC_J  Calib Start Date: 01/29/2019 17:42

GC Column: CLP1  ID: 0.32(mm)  Calib End Date: 01/29/2019 19:49

Lab File ID: 01290018.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1221 Peak 1 | Lin1 | | 0.0418 | | 229 | 250 | -8.3 | 20.0 |
| PCB-1221 Peak 2 | Ave | 0.0271 | 0.0248 | | 229 | 250 | -8.6 | 20.0 |
| PCB-1221 Peak 3 | Lin1 | | 0.1147 | | 229 | 250 | -8.5 | 20.0 |
| PCB-1254 Peak 1 | Lin1 | | 0.2096 | | 245 | 250 | -2.0 | 20.0 |
| PCB-1254 Peak 2 | Lin1 | | 0.1439 | | 228 | 250 | -8.8 | 20.0 |
| PCB-1254 Peak 3 | Lin1 | | 0.2729 | | 232 | 250 | -7.0 | 20.0 |
| PCB-1254 Peak 4 | Lin1 | | 0.1930 | | 236 | 250 | -5.7 | 20.0 |
| PCB-1254 Peak 5 | Lin1 | | 0.2512 | | 248 | 250 | -1.0 | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/18 Calibration Date: 01/29/2019 20:10

Instrument ID: SGC_J Calib Start Date: 01/29/2019 17:42

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 01/29/2019 19:49

Lab File ID: 01290018.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1221 Peak 1 | 3.10 | 2.85 | 3.35 |
| PCB-1221 Peak 2 | 3.25 | 3.00 | 3.50 |
| PCB-1221 Peak 3 | 3.29 | 3.04 | 3.54 |
| PCB-1254 Peak 1 | 5.54 | 5.29 | 5.79 |
| PCB-1254 Peak 2 | 5.88 | 5.64 | 6.14 |
| PCB-1254 Peak 3 | 6.04 | 5.79 | 6.29 |
| PCB-1254 Peak 4 | 6.41 | 6.16 | 6.66 |
| PCB-1254 Peak 5 | 7.03 | 6.79 | 7.29 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290018.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 29-Jan-2019 20:10:36 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0078470-018
Operator ID: TEM Instrument ID: SGC_J
Sublist:

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:16 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:42:37

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.979 | -0.001 | 19058571 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.789 | -0.001 | 107097769 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.101 | 3.101 | 0.000 | 1991619 | 250.0 | 229.3 | |
| 1 | 3.248 | 3.247 | 0.001 | 1181241 | 250.0 | 228.5 | |
| 1 | 3.288 | 3.287 | 0.001 | 5463585 | 250.0 | 228.7 | |
| | | Average of Peak Amounts = | | | | 228.8 | |
| 2 | 3.135 | 3.134 | 0.001 | 5596575 | 250.0 | 239.3 | |
| 2 | 3.265 | 3.264 | 0.001 | 3845210 | 250.0 | 268.5 | |
| 2 | 3.318 | 3.318 | 0.000 | 12687564 | 250.0 | 247.2 | |
| | | Average of Peak Amounts = | | | | 251.7 | |
| | | | | | | RPD = 9.52 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.544 | 5.544 | 0.000 | 9986534 | 250.0 | 245.0 | |
| 1 | 5.884 | 5.887 | -0.003 | 6855426 | 250.0 | 228.0 | |
| 1 | 6.044 | 6.044 | 0.000 | 13001483 | 250.0 | 232.4 | |
| 1 | 6.411 | 6.411 | 0.000 | 9197007 | 250.0 | 235.7 | |
| 1 | 7.034 | 7.037 | -0.003 | 11966810 | 250.0 | 247.6 | |
| | | Average of Peak Amounts = | | | | 237.8 | |
| 2 | 5.598 | 5.598 | 0.000 | 21693422 | 250.0 | 246.6 | |
| 2 | 6.025 | 6.024 | 0.001 | 16207339 | 250.0 | 243.7 | |
| 2 | 6.175 | 6.174 | 0.001 | 29870350 | 250.0 | 239.7 | |
| 2 | 6.725 | 6.724 | 0.001 | 13887779 | 250.0 | 267.7 | |
| 2 | 7.198 | 7.198 | 0.000 | 32755505 | 250.0 | 262.0 | |
| | | Average of Peak Amounts = | | | | 251.9 | |
| | | | | | | RPD = 5.79 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_ICV_00015 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

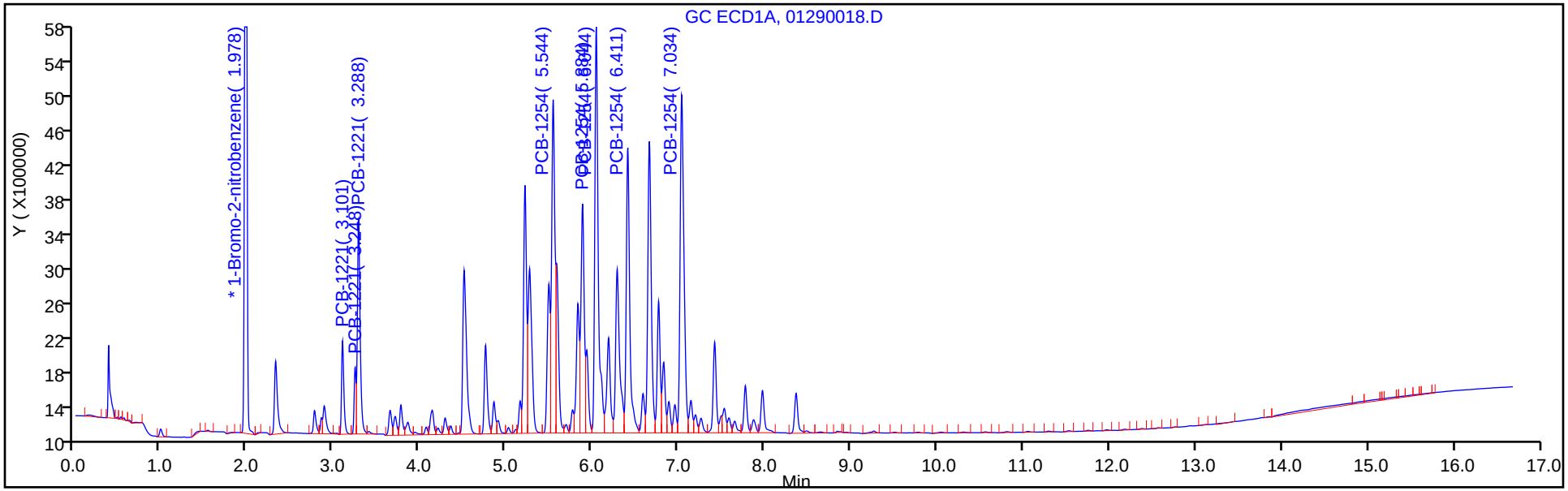
Report Date: 30-Jan-2019 14:59:19 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

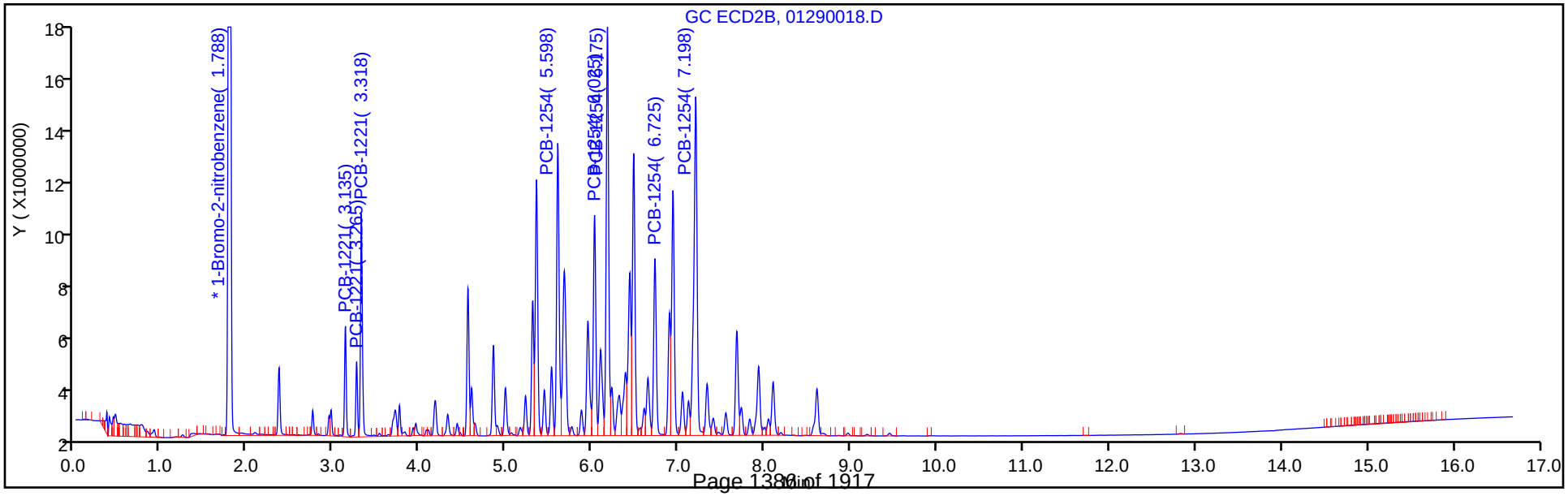
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290018.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 20:10:36 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | ICV | | | Worklist Smp#: | 18 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 18 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/18  Calibration Date: 01/29/2019 20:10

Instrument ID: SGC_J  Calib Start Date: 01/29/2019 17:42

GC Column: CLP2  ID: 0.32(mm)  Calib End Date: 01/29/2019 19:49

Lab File ID: 01290018.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1221 Peak 1 | Lin2 | | 0.0209 | | 239 | 250 | -4.3 | 20.0 |
| PCB-1221 Peak 2 | Lin1 | | 0.0144 | | 268 | 250 | 7.4 | 20.0 |
| PCB-1221 Peak 3 | Lin1 | | 0.0474 | | 247 | 250 | -1.1 | 20.0 |
| PCB-1254 Peak 1 | Lin1 | | 0.0810 | | 247 | 250 | -1.4 | 20.0 |
| PCB-1254 Peak 2 | Lin1 | | 0.0605 | | 244 | 250 | -2.5 | 20.0 |
| PCB-1254 Peak 3 | Lin1 | | 0.1116 | | 240 | 250 | -4.1 | 20.0 |
| PCB-1254 Peak 4 | Lin1 | | 0.0519 | | 268 | 250 | 7.1 | 20.0 |
| PCB-1254 Peak 5 | Lin1 | | 0.1223 | | 262 | 250 | 4.8 | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/18 Calibration Date: 01/29/2019 20:10

Instrument ID: SGC_J Calib Start Date: 01/29/2019 17:42

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 01/29/2019 19:49

Lab File ID: 01290018.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1221 Peak 1 | 3.14 | 2.88 | 3.38 |
| PCB-1221 Peak 2 | 3.27 | 3.01 | 3.51 |
| PCB-1221 Peak 3 | 3.32 | 3.07 | 3.57 |
| PCB-1254 Peak 1 | 5.60 | 5.35 | 5.85 |
| PCB-1254 Peak 2 | 6.03 | 5.77 | 6.27 |
| PCB-1254 Peak 3 | 6.18 | 5.92 | 6.42 |
| PCB-1254 Peak 4 | 6.73 | 6.47 | 6.97 |
| PCB-1254 Peak 5 | 7.20 | 6.95 | 7.45 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290018.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 29-Jan-2019 20:10:36 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0078470-018
Operator ID: TEM Instrument ID: SGC_J
Sublist:

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:16 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 11:42:37

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.978 | 1.979 | -0.001 | 19058571 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.789 | -0.001 | 107097769 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 3 PCB-1221 | | | | | | | |
| 1 | 3.101 | 3.101 | 0.000 | 1991619 | 250.0 | 229.3 | |
| 1 | 3.248 | 3.247 | 0.001 | 1181241 | 250.0 | 228.5 | |
| 1 | 3.288 | 3.287 | 0.001 | 5463585 | 250.0 | 228.7 | |
| | | Average of Peak Amounts = | | | | 228.8 | |
| 2 | 3.135 | 3.134 | 0.001 | 5596575 | 250.0 | 239.3 | |
| 2 | 3.265 | 3.264 | 0.001 | 3845210 | 250.0 | 268.5 | |
| 2 | 3.318 | 3.318 | 0.000 | 12687564 | 250.0 | 247.2 | |
| | | Average of Peak Amounts = | | | | 251.7 | |
| | | | | | | RPD = 9.52 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | |
| 1 | 5.544 | 5.544 | 0.000 | 9986534 | 250.0 | 245.0 | |
| 1 | 5.884 | 5.887 | -0.003 | 6855426 | 250.0 | 228.0 | |
| 1 | 6.044 | 6.044 | 0.000 | 13001483 | 250.0 | 232.4 | |
| 1 | 6.411 | 6.411 | 0.000 | 9197007 | 250.0 | 235.7 | |
| 1 | 7.034 | 7.037 | -0.003 | 11966810 | 250.0 | 247.6 | |
| | | Average of Peak Amounts = | | | | 237.8 | |
| 2 | 5.598 | 5.598 | 0.000 | 21693422 | 250.0 | 246.6 | |
| 2 | 6.025 | 6.024 | 0.001 | 16207339 | 250.0 | 243.7 | |
| 2 | 6.175 | 6.174 | 0.001 | 29870350 | 250.0 | 239.7 | |
| 2 | 6.725 | 6.724 | 0.001 | 13887779 | 250.0 | 267.7 | |
| 2 | 7.198 | 7.198 | 0.000 | 32755505 | 250.0 | 262.0 | |
| | | Average of Peak Amounts = | | | | 251.9 | |
| | | | | | | RPD = 5.79 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_2154_ICV_00015 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

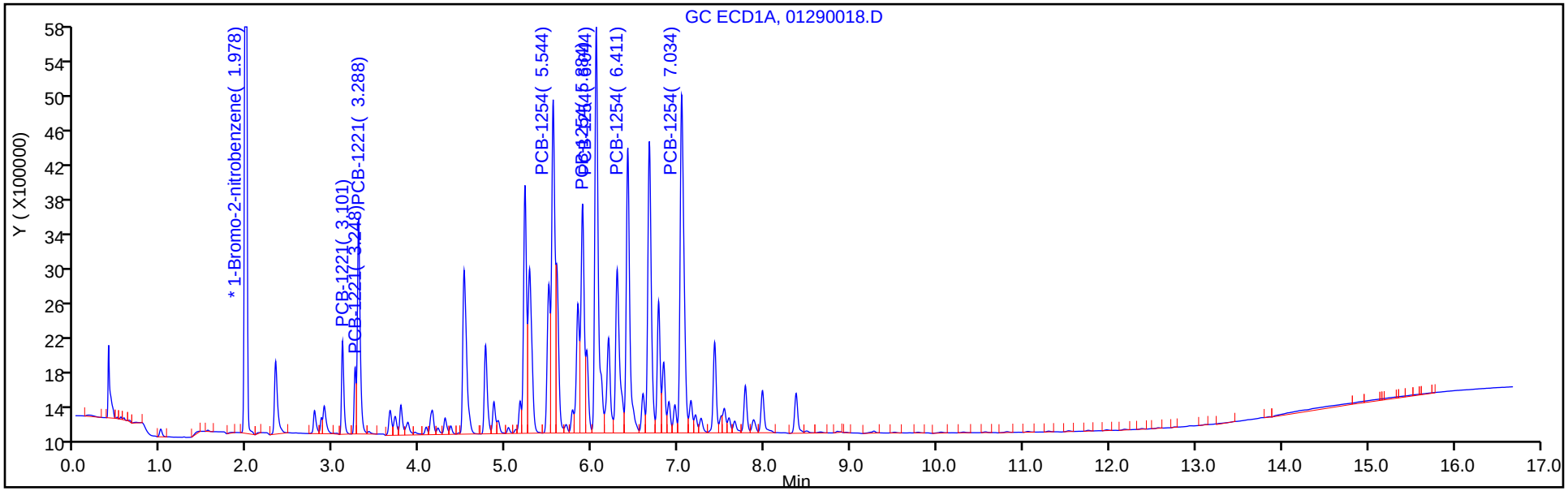
Report Date: 30-Jan-2019 14:59:19 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

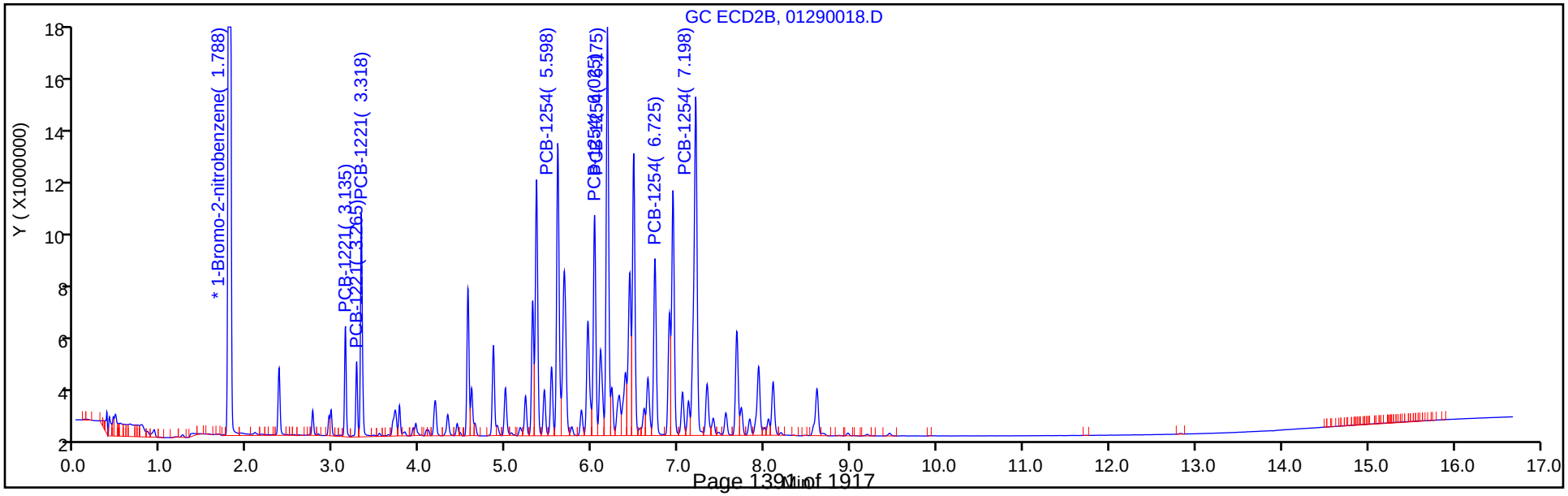
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290018.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 20:10:36 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | ICV | | | Worklist Smp#: | 18 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 18 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/26  Calibration Date: 01/29/2019 22:59

Instrument ID: SGC_J  Calib Start Date: 01/29/2019 20:31

GC Column: CLP1  ID: 0.32(mm)  Calib End Date: 01/29/2019 22:38

Lab File ID: 01290026.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 Peak 1 | Lin1 | | 0.0868 | | 266 | 250 | 6.4 | 20.0 |
| PCB-1016 Peak 2 | Lin1 | | 0.1862 | | 255 | 250 | 2.0 | 20.0 |
| PCB-1016 Peak 3 | Lin1 | | 0.3016 | | 223 | 250 | -11.0 | 20.0 |
| PCB-1016 Peak 4 | Lin1 | | 0.1352 | | 247 | 250 | -1.0 | 20.0 |
| PCB-1016 Peak 5 | Lin1 | | 0.1496 | | 256 | 250 | 2.5 | 20.0 |
| PCB-1260 Peak 1 | Lin1 | | 0.2221 | | 270 | 250 | 7.8 | 20.0 |
| PCB-1260 Peak 2 | Lin1 | | 0.1304 | | 283 | 250 | 13.0 | 20.0 |
| PCB-1260 Peak 3 | Lin1 | | 0.1658 | | 230 | 250 | -8.0 | 20.0 |
| PCB-1260 Peak 4 | Lin1 | | 0.3524 | | 220 | 250 | -12.1 | 20.0 |
| PCB-1260 Peak 5 | Lin1 | | 0.1548 | | 230 | 250 | -8.1 | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/26 Calibration Date: 01/29/2019 22:59

Instrument ID: SGC_J Calib Start Date: 01/29/2019 20:31

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 01/29/2019 22:38

Lab File ID: 01290026.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1016 Peak 1 | 3.29 | 3.04 | 3.54 |
| PCB-1016 Peak 2 | 3.65 | 3.40 | 3.90 |
| PCB-1016 Peak 3 | 4.14 | 3.89 | 4.39 |
| PCB-1016 Peak 4 | 4.29 | 4.04 | 4.54 |
| PCB-1016 Peak 5 | 4.76 | 4.51 | 5.01 |
| PCB-1260 Peak 1 | 6.29 | 6.04 | 6.54 |
| PCB-1260 Peak 2 | 6.83 | 6.58 | 7.08 |
| PCB-1260 Peak 3 | 7.53 | 7.28 | 7.78 |
| PCB-1260 Peak 4 | 7.97 | 7.73 | 8.23 |
| PCB-1260 Peak 5 | 8.36 | 8.12 | 8.62 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290026.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 29-Jan-2019 22:59:07 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0078470-026
Operator ID: TEM Instrument ID: SGC_J
Sublist:

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:00 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:36:56

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 19116825 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 106734485 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.286 | 3.286 | 0.000 | 4146191 | 250.0 | 266.1 | |
| 1 | 3.653 | 3.652 | 0.001 | 8900489 | 250.0 | 255.1 | |
| 1 | 4.143 | 4.142 | 0.001 | 14415346 | 250.0 | 222.6 | |
| 1 | 4.290 | 4.292 | -0.002 | 6459210 | 250.0 | 247.4 | |
| 1 | 4.763 | 4.762 | 0.001 | 7151240 | 250.0 | 256.3 | |
| | | Average of Peak Amounts = | | | | 249.5 | |
| 2 | 3.713 | 3.712 | 0.001 | 17521396 | 250.0 | 243.3 | |
| 2 | 4.176 | 4.176 | 0.000 | 37138015 | 250.0 | 238.0 | |
| 2 | 4.320 | 4.322 | -0.002 | 16127839 | 250.0 | 242.7 | |
| 2 | 4.556 | 4.556 | 0.000 | 8172222 | 250.0 | 228.9 | |
| 2 | 4.850 | 4.852 | -0.002 | 12903521 | 250.0 | 254.0 | |
| | | Average of Peak Amounts = | | | | 241.4 | |
| | | | | | | RPD = 3.30 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.286 | 6.289 | -0.003 | 10613825 | 250.0 | 269.5 | |
| 1 | 6.826 | 6.829 | -0.003 | 6231743 | 250.0 | 282.5 | |
| 1 | 7.533 | 7.532 | 0.001 | 7921591 | 250.0 | 229.9 | |
| 1 | 7.973 | 7.976 | -0.003 | 16841673 | 250.0 | 219.7 | |
| 1 | 8.363 | 8.366 | -0.003 | 7399485 | 250.0 | 229.9 | |
| | | Average of Peak Amounts = | | | | 246.3 | |
| 2 | 6.726 | 6.726 | 0.000 | 27602477 | 250.0 | 263.8 | |
| 2 | 7.196 | 7.196 | 0.000 | 41150915 | 250.0 | 274.0 | |
| 2 | 7.330 | 7.332 | -0.002 | 18634642 | 250.0 | 220.5 | |
| 2 | 8.096 | 8.099 | -0.003 | 43570058 | 250.0 | 222.6 | |
| 2 | 8.603 | 8.606 | -0.003 | 31704282 | 250.0 | 224.2 | |
| | | Average of Peak Amounts = | | | | 241.0 | |
| | | | | | | RPD = 2.16 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_ICV_00015 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

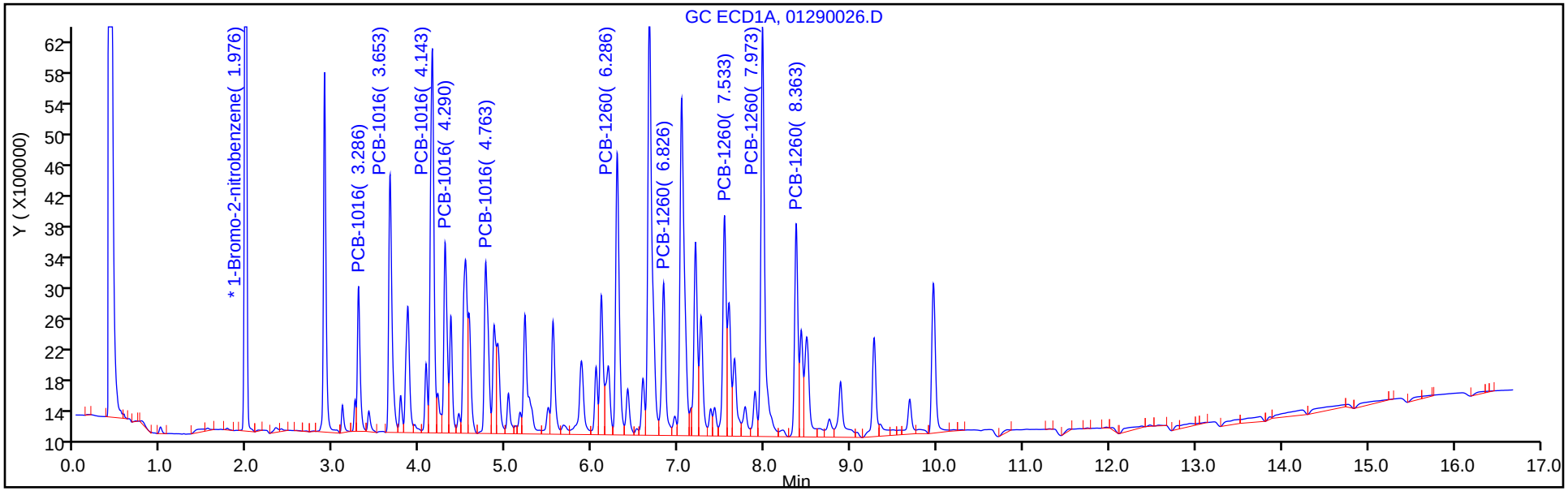
Report Date: 30-Jan-2019 14:59:03 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

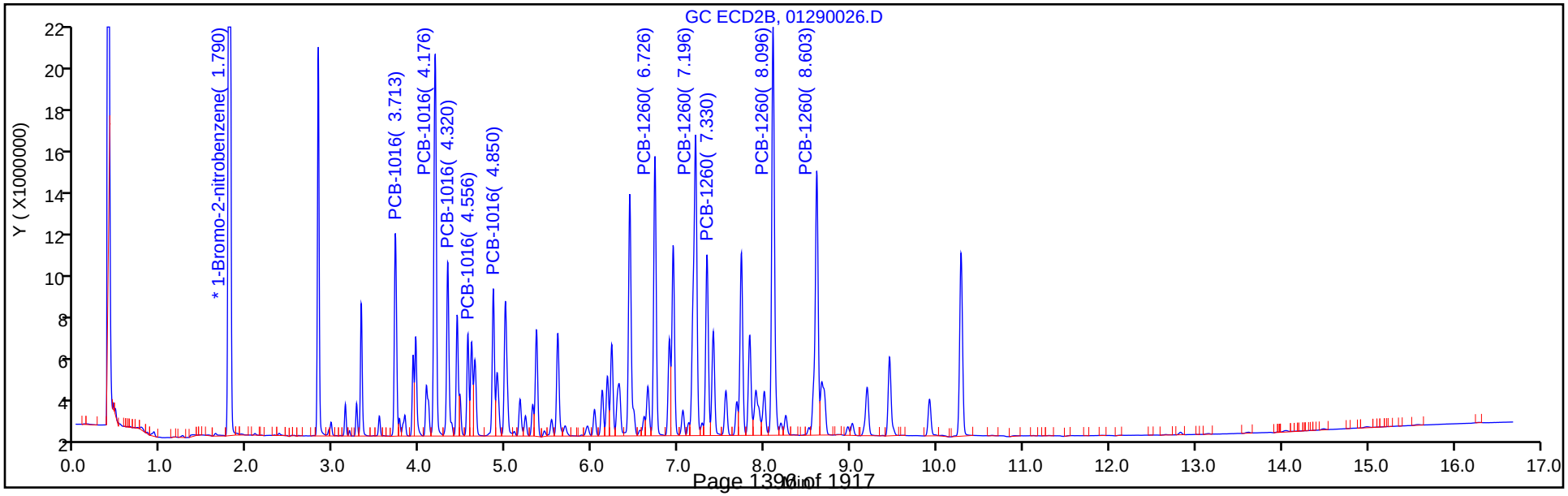
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290026.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 22:59:07 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | ICV | | | Worklist Smp#: | 26 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 26 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/26  Calibration Date: 01/29/2019 22:59

Instrument ID: SGC_J  Calib Start Date: 01/29/2019 20:31

GC Column: CLP2  ID: 0.32(mm)  Calib End Date: 01/29/2019 22:38

Lab File ID: 01290026.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 Peak 1 | Lin2 | | 0.0657 | | 243 | 250 | -2.7 | 20.0 |
| PCB-1016 Peak 2 | Lin2 | | 0.1392 | | 238 | 250 | -4.8 | 20.0 |
| PCB-1016 Peak 3 | Lin2 | | 0.0604 | | 243 | 250 | -2.9 | 20.0 |
| PCB-1016 Peak 4 | Qua1 | | 0.0306 | | 229 | 250 | -8.4 | 20.0 |
| PCB-1016 Peak 5 | Qua1 | | 0.0484 | | 254 | 250 | 1.6 | 20.0 |
| PCB-1260 Peak 1 | Lin2 | | 0.1034 | | 264 | 250 | 5.5 | 20.0 |
| PCB-1260 Peak 2 | Lin2 | | 0.1542 | | 274 | 250 | 9.6 | 20.0 |
| PCB-1260 Peak 3 | Lin2 | | 0.0698 | | 221 | 250 | -11.8 | 20.0 |
| PCB-1260 Peak 4 | Lin2 | | 0.1633 | | 223 | 250 | -10.9 | 20.0 |
| PCB-1260 Peak 5 | Lin2 | | 0.1188 | | 224 | 250 | -10.3 | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/26 Calibration Date: 01/29/2019 22:59

Instrument ID: SGC_J Calib Start Date: 01/29/2019 20:31

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 01/29/2019 22:38

Lab File ID: 01290026.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1016 Peak 1 | 3.71 | 3.46 | 3.96 |
| PCB-1016 Peak 2 | 4.18 | 3.93 | 4.43 |
| PCB-1016 Peak 3 | 4.32 | 4.07 | 4.57 |
| PCB-1016 Peak 4 | 4.56 | 4.31 | 4.81 |
| PCB-1016 Peak 5 | 4.85 | 4.60 | 5.10 |
| PCB-1260 Peak 1 | 6.73 | 6.48 | 6.98 |
| PCB-1260 Peak 2 | 7.20 | 6.95 | 7.45 |
| PCB-1260 Peak 3 | 7.33 | 7.08 | 7.58 |
| PCB-1260 Peak 4 | 8.10 | 7.85 | 8.35 |
| PCB-1260 Peak 5 | 8.60 | 8.36 | 8.86 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290026.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 29-Jan-2019 22:59:07 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0078470-026
Operator ID: TEM Instrument ID: SGC_J
Sublist:

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:59:00 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:36:56

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.976 | 1.979 | -0.003 | 19116825 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 106734485 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.286 | 3.286 | 0.000 | 4146191 | 250.0 | 266.1 | |
| 1 | 3.653 | 3.652 | 0.001 | 8900489 | 250.0 | 255.1 | |
| 1 | 4.143 | 4.142 | 0.001 | 14415346 | 250.0 | 222.6 | |
| 1 | 4.290 | 4.292 | -0.002 | 6459210 | 250.0 | 247.4 | |
| 1 | 4.763 | 4.762 | 0.001 | 7151240 | 250.0 | 256.3 | |
| | | Average of Peak Amounts = | | | | 249.5 | |
| 2 | 3.713 | 3.712 | 0.001 | 17521396 | 250.0 | 243.3 | |
| 2 | 4.176 | 4.176 | 0.000 | 37138015 | 250.0 | 238.0 | |
| 2 | 4.320 | 4.322 | -0.002 | 16127839 | 250.0 | 242.7 | |
| 2 | 4.556 | 4.556 | 0.000 | 8172222 | 250.0 | 228.9 | |
| 2 | 4.850 | 4.852 | -0.002 | 12903521 | 250.0 | 254.0 | |
| | | Average of Peak Amounts = | | | | 241.4 | |
| | | | | | | RPD = 3.30 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.286 | 6.289 | -0.003 | 10613825 | 250.0 | 269.5 | |
| 1 | 6.826 | 6.829 | -0.003 | 6231743 | 250.0 | 282.5 | |
| 1 | 7.533 | 7.532 | 0.001 | 7921591 | 250.0 | 229.9 | |
| 1 | 7.973 | 7.976 | -0.003 | 16841673 | 250.0 | 219.7 | |
| 1 | 8.363 | 8.366 | -0.003 | 7399485 | 250.0 | 229.9 | |
| | | Average of Peak Amounts = | | | | 246.3 | |
| 2 | 6.726 | 6.726 | 0.000 | 27602477 | 250.0 | 263.8 | |
| 2 | 7.196 | 7.196 | 0.000 | 41150915 | 250.0 | 274.0 | |
| 2 | 7.330 | 7.332 | -0.002 | 18634642 | 250.0 | 220.5 | |
| 2 | 8.096 | 8.099 | -0.003 | 43570058 | 250.0 | 222.6 | |
| 2 | 8.603 | 8.606 | -0.003 | 31704282 | 250.0 | 224.2 | |
| | | Average of Peak Amounts = | | | | 241.0 | |
| | | | | | | RPD = 2.16 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_ICV_00015 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

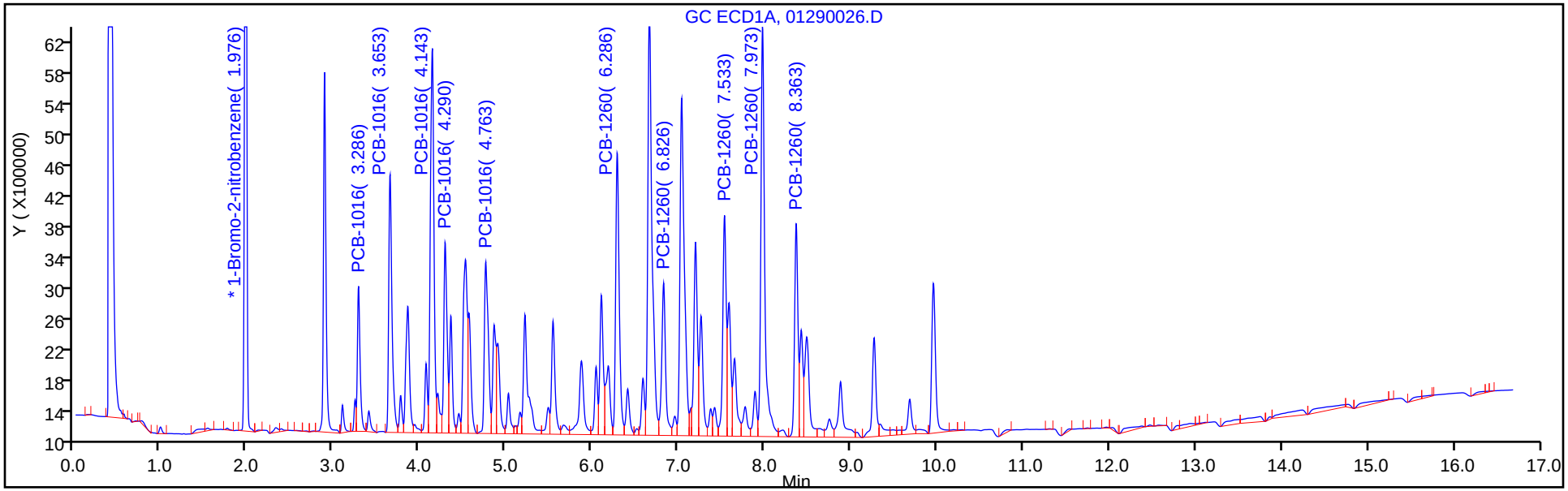
Report Date: 30-Jan-2019 14:59:03 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

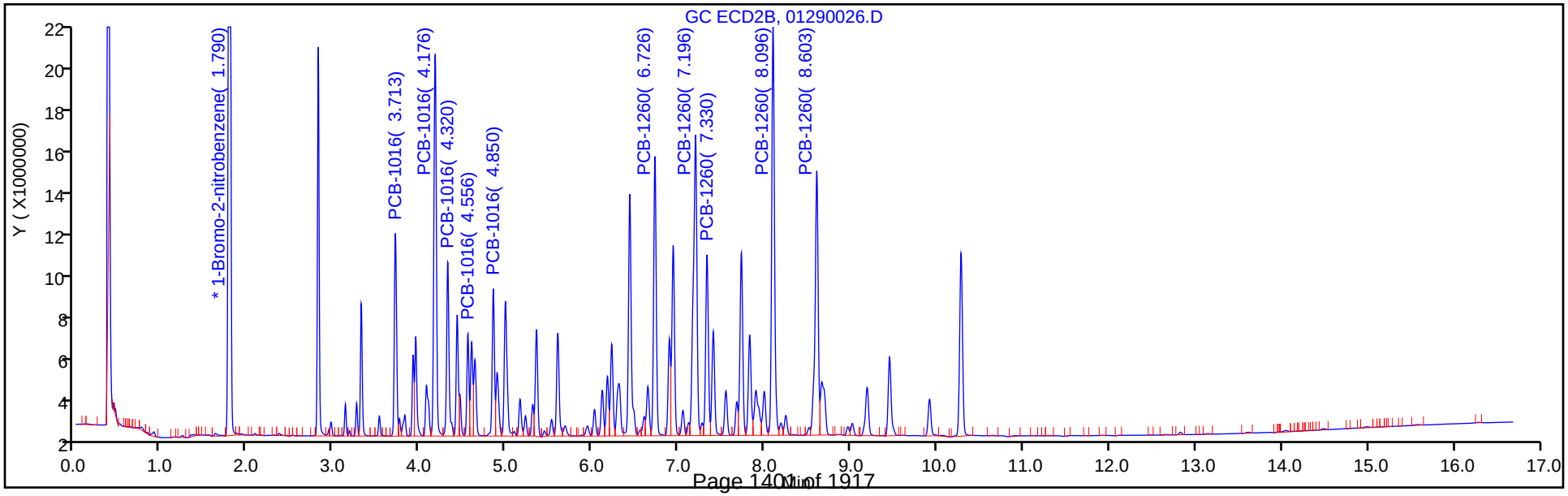
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290026.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 29-Jan-2019 22:59:07 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | ICV | | | Worklist Smp#: | 26 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 26 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/34  Calibration Date: 01/30/2019 01:48

Instrument ID: SGC_J  Calib Start Date: 01/29/2019 23:20

GC Column: CLP1  ID: 0.32(mm)  Calib End Date: 01/30/2019 01:26

Lab File ID: 01290034.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1232 Peak 1 | Lin1 | | 0.0956 | | 242 | 250 | -3.4 | 20.0 |
| PCB-1232 Peak 2 | Lin1 | | 0.0943 | | 256 | 250 | 2.3 | 20.0 |
| PCB-1232 Peak 3 | Lin1 | | 0.1292 | | 233 | 250 | -6.9 | 20.0 |
| PCB-1232 Peak 4 | Lin1 | | 0.0639 | | 255 | 250 | 2.0 | 20.0 |
| PCB-1232 Peak 5 | Lin1 | | 0.0692 | | 277 | 250 | 10.9 | 20.0 |
| PCB-1262 Peak 1 | Lin1 | | 0.3470 | | 264 | 250 | 5.7 | 20.0 |
| PCB-1262 Peak 2 | Lin1 | | 0.2506 | | 216 | 250 | -13.7 | 20.0 |
| PCB-1262 Peak 3 | Lin1 | | 0.2306 | | 225 | 250 | -10.0 | 20.0 |
| PCB-1262 Peak 4 | Lin1 | | 0.4843 | | 235 | 250 | -5.9 | 20.0 |
| PCB-1262 Peak 5 | Lin1 | | 0.1437 | | 244 | 250 | -2.5 | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/34 Calibration Date: 01/30/2019 01:48

Instrument ID: SGC_J Calib Start Date: 01/29/2019 23:20

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 01/30/2019 01:26

Lab File ID: 01290034.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1232 Peak 1 | 3.29 | 3.04 | 3.54 |
| PCB-1232 Peak 2 | 3.65 | 3.40 | 3.90 |
| PCB-1232 Peak 3 | 4.14 | 3.89 | 4.39 |
| PCB-1232 Peak 4 | 4.29 | 4.04 | 4.54 |
| PCB-1232 Peak 5 | 4.76 | 4.51 | 5.01 |
| PCB-1262 Peak 1 | 6.66 | 6.42 | 6.92 |
| PCB-1262 Peak 2 | 7.20 | 6.95 | 7.45 |
| PCB-1262 Peak 3 | 7.53 | 7.29 | 7.79 |
| PCB-1262 Peak 4 | 7.98 | 7.73 | 8.23 |
| PCB-1262 Peak 5 | 8.37 | 8.12 | 8.62 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290034.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 30-Jan-2019 01:48:01 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0078470-034
Operator ID: TEM Instrument ID: SGC_J
Sublist:

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:45 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:48:47

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.974 | 0.001 | 17204313 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.788 | 0.001 | 95342219 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | M |
| 1 | 3.285 | 3.285 | 0.000 | 4112582 | 250.0 | 241.6 | |
| 1 | 3.652 | 3.652 | 0.000 | 4053559 | 250.0 | 255.8 | |
| 1 | 4.142 | 4.142 | 0.000 | 5558688 | 250.0 | 232.9 | |
| 1 | 4.289 | 4.292 | -0.003 | 2748024 | 250.0 | 254.9 | |
| 1 | 4.762 | 4.762 | 0.000 | 2974865 | 250.0 | 277.1 | |
| | | Average of Peak Amounts = | | | | 252.4 | |
| 2 | 3.319 | 3.319 | 0.000 | 9320032 | 250.0 | 244.7 | M |
| 2 | 3.712 | 3.712 | 0.000 | 8369249 | 250.0 | 260.6 | M |
| 2 | 4.176 | 4.176 | 0.000 | 15713368 | 250.0 | 246.3 | M |
| 2 | 4.322 | 4.322 | 0.000 | 7466479 | 250.0 | 261.0 | M |
| 2 | 4.849 | 4.852 | -0.003 | 5685674 | 250.0 | 250.9 | M |
| | | Average of Peak Amounts = | | | | 252.7 | |
| | | | | | | RPD = 0.10 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.662 | 6.665 | -0.003 | 14923577 | 250.0 | 264.1 | |
| 1 | 7.199 | 7.202 | -0.003 | 10776903 | 250.0 | 215.7 | |
| 1 | 7.532 | 7.535 | -0.003 | 9916190 | 250.0 | 225.1 | |
| 1 | 7.975 | 7.975 | 0.000 | 20830226 | 250.0 | 235.2 | |
| 1 | 8.365 | 8.365 | 0.000 | 6181309 | 250.0 | 243.8 | |
| | | Average of Peak Amounts = | | | | 236.8 | |
| 2 | 6.726 | 6.726 | 0.000 | 20537264 | 250.0 | 250.5 | |
| 2 | 7.329 | 7.329 | 0.000 | 26147960 | 250.0 | 223.4 | |
| 2 | 7.729 | 7.729 | 0.000 | 24455707 | 250.0 | 217.4 | |
| 2 | 8.096 | 8.096 | 0.000 | 52007383 | 250.0 | 238.6 | |
| 2 | 8.602 | 8.602 | 0.000 | 37621729 | 250.0 | 242.5 | |
| | | Average of Peak Amounts = | | | | 234.5 | |
| | | | | | | RPD = 0.99 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_ICV_00014 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

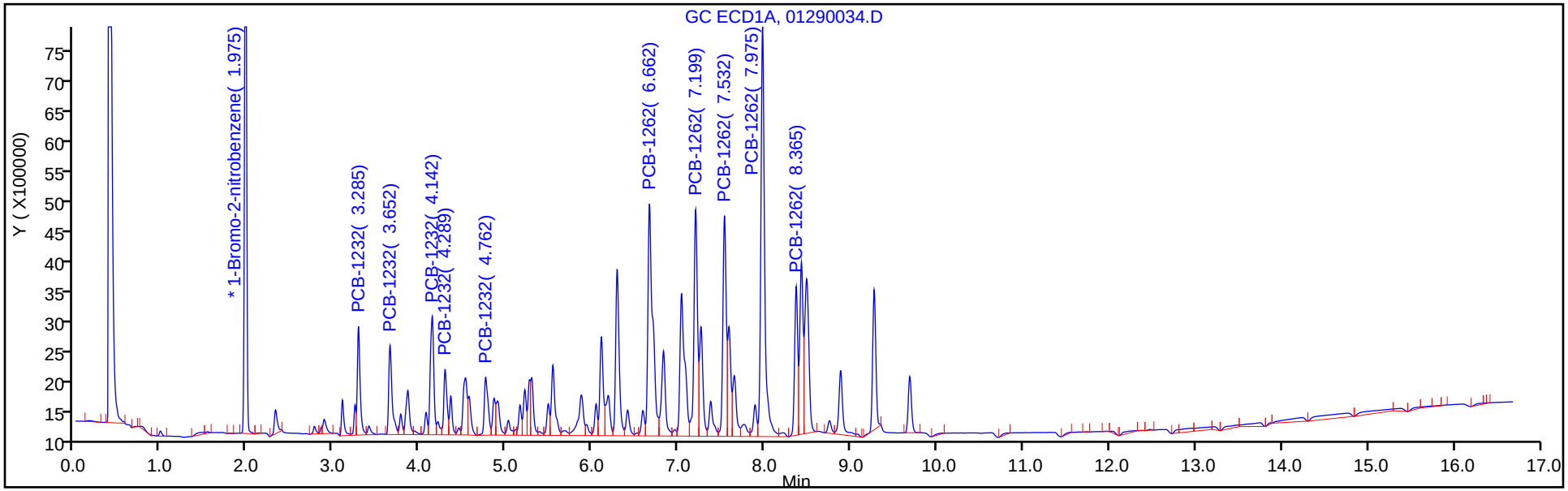
Report Date: 30-Jan-2019 14:58:47 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

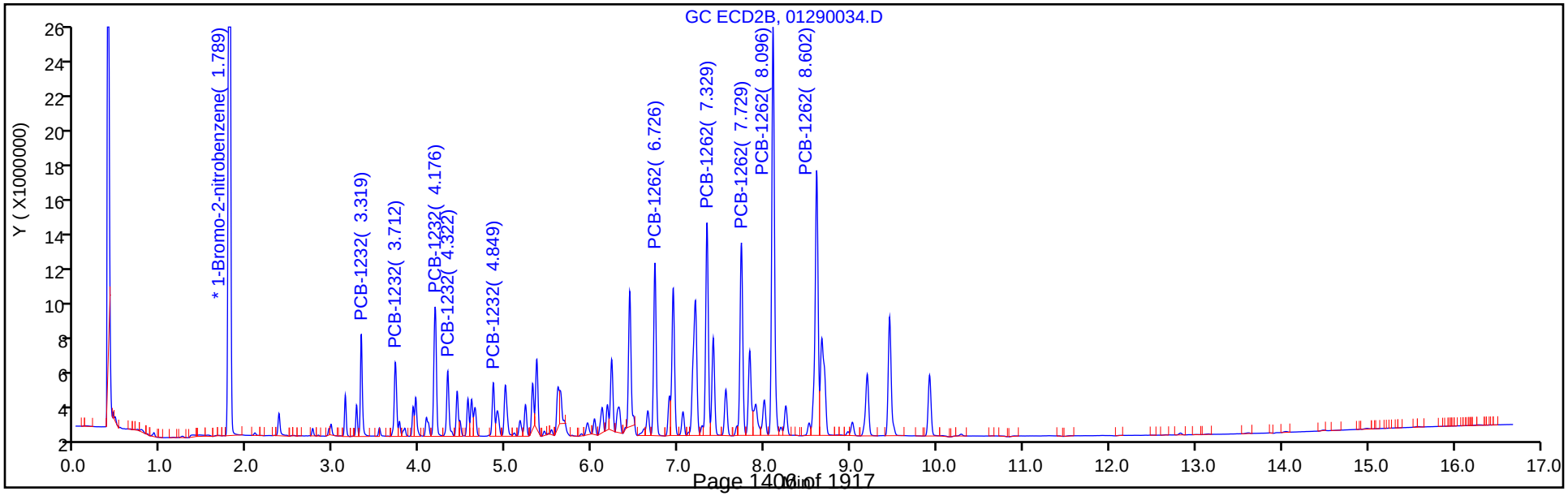
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290034.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 01:48:01 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | ICV | | | Worklist Smp#: | 34 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 34 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/34  Calibration Date: 01/30/2019 01:48

Instrument ID: SGC_J  Calib Start Date: 01/29/2019 23:20

GC Column: CLP2  ID: 0.32(mm)  Calib End Date: 01/30/2019 01:26

Lab File ID: 01290034.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1232 Peak 1 | Lin1 | | 0.0391 | | 245 | 250 | -2.1 | 20.0 |
| PCB-1232 Peak 2 | Lin1 | | 0.0351 | | 261 | 250 | 4.2 | 20.0 |
| PCB-1232 Peak 3 | Lin1 | | 0.0659 | | 246 | 250 | -1.5 | 20.0 |
| PCB-1232 Peak 4 | Lin1 | | 0.0313 | | 261 | 250 | 4.4 | 20.0 |
| PCB-1232 Peak 5 | Qua1 | | 0.0239 | | 251 | 250 | 0.3 | 20.0 |
| PCB-1262 Peak 1 | Lin1 | | 0.0862 | | 251 | 250 | 0.2 | 20.0 |
| PCB-1262 Peak 2 | Lin1 | | 0.1097 | | 223 | 250 | -10.6 | 20.0 |
| PCB-1262 Peak 3 | Lin1 | | 0.1026 | | 217 | 250 | -13.0 | 20.0 |
| PCB-1262 Peak 4 | Lin1 | | 0.2182 | | 239 | 250 | -4.5 | 20.0 |
| PCB-1262 Peak 5 | Lin1 | | 0.1578 | | 242 | 250 | -3.0 | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/34 Calibration Date: 01/30/2019 01:48

Instrument ID: SGC_J Calib Start Date: 01/29/2019 23:20

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 01/30/2019 01:26

Lab File ID: 01290034.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1232 Peak 1 | 3.32 | 3.07 | 3.57 |
| PCB-1232 Peak 2 | 3.71 | 3.46 | 3.96 |
| PCB-1232 Peak 3 | 4.18 | 3.93 | 4.43 |
| PCB-1232 Peak 4 | 4.32 | 4.07 | 4.57 |
| PCB-1232 Peak 5 | 4.85 | 4.60 | 5.10 |
| PCB-1262 Peak 1 | 6.73 | 6.48 | 6.98 |
| PCB-1262 Peak 2 | 7.33 | 7.08 | 7.58 |
| PCB-1262 Peak 3 | 7.73 | 7.48 | 7.98 |
| PCB-1262 Peak 4 | 8.10 | 7.85 | 8.35 |
| PCB-1262 Peak 5 | 8.60 | 8.35 | 8.85 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290034.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 30-Jan-2019 01:48:01 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0078470-034
Operator ID: TEM Instrument ID: SGC_J
Sublist:

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:58:45 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:48:47

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.974 | 0.001 | 17204313 | 100.0 | 100.0 | |
| 2 | 1.789 | 1.788 | 0.001 | 95342219 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 7 PCB-1232 | | | | | | | M |
| 1 | 3.285 | 3.285 | 0.000 | 4112582 | 250.0 | 241.6 | |
| 1 | 3.652 | 3.652 | 0.000 | 4053559 | 250.0 | 255.8 | |
| 1 | 4.142 | 4.142 | 0.000 | 5558688 | 250.0 | 232.9 | |
| 1 | 4.289 | 4.292 | -0.003 | 2748024 | 250.0 | 254.9 | |
| 1 | 4.762 | 4.762 | 0.000 | 2974865 | 250.0 | 277.1 | |
| | | Average of Peak Amounts = | | | | 252.4 | |
| 2 | 3.319 | 3.319 | 0.000 | 9320032 | 250.0 | 244.7 | M |
| 2 | 3.712 | 3.712 | 0.000 | 8369249 | 250.0 | 260.6 | M |
| 2 | 4.176 | 4.176 | 0.000 | 15713368 | 250.0 | 246.3 | M |
| 2 | 4.322 | 4.322 | 0.000 | 7466479 | 250.0 | 261.0 | M |
| 2 | 4.849 | 4.852 | -0.003 | 5685674 | 250.0 | 250.9 | M |
| | | Average of Peak Amounts = | | | | 252.7 | |
| | | | | | | RPD = 0.10 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 5 PCB-1262 | | | | | | | |
| 1 | 6.662 | 6.665 | -0.003 | 14923577 | 250.0 | 264.1 | |
| 1 | 7.199 | 7.202 | -0.003 | 10776903 | 250.0 | 215.7 | |
| 1 | 7.532 | 7.535 | -0.003 | 9916190 | 250.0 | 225.1 | |
| 1 | 7.975 | 7.975 | 0.000 | 20830226 | 250.0 | 235.2 | |
| 1 | 8.365 | 8.365 | 0.000 | 6181309 | 250.0 | 243.8 | |
| | | Average of Peak Amounts = | | | | 236.8 | |
| 2 | 6.726 | 6.726 | 0.000 | 20537264 | 250.0 | 250.5 | |
| 2 | 7.329 | 7.329 | 0.000 | 26147960 | 250.0 | 223.4 | |
| 2 | 7.729 | 7.729 | 0.000 | 24455707 | 250.0 | 217.4 | |
| 2 | 8.096 | 8.096 | 0.000 | 52007383 | 250.0 | 238.6 | |
| 2 | 8.602 | 8.602 | 0.000 | 37621729 | 250.0 | 242.5 | |
| | | Average of Peak Amounts = | | | | 234.5 | |
| | | | | | | RPD = 0.99 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_3262_ICV_00014 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

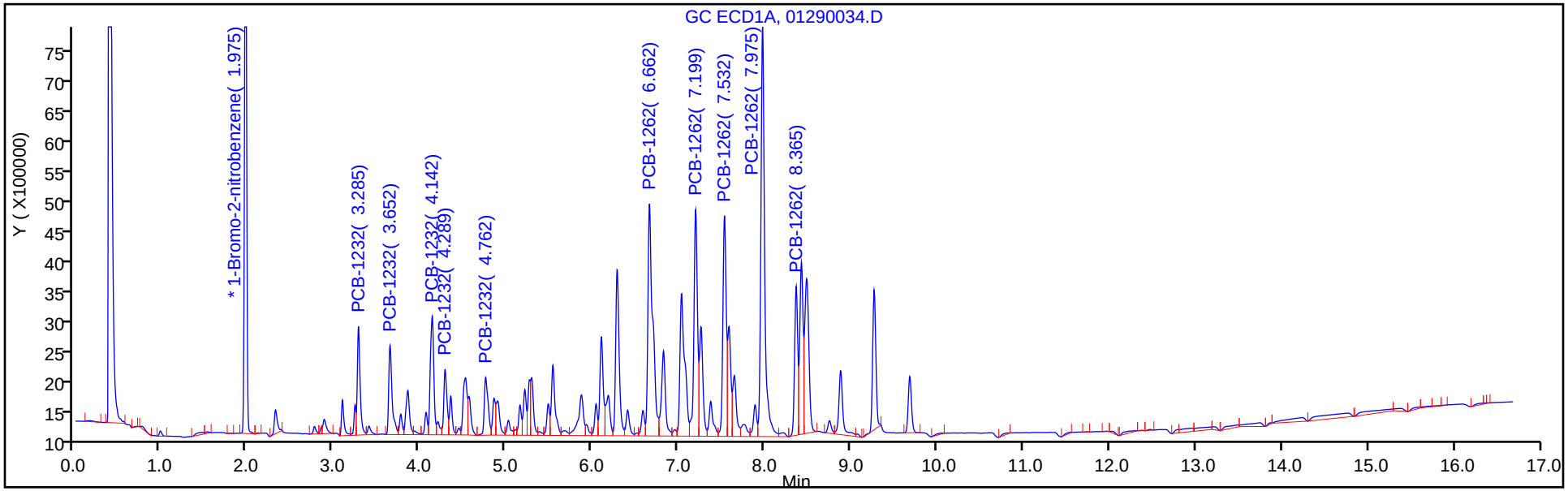
Report Date: 30-Jan-2019 14:58:47 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

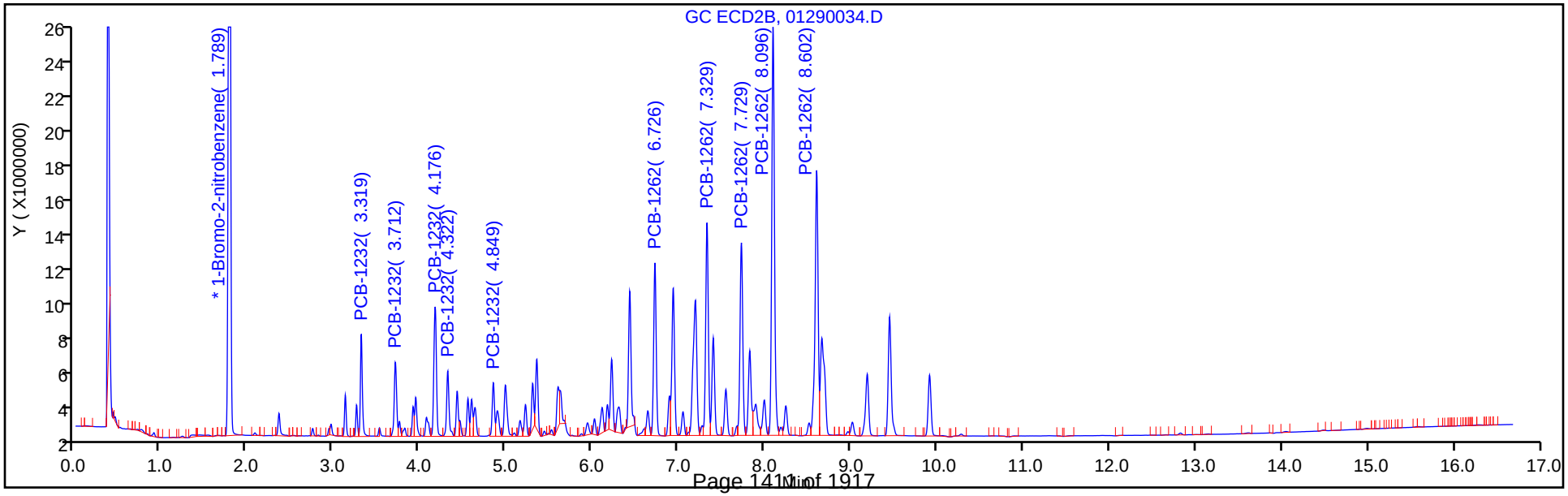
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290034.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 01:48:01 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | ICV | | | Worklist Smp#: | 34 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 34 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 30-Jan-2019 14:58:47 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290034.D

Injection Date: 30-Jan-2019 01:48:01 Instrument ID: SGC_J

Lims ID: ICV

Client ID:

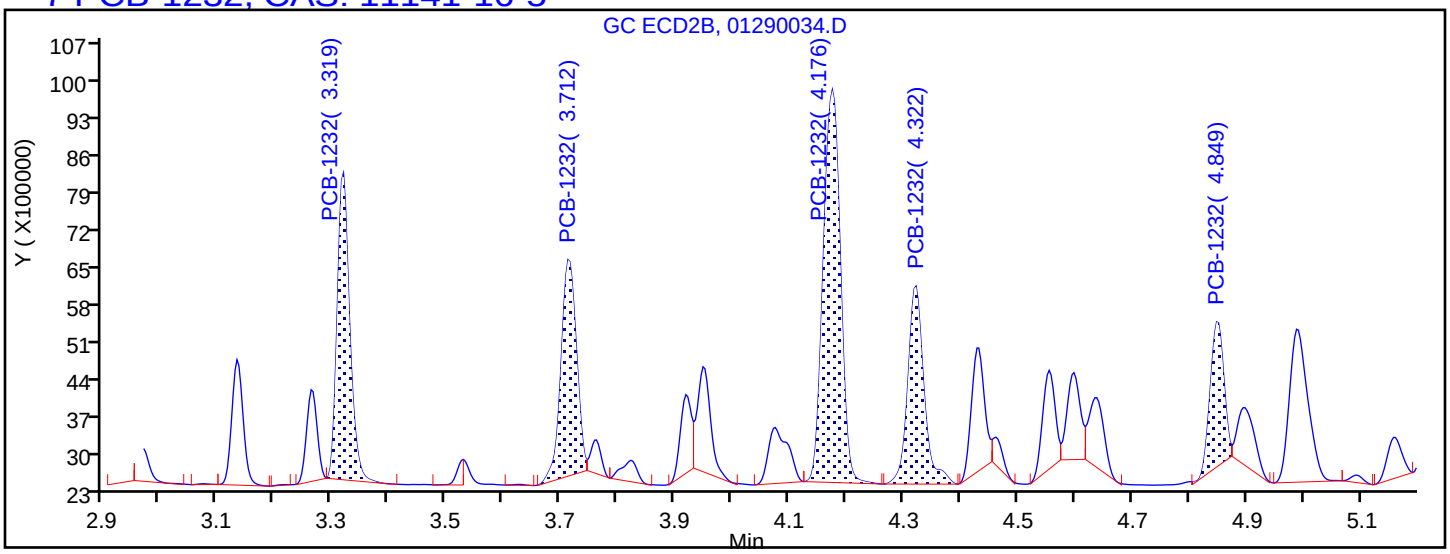
Operator ID: TEM ALS Bottle#: 34 Worklist Smp#: 34

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

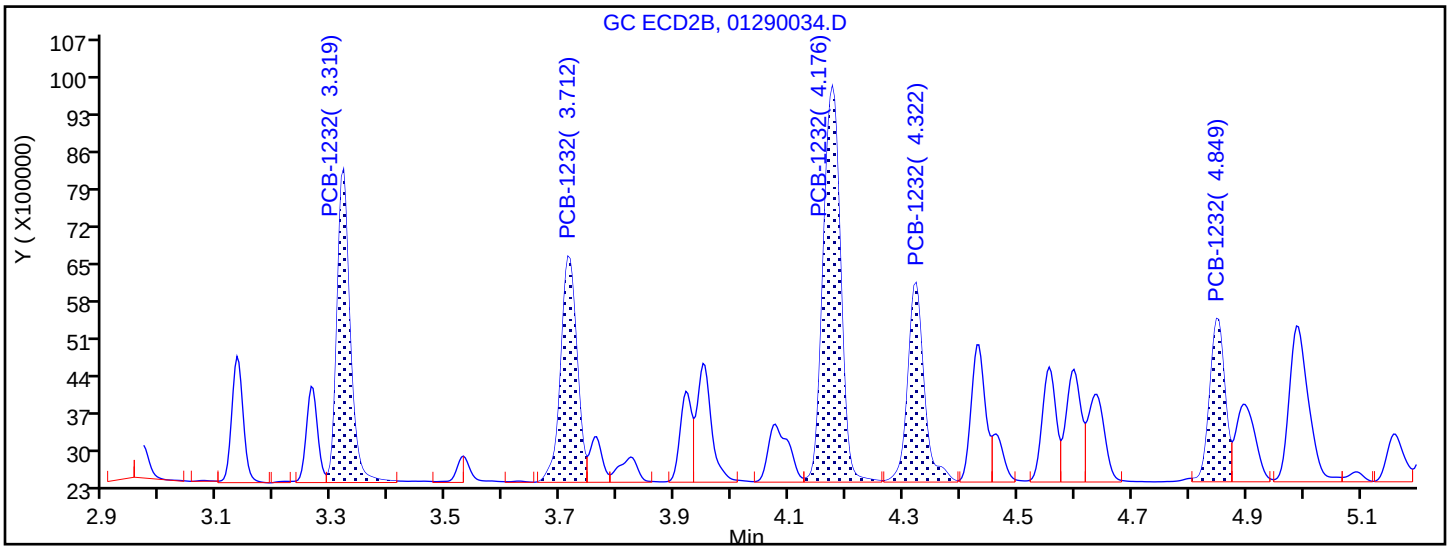
Column: CLP2 Pesticides Column 2 ( 0.32 mm) Detector GC ECD2B

## 7 PCB-1232, CAS: 11141-16-5




Processing Integration Results

| | |
|---|---|
| 3.319 | Response = 8712521 |
| 3.712 | Response = 7624144 |
| 4.176 | Response = 15310272 |
| 4.322 | Response = 7274213 |
| 4.849 | Response = 4532383 |




Manual Integration Results

| | | |
|---|---|---|
| 3.319 | Response = 9320032 | M |
| 3.712 | Response = 8369249 | M |
| 4.176 | Response = 15713368 | M |
| 4.322 | Response = 7466479 | M |
| 4.849 | Response = 5685674 | M |

Reviewer: mooret, 30-Jan-2019 14:48:30

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/42  Calibration Date: 01/30/2019 04:36

Instrument ID: SGC_J  Calib Start Date: 01/30/2019 02:09

GC Column: CLP1  ID: 0.32(mm)  Calib End Date: 01/30/2019 04:15

Lab File ID: 01290042.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1242 Peak 1 | Lin1 | | 0.1482 | | 240 | 250 | -4.1 | 20.0 |
| PCB-1242 Peak 2 | Lin1 | | 0.2344 | | 221 | 250 | -11.6 | 20.0 |
| PCB-1242 Peak 3 | Lin1 | | 0.1219 | | 241 | 250 | -3.7 | 20.0 |
| PCB-1242 Peak 4 | Lin1 | | 0.0614 | | 210 | 250 | -16.1 | 20.0 |
| PCB-1242 Peak 5 | Lin1 | | 0.0880 | | 206 | 250 | -17.6 | 20.0 |
| PCB-1268 Peak 1 | Lin1 | | 0.4901 | | 227 | 250 | -9.3 | 20.0 |
| PCB-1268 Peak 2 | Lin1 | | 0.5191 | | 226 | 250 | -9.6 | 20.0 |
| PCB-1268 Peak 3 | Lin1 | | 0.4558 | | 254 | 250 | 1.7 | 20.0 |
| PCB-1268 Peak 4 | Lin1 | | 0.1189 | | 221 | 250 | -11.5 | 20.0 |
| PCB-1268 Peak 5 | Lin1 | | 1.001 | | 203 | 250 | -18.9 | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/42 Calibration Date: 01/30/2019 04:36

Instrument ID: SGC_J Calib Start Date: 01/30/2019 02:09

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 01/30/2019 04:15

Lab File ID: 01290042.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1242 Peak 1 | 3.65 | 3.40 | 3.90 |
| PCB-1242 Peak 2 | 4.14 | 3.89 | 4.39 |
| PCB-1242 Peak 3 | 4.76 | 4.51 | 5.01 |
| PCB-1242 Peak 4 | 5.27 | 5.03 | 5.53 |
| PCB-1242 Peak 5 | 5.29 | 5.05 | 5.55 |
| PCB-1268 Peak 1 | 8.43 | 8.18 | 8.68 |
| PCB-1268 Peak 2 | 8.48 | 8.23 | 8.73 |
| PCB-1268 Peak 3 | 8.75 | 8.50 | 9.00 |
| PCB-1268 Peak 4 | 8.87 | 8.63 | 9.13 |
| PCB-1268 Peak 5 | 9.68 | 9.44 | 9.94 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290042.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 30-Jan-2019 04:36:42 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0078470-042
Operator ID: TEM Instrument ID: SGC_J
Sublist:

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:57:53 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:56:39

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.975 | 0.002 | 19419783 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 105092238 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | |
| 1 | 3.654 | 3.652 | 0.002 | 7194507 | 250.0 | 239.9 | |
| 1 | 4.144 | 4.142 | 0.002 | 11382148 | 250.0 | 221.0 | |
| 1 | 4.760 | 4.762 | -0.002 | 5919376 | 250.0 | 240.7 | |
| 1 | 5.274 | 5.279 | -0.005 | 2980752 | 250.0 | 209.7 | |
| 1 | 5.294 | 5.295 | -0.001 | 4272177 | 250.0 | 206.1 | |
| | | Average of Peak Amounts = | | | | 223.5 | |
| 2 | 3.714 | 3.712 | 0.002 | 14370433 | 250.0 | 232.7 | |
| 2 | 4.174 | 4.175 | -0.001 | 29861019 | 250.0 | 230.6 | |
| 2 | 4.320 | 4.322 | -0.002 | 13217105 | 250.0 | 231.2 | |
| 2 | 4.850 | 4.849 | 0.001 | 10952569 | 250.0 | 230.9 | |
| 2 | 4.990 | 4.989 | 0.001 | 12525766 | 250.0 | 228.9 | |
| | | Average of Peak Amounts = | | | | 230.9 | |
| | | | | | | RPD = 3.25 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.427 | 8.425 | 0.002 | 23791900 | 250.0 | 226.7 | |
| 1 | 8.477 | 8.479 | -0.002 | 25201296 | 250.0 | 226.0 | |
| 1 | 8.754 | 8.752 | 0.002 | 22127452 | 250.0 | 254.2 | |
| 1 | 8.874 | 8.875 | -0.001 | 5773559 | 250.0 | 221.3 | |
| 1 | 9.684 | 9.685 | -0.001 | 48621838 | 250.0 | 202.8 | |
| | | Average of Peak Amounts = | | | | 226.2 | |
| 2 | 8.600 | 8.599 | 0.001 | 65281234 | 250.0 | 234.5 | |
| 2 | 8.660 | 8.662 | -0.002 | 49881751 | 250.0 | 193.7 | |
| 2 | 9.017 | 9.015 | 0.002 | 57509315 | 250.0 | 262.4 | |
| 2 | 9.157 | 9.159 | -0.002 | 15971423 | 250.0 | 231.7 | |
| 2 | 9.914 | 9.912 | 0.002 | 139727299 | 250.0 | 215.1 | |
| | | Average of Peak Amounts = | | | | 227.5 | |
| | | | | | | RPD = 0.56 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_ICV_00014 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

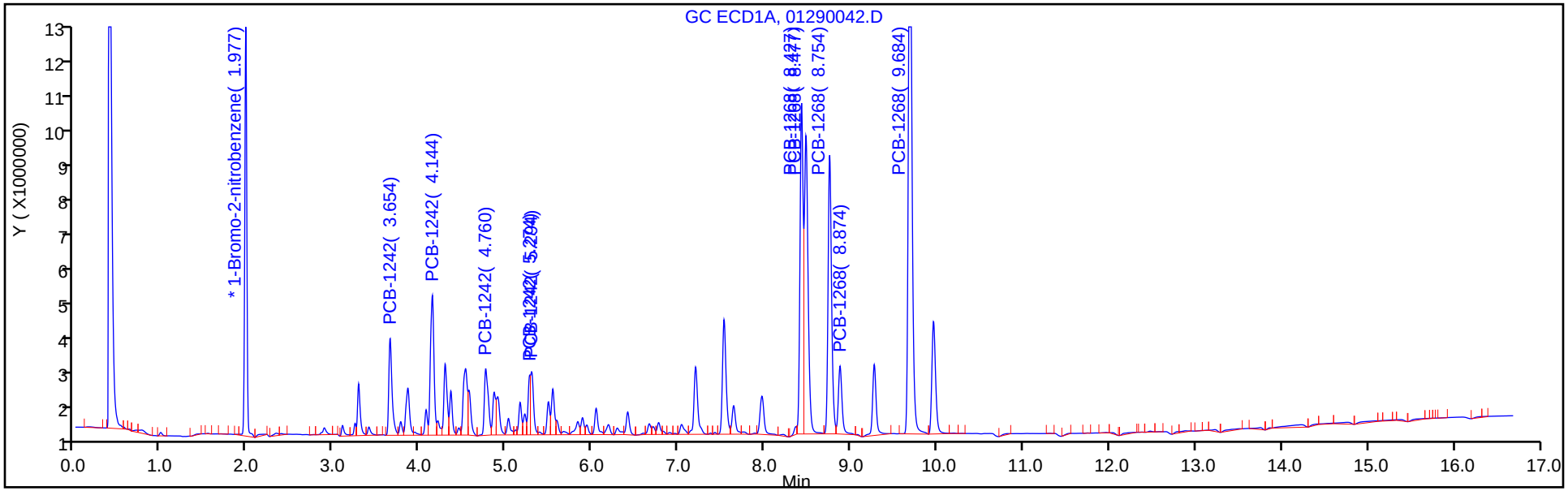
Report Date: 30-Jan-2019 14:58:33 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

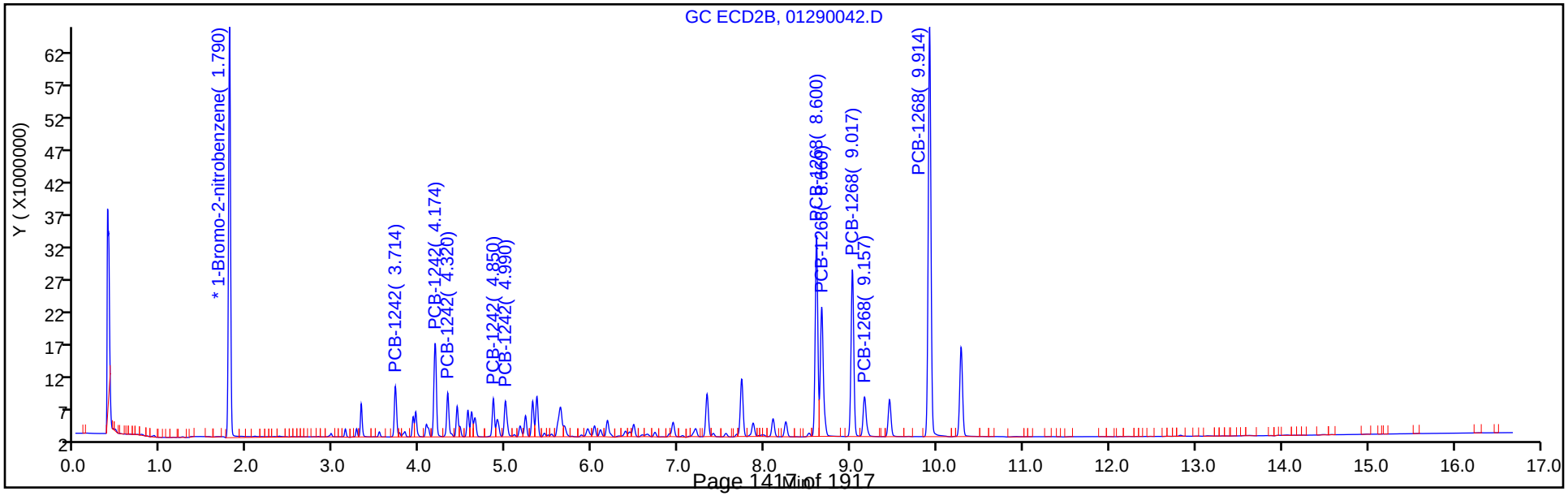
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290042.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 04:36:42 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | ICV | | | Worklist Smp#: | 42 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 42 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/42  Calibration Date: 01/30/2019 04:36

Instrument ID: SGC_J  Calib Start Date: 01/30/2019 02:09

GC Column: CLP2  ID: 0.32(mm)  Calib End Date: 01/30/2019 04:15

Lab File ID: 01290042.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1242 Peak 1 | Lin2 | | 0.0547 | | 233 | 250 | -6.9 | 20.0 |
| PCB-1242 Peak 2 | Lin1 | | 0.1137 | | 231 | 250 | -7.8 | 20.0 |
| PCB-1242 Peak 3 | Lin2 | | 0.0503 | | 231 | 250 | -7.5 | 20.0 |
| PCB-1242 Peak 4 | Qua1 | | 0.0417 | | 231 | 250 | -7.6 | 20.0 |
| PCB-1242 Peak 5 | Lin2 | | 0.0477 | | 229 | 250 | -8.4 | 20.0 |
| PCB-1268 Peak 1 | Lin1 | | 0.2485 | | 235 | 250 | -6.2 | 20.0 |
| PCB-1268 Peak 2 | Lin1 | | 0.1899 | | 194 | 250 | -22.5* | 20.0 |
| PCB-1268 Peak 3 | Lin1 | | 0.2189 | | 262 | 250 | 5.0 | 20.0 |
| PCB-1268 Peak 4 | Lin1 | | 0.0608 | | 232 | 250 | -7.3 | 20.0 |
| PCB-1268 Peak 5 | Lin1 | | 0.5318 | | 215 | 250 | -14.0 | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 280-445745/42 Calibration Date: 01/30/2019 04:36

Instrument ID: SGC_J Calib Start Date: 01/30/2019 02:09

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 01/30/2019 04:15

Lab File ID: 01290042.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1242 Peak 1 | 3.71 | 3.46 | 3.96 |
| PCB-1242 Peak 2 | 4.17 | 3.93 | 4.43 |
| PCB-1242 Peak 3 | 4.32 | 4.07 | 4.57 |
| PCB-1242 Peak 4 | 4.85 | 4.60 | 5.10 |
| PCB-1242 Peak 5 | 4.99 | 4.74 | 5.24 |
| PCB-1268 Peak 1 | 8.60 | 8.35 | 8.85 |
| PCB-1268 Peak 2 | 8.66 | 8.41 | 8.91 |
| PCB-1268 Peak 3 | 9.02 | 8.77 | 9.27 |
| PCB-1268 Peak 4 | 9.16 | 8.91 | 9.41 |
| PCB-1268 Peak 5 | 9.91 | 9.66 | 10.16 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290042.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 30-Jan-2019 04:36:42 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0078470-042
Operator ID: TEM Instrument ID: SGC_J
Sublist:

Method: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Jan-2019 14:57:53 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 30-Jan-2019 14:56:39

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.977 | 1.975 | 0.002 | 19419783 | 100.0 | 100.0 | |
| 2 | 1.790 | 1.789 | 0.001 | 105092238 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| 10 PCB-1242 | | | | | | | |
| 1 | 3.654 | 3.652 | 0.002 | 7194507 | 250.0 | 239.9 | |
| 1 | 4.144 | 4.142 | 0.002 | 11382148 | 250.0 | 221.0 | |
| 1 | 4.760 | 4.762 | -0.002 | 5919376 | 250.0 | 240.7 | |
| 1 | 5.274 | 5.279 | -0.005 | 2980752 | 250.0 | 209.7 | |
| 1 | 5.294 | 5.295 | -0.001 | 4272177 | 250.0 | 206.1 | |
| | | Average of Peak Amounts = | | | | 223.5 | |
| 2 | 3.714 | 3.712 | 0.002 | 14370433 | 250.0 | 232.7 | |
| 2 | 4.174 | 4.175 | -0.001 | 29861019 | 250.0 | 230.6 | |
| 2 | 4.320 | 4.322 | -0.002 | 13217105 | 250.0 | 231.2 | |
| 2 | 4.850 | 4.849 | 0.001 | 10952569 | 250.0 | 230.9 | |
| 2 | 4.990 | 4.989 | 0.001 | 12525766 | 250.0 | 228.9 | |
| | | Average of Peak Amounts = | | | | 230.9 | |
| | | | | | | RPD = 3.25 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 13 PCB-1268 | | | | | | | |
| 1 | 8.427 | 8.425 | 0.002 | 23791900 | 250.0 | 226.7 | |
| 1 | 8.477 | 8.479 | -0.002 | 25201296 | 250.0 | 226.0 | |
| 1 | 8.754 | 8.752 | 0.002 | 22127452 | 250.0 | 254.2 | |
| 1 | 8.874 | 8.875 | -0.001 | 5773559 | 250.0 | 221.3 | |
| 1 | 9.684 | 9.685 | -0.001 | 48621838 | 250.0 | 202.8 | |
| | | Average of Peak Amounts = | | | | 226.2 | |
| 2 | 8.600 | 8.599 | 0.001 | 65281234 | 250.0 | 234.5 | |
| 2 | 8.660 | 8.662 | -0.002 | 49881751 | 250.0 | 193.7 | |
| 2 | 9.017 | 9.015 | 0.002 | 57509315 | 250.0 | 262.4 | |
| 2 | 9.157 | 9.159 | -0.002 | 15971423 | 250.0 | 231.7 | |
| 2 | 9.914 | 9.912 | 0.002 | 139727299 | 250.0 | 215.1 | |
| | | Average of Peak Amounts = | | | | 227.5 | |
| | | | | | | RPD = 0.56 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_4268_ICV_00014 | Amount Added: | 1.00 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

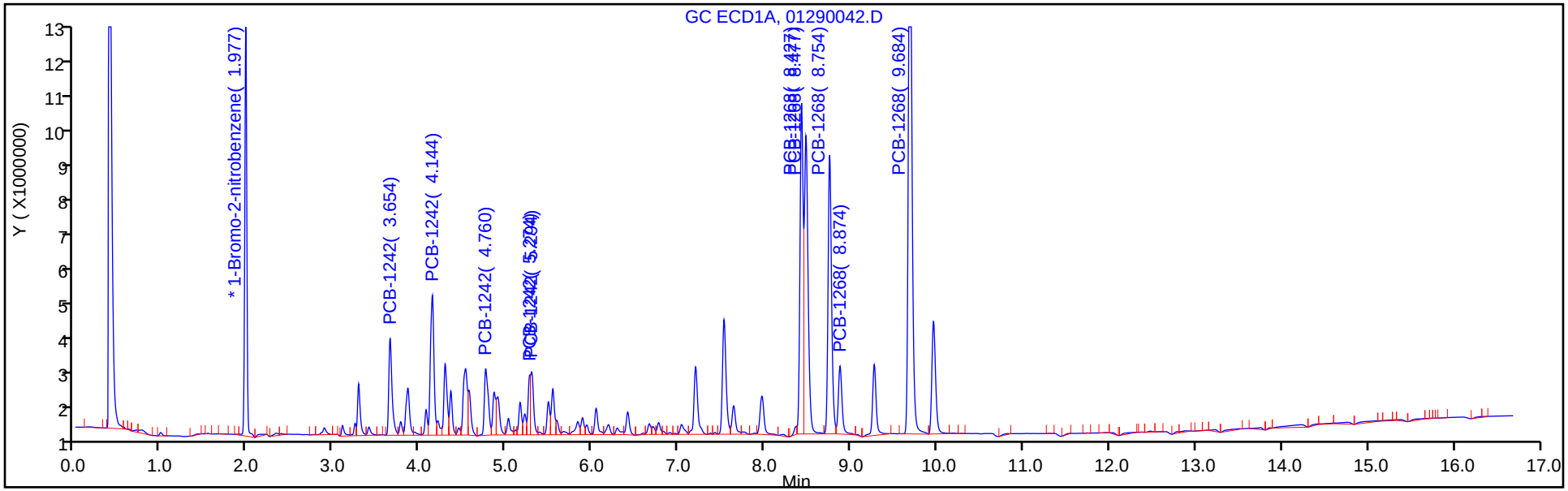
Report Date: 30-Jan-2019 14:58:33 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

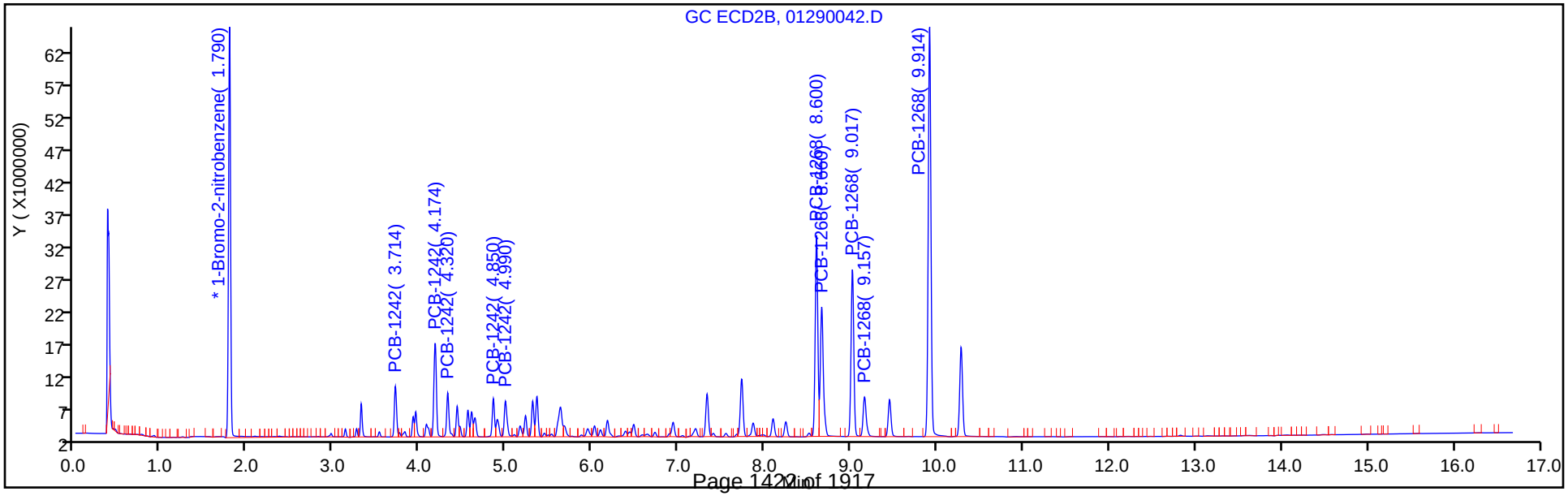
Data File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290042.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 30-Jan-2019 04:36:42 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | ICV | | | Worklist Smp#: | 42 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 42 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCVIS 280-446463/5  Calibration Date: 02/05/2019 13:46

Instrument ID: SGC_J  Calib Start Date: 01/29/2019 20:31

GC Column: CLP1  ID: 0.32(mm)  Calib End Date: 01/29/2019 22:38

Lab File ID: 02040005.D  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 Peak 1 | Lin1 | | 0.0963 | | 613 | 500 | 22.5* | 20.0 |
| PCB-1016 Peak 2 | Lin1 | | 0.2148 | | 612 | 500 | 22.4* | 20.0 |
| PCB-1016 Peak 3 | Lin1 | | 0.3823 | | 563 | 500 | 12.5 | 20.0 |
| PCB-1016 Peak 4 | Lin1 | | 0.1598 | | 598 | 500 | 19.7 | 20.0 |
| PCB-1016 Peak 5 | Lin1 | | 0.1716 | | 598 | 500 | 19.5 | 20.0 |
| PCB-1260 Peak 1 | Lin1 | | 0.2451 | | 608 | 500 | 21.5* | 20.0 |
| PCB-1260 Peak 2 | Lin1 | | 0.1348 | | 588 | 500 | 17.6 | 20.0 |
| PCB-1260 Peak 3 | Lin1 | | 0.2102 | | 595 | 500 | 19.0 | 20.0 |
| PCB-1260 Peak 4 | Lin1 | | 0.4753 | | 598 | 500 | 19.5 | 20.0 |
| PCB-1260 Peak 5 | Lin1 | | 0.1988 | | 597 | 500 | 19.4 | 20.0 |
| Tetrachloro-m-xylene | Lin1 | | 4.972 | | 29.6 | 25.0 | 18.5 | 20.0 |
| DCB Decachlorobiphenyl | Lin1 | | 3.915 | | 31.7 | 25.0 | 26.7* | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCVIS 280-446463/5 Calibration Date: 02/05/2019 13:46

Instrument ID: SGC_J Calib Start Date: 01/29/2019 20:31

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 01/29/2019 22:38

Lab File ID: 02040005.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1016 Peak 1 | 3.28 | 3.03 | 3.53 |
| PCB-1016 Peak 2 | 3.65 | 3.40 | 3.90 |
| PCB-1016 Peak 3 | 4.14 | 3.89 | 4.39 |
| PCB-1016 Peak 4 | 4.29 | 4.04 | 4.54 |
| PCB-1016 Peak 5 | 4.76 | 4.51 | 5.01 |
| PCB-1260 Peak 1 | 6.28 | 6.03 | 6.53 |
| PCB-1260 Peak 2 | 6.82 | 6.57 | 7.07 |
| PCB-1260 Peak 3 | 7.53 | 7.28 | 7.78 |
| PCB-1260 Peak 4 | 7.97 | 7.72 | 8.22 |
| PCB-1260 Peak 5 | 8.36 | 8.11 | 8.61 |
| Tetrachloro-m-xylene | 2.89 | 2.64 | 3.14 |
| DCB Decachlorobiphenyl | 9.95 | 9.70 | 10.20 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040005.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 05-Feb-2019 13:46:31 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 280-0078693-005
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 06-Feb-2019 10:46:36 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0325

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.973 | 1.973 | 0.000 | 17452101 | 100.0 | 100.0 | |
| 2 | 1.787 | 1.787 | 0.000 | 102812303 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.890 | 2.890 | 0.000 | 21692417 | 25.0 | 29.6 | |
| 2 | 2.817 | 2.817 | 0.000 | 52609377 | 25.0 | 26.9 | |
| | | | | | | RPD = 9.67 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.283 | 3.283 | 0.000 | 8399622 | 500.0 | 612.6 | |
| 1 | 3.650 | 3.650 | 0.000 | 18744959 | 500.0 | 611.8 | |
| 1 | 4.140 | 4.140 | 0.000 | 33358316 | 500.0 | 562.5 | |
| 1 | 4.286 | 4.286 | 0.000 | 13944938 | 500.0 | 598.5 | |
| 1 | 4.760 | 4.760 | 0.000 | 14976405 | 500.0 | 597.6 | |
| | | Average of Peak Amounts = | | | | 596.6 | |
| 2 | 3.710 | 3.710 | 0.000 | 34729863 | 500.0 | 518.1 | |
| 2 | 4.173 | 4.173 | 0.000 | 75706973 | 500.0 | 516.6 | |
| 2 | 4.317 | 4.317 | 0.000 | 32096418 | 500.0 | 518.0 | |
| 2 | 4.553 | 4.553 | 0.000 | 17144996 | 500.0 | 542.0 | |
| 2 | 4.847 | 4.847 | 0.000 | 25065006 | 500.0 | 549.1 | |
| | | Average of Peak Amounts = | | | | 528.8 | |
| | | | | | | RPD = 12.06 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.283 | 6.283 | 0.000 | 21383298 | 500.0 | 607.5 | |
| 1 | 6.823 | 6.823 | 0.000 | 11758938 | 500.0 | 588.1 | |
| 1 | 7.526 | 7.526 | 0.000 | 18340562 | 500.0 | 594.8 | |
| 1 | 7.970 | 7.970 | 0.000 | 41476762 | 500.0 | 597.6 | |
| 1 | 8.360 | 8.360 | 0.000 | 17346751 | 500.0 | 597.0 | |
| | | Average of Peak Amounts = | | | | 597.0 | |
| 2 | 6.720 | 6.720 | 0.000 | 52241834 | 500.0 | 532.4 | |
| 2 | 7.190 | 7.190 | 0.000 | 75621680 | 500.0 | 535.1 | |
| 2 | 7.323 | 7.323 | 0.000 | 41582311 | 500.0 | 530.6 | |
| 2 | 8.090 | 8.090 | 0.000 | 101070795 | 500.0 | 551.3 | |
| 2 | 8.597 | 8.597 | 0.000 | 72951558 | 500.0 | 553.5 | |
| | | Average of Peak Amounts = | | | | 540.6 | |
| | | | | | | RPD = 9.92 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.953 | 9.953 | 0.000 | 17082284 | 25.0 | 31.7 | |
| 2 | 10.273 | 10.273 | 0.000 | 45003352 | 25.0 | 28.3 | |
| | | | | | | RPD = 11.17 | |
| 19 1260 Res 1 | | | | | | | |
| 1 | 8.360 | 8.360 | 0.000 | 17346751 | NR | NR | |
| 16 1260 Res 2 | | | | | | | |
| 1 | 8.420 | 8.420 | 0.000 | 9853681 | NR | NR | |
| 18 1260 Res 3 | | | | | | | |
| 1 | 8.483 | 8.483 | 0.000 | 11986997 | NR | NR | |

## QC Flag Legend

Processing Flags

NR - Missing Quant Standard

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.50 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

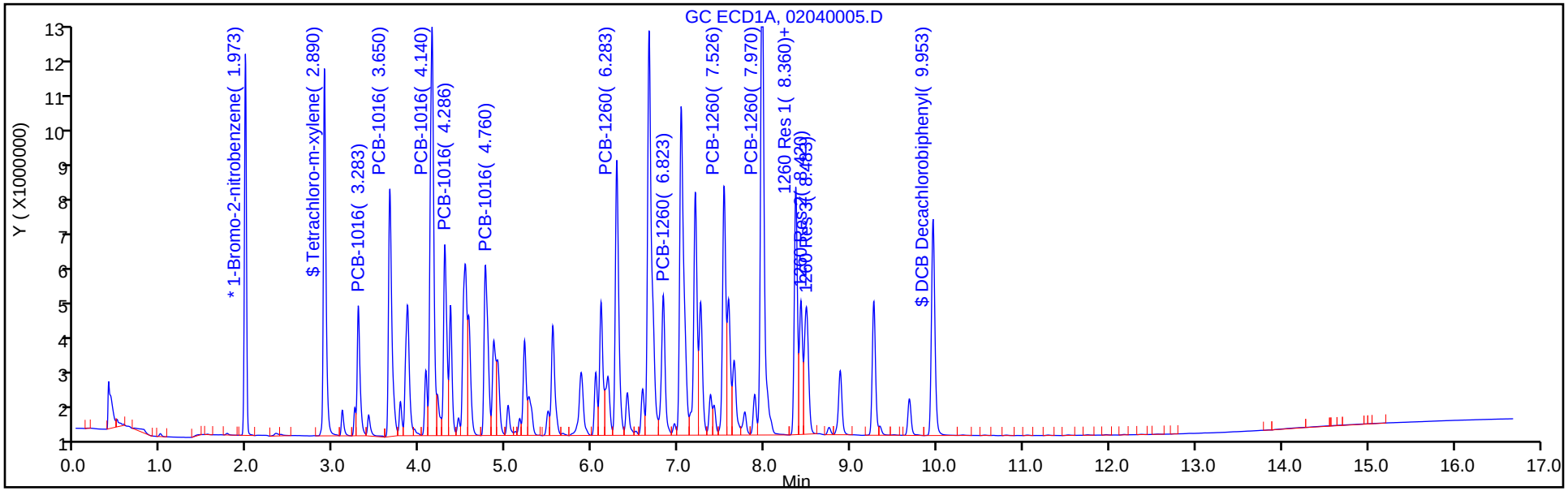
Report Date: 06-Feb-2019 10:46:36 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

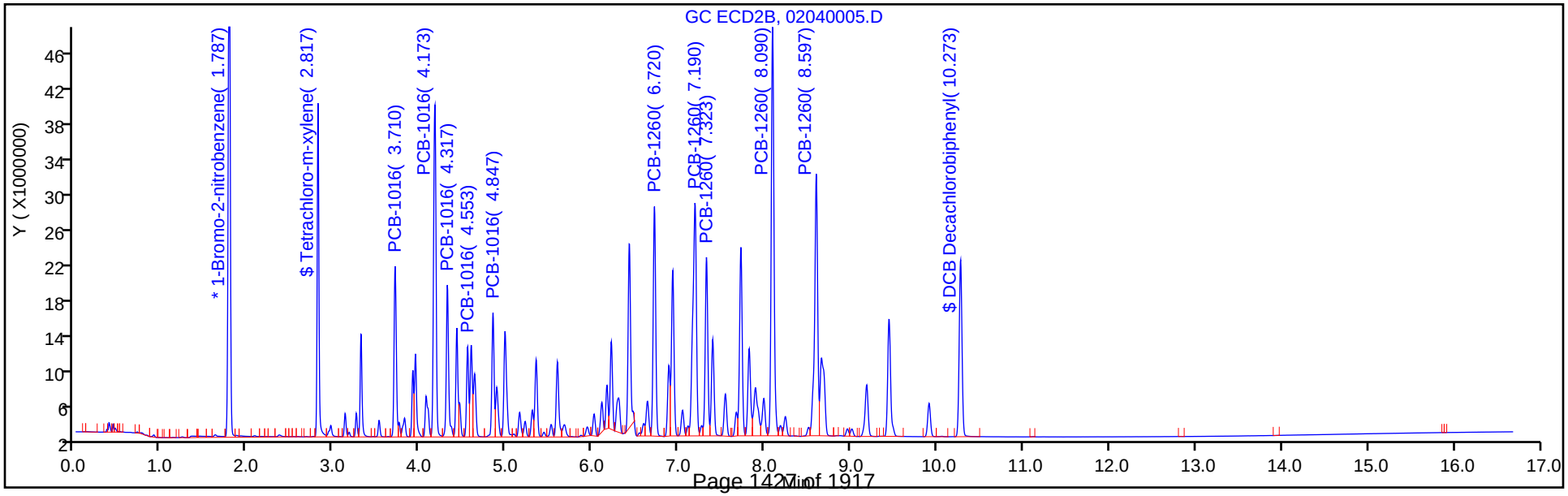
Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040005.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Feb-2019 13:46:31 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | CCVIS | | | Worklist Smp#: | 5 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 5 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCVIS 280-446463/5 | Calibration Date: 02/05/2019 13:46

Instrument ID: SGC_J | Calib Start Date: 01/29/2019 20:31

GC Column: CLP2 ID: 0.32(mm) | Calib End Date: 01/29/2019 22:38

Lab File ID: 02040005.D | Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 Peak 1 | Lin2 | | 0.0676 | | 518 | 500 | 3.6 | 20.0 |
| PCB-1016 Peak 2 | Lin2 | | 0.1473 | | 517 | 500 | 3.3 | 20.0 |
| PCB-1016 Peak 3 | Lin2 | | 0.0624 | | 518 | 500 | 3.6 | 20.0 |
| PCB-1016 Peak 4 | Qua1 | | 0.0334 | | 542 | 500 | 8.4 | 20.0 |
| PCB-1016 Peak 5 | Qua1 | | 0.0488 | | 549 | 500 | 9.8 | 20.0 |
| PCB-1260 Peak 1 | Lin2 | | 0.1016 | | 532 | 500 | 6.5 | 20.0 |
| PCB-1260 Peak 2 | Lin2 | | 0.1471 | | 535 | 500 | 7.0 | 20.0 |
| PCB-1260 Peak 3 | Lin2 | | 0.0809 | | 531 | 500 | 6.1 | 20.0 |
| PCB-1260 Peak 4 | Lin2 | | 0.1966 | | 551 | 500 | 10.3 | 20.0 |
| PCB-1260 Peak 5 | Lin2 | | 0.1419 | | 553 | 500 | 10.7 | 20.0 |
| Tetrachloro-m-xylene | Lin1 | | 2.047 | | 26.9 | 25.0 | 7.6 | 20.0 |
| DCB Decachlorobiphenyl | Lin2 | | 1.751 | | 28.3 | 25.0 | 13.3 | 20.0 |

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Lab Sample ID: CCVIS 280-446463/5 Calibration Date: 02/05/2019 13:46

Instrument ID: SGC_J Calib Start Date: 01/29/2019 20:31

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 01/29/2019 22:38

Lab File ID: 02040005.D

| Analyte | RT | RT WINDOW | |
|---|---|---|---|
| | | FROM | TO |
| PCB-1016 Peak 1 | 3.71 | 3.46 | 3.96 |
| PCB-1016 Peak 2 | 4.17 | 3.92 | 4.42 |
| PCB-1016 Peak 3 | 4.32 | 4.07 | 4.57 |
| PCB-1016 Peak 4 | 4.55 | 4.30 | 4.80 |
| PCB-1016 Peak 5 | 4.85 | 4.60 | 5.10 |
| PCB-1260 Peak 1 | 6.72 | 6.47 | 6.97 |
| PCB-1260 Peak 2 | 7.19 | 6.94 | 7.44 |
| PCB-1260 Peak 3 | 7.32 | 7.07 | 7.57 |
| PCB-1260 Peak 4 | 8.09 | 7.84 | 8.34 |
| PCB-1260 Peak 5 | 8.60 | 8.35 | 8.85 |
| Tetrachloro-m-xylene | 2.82 | 2.57 | 3.07 |
| DCB Decachlorobiphenyl | 10.27 | 10.02 | 10.52 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040005.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 05-Feb-2019 13:46:31 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 280-0078693-005
Operator ID: TEM Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 06-Feb-2019 10:46:36 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0325

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.973 | 1.973 | 0.000 | 17452101 | 100.0 | 100.0 | |
| 2 | 1.787 | 1.787 | 0.000 | 102812303 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.890 | 2.890 | 0.000 | 21692417 | 25.0 | 29.6 | |
| 2 | 2.817 | 2.817 | 0.000 | 52609377 | 25.0 | 26.9 | |
| | | | | | | RPD = 9.67 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.283 | 3.283 | 0.000 | 8399622 | 500.0 | 612.6 | |
| 1 | 3.650 | 3.650 | 0.000 | 18744959 | 500.0 | 611.8 | |
| 1 | 4.140 | 4.140 | 0.000 | 33358316 | 500.0 | 562.5 | |
| 1 | 4.286 | 4.286 | 0.000 | 13944938 | 500.0 | 598.5 | |
| 1 | 4.760 | 4.760 | 0.000 | 14976405 | 500.0 | 597.6 | |
| | | Average of Peak Amounts = | | | | 596.6 | |
| 2 | 3.710 | 3.710 | 0.000 | 34729863 | 500.0 | 518.1 | |
| 2 | 4.173 | 4.173 | 0.000 | 75706973 | 500.0 | 516.6 | |
| 2 | 4.317 | 4.317 | 0.000 | 32096418 | 500.0 | 518.0 | |
| 2 | 4.553 | 4.553 | 0.000 | 17144996 | 500.0 | 542.0 | |
| 2 | 4.847 | 4.847 | 0.000 | 25065006 | 500.0 | 549.1 | |
| | | Average of Peak Amounts = | | | | 528.8 | |
| | | | | | | RPD = 12.06 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.283 | 6.283 | 0.000 | 21383298 | 500.0 | 607.5 | |
| 1 | 6.823 | 6.823 | 0.000 | 11758938 | 500.0 | 588.1 | |
| 1 | 7.526 | 7.526 | 0.000 | 18340562 | 500.0 | 594.8 | |
| 1 | 7.970 | 7.970 | 0.000 | 41476762 | 500.0 | 597.6 | |
| 1 | 8.360 | 8.360 | 0.000 | 17346751 | 500.0 | 597.0 | |
| | | Average of Peak Amounts = | | | | 597.0 | |
| 2 | 6.720 | 6.720 | 0.000 | 52241834 | 500.0 | 532.4 | |
| 2 | 7.190 | 7.190 | 0.000 | 75621680 | 500.0 | 535.1 | |
| 2 | 7.323 | 7.323 | 0.000 | 41582311 | 500.0 | 530.6 | |
| 2 | 8.090 | 8.090 | 0.000 | 101070795 | 500.0 | 551.3 | |
| 2 | 8.597 | 8.597 | 0.000 | 72951558 | 500.0 | 553.5 | |
| | | Average of Peak Amounts = | | | | 540.6 | |
| | | | | | | RPD = 9.92 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.953 | 9.953 | 0.000 | 17082284 | 25.0 | 31.7 | |
| 2 | 10.273 | 10.273 | 0.000 | 45003352 | 25.0 | 28.3 | |
| | | | | | | RPD = 11.17 | |
| 19 1260 Res 1 | | | | | | | |
| 1 | 8.360 | 8.360 | 0.000 | 17346751 | NR | NR | |
| 16 1260 Res 2 | | | | | | | |
| 1 | 8.420 | 8.420 | 0.000 | 9853681 | NR | NR | |
| 18 1260 Res 3 | | | | | | | |
| 1 | 8.483 | 8.483 | 0.000 | 11986997 | NR | NR | |

## QC Flag Legend

Processing Flags

NR - Missing Quant Standard

## Reagents:

| | | | | |
|---|---|---|---|---|
| AR_1660_L7_00028 | Amount Added: | 0.50 | Units: mL | |
| BNB IS_00013 | Amount Added: | 0.10 | Units: mL | Run Reagent |

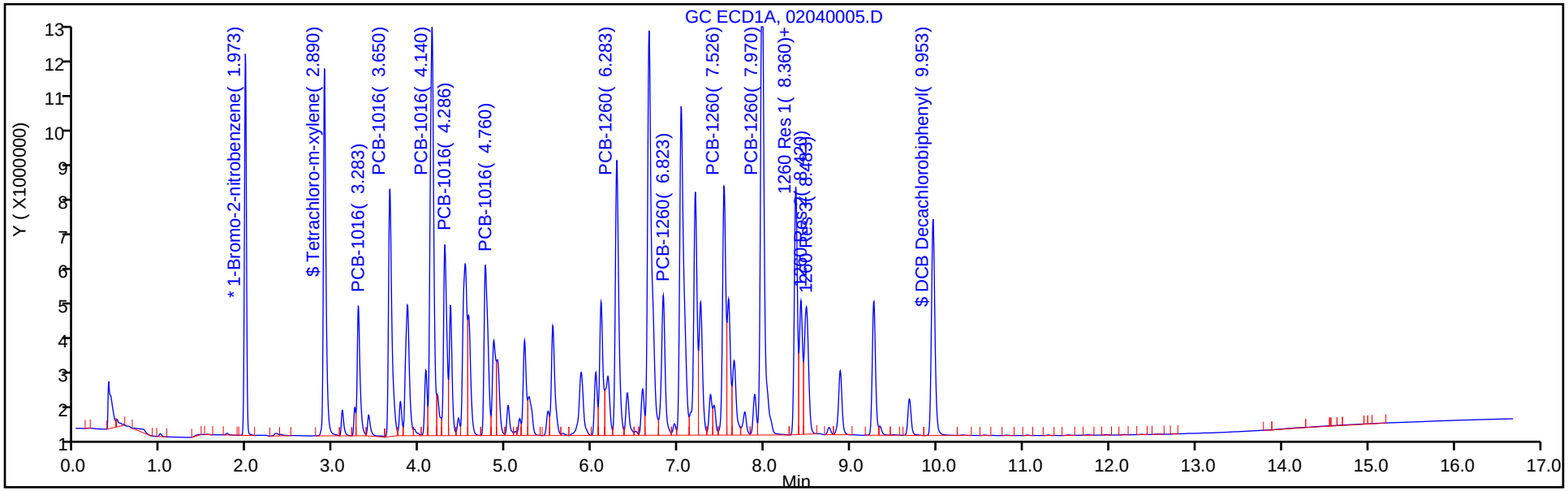
Report Date: 06-Feb-2019 10:46:37 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

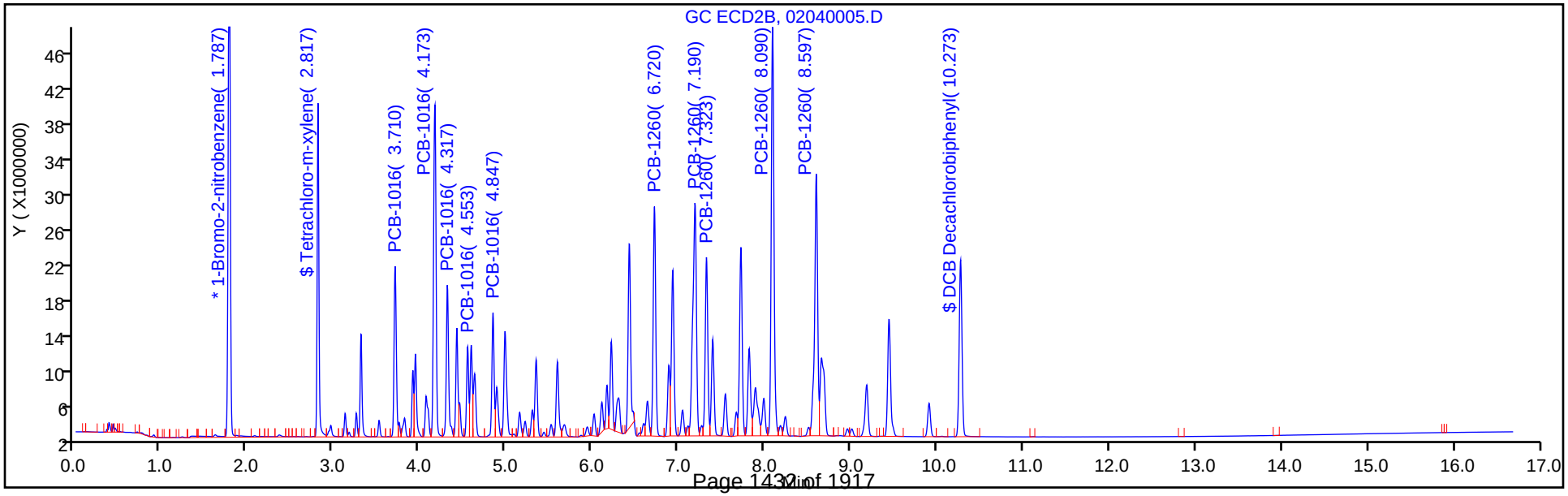
Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040005.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Feb-2019 13:46:31 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | CCVIS | | | Worklist Smp#: | 5 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 5 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-444887/1-A

Matrix: Water | Lab File ID: 02040008.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3510C | Date Extracted: 01/21/2019 11:30

Sample wt/vol: 1000(mL) | Date Analyzed: 02/05/2019 14:49

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 446463 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 11104-28-2 | PCB-1221 | 0.21 | U | 1.0 | 0.21 |
| 12674-11-2 | PCB-1016 | 0.12 | U | 1.0 | 0.12 |
| 11141-16-5 | PCB-1232 | 0.17 | U | 1.0 | 0.17 |
| 53469-21-9 | PCB-1242 | 0.10 | U | 1.0 | 0.10 |
| 12672-29-6 | PCB-1248 | 0.092 | U | 1.0 | 0.092 |
| 11097-69-1 | PCB-1254 | 0.11 | U | 1.0 | 0.11 |
| 11096-82-5 | PCB-1260 | 0.16 | U | 1.0 | 0.16 |
| 37324-23-5 | PCB-1262 | 0.085 | U | 1.0 | 0.085 |
| 11100-14-4 | PCB-1268 | 0.36 | U | 1.0 | 0.36 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 877-09-8 | Tetrachloro-m-xylene | 73 | | 25-120 |
| 2051-24-3 | DCB Decachlorobiphenyl | 77 | | 30-136 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040008.D
Lims ID: MB 280-444887/1-A
Client ID:
Sample Type: MB
Inject. Date: 05-Feb-2019 14:49:53 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-444887/1-
Misc. Info.: 280-0078693-008
Operator ID: TEM Instrument ID: SGC_J

Method: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 06-Feb-2019 10:46:07 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0325

First Level Reviewer: mooret Date: 06-Feb-2019 10:45:40

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.973 | 0.002 | 15288773 | 100.0 | 100.0 | |
| 2 | 1.788 | 1.787 | 0.001 | 85555457 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.891 | 2.890 | 0.001 | 8604752 | 20.0 | 13.5 | |
| 2 | 2.815 | 2.817 | -0.002 | 23659564 | 20.0 | 14.5 | |
| | | | | | | RPD = 7.42 | |
| 3 PCB-1221 | | | | | | | U |
| 1 | | 3.100 | | | | ND | |
| 1 | | 3.243 | | | | | |
| 1 | | 3.283 | | | | | |
| 2 | | 3.130 | | | | | |
| 2 | | 3.260 | | | | | |
| 2 | | 3.316 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 1 | PCB-1016 | | | | | | U |
| 1 | | 3.283 | | | | ND | |
| 1 | | 3.650 | | | | | |
| 1 | | 4.140 | | | | | |
| 1 | | 4.286 | | | | | |
| 1 | | 4.760 | | | | | |
| 2 | | 3.710 | | | | | |
| 2 | | 4.173 | | | | | |
| 2 | | 4.317 | | | | | |
| 2 | | 4.553 | | | | | |
| 2 | | 4.847 | | | | | |
| 7 | PCB-1232 | | | | | | U |
| 1 | | 3.284 | | | | ND | |
| 1 | | 3.651 | | | | | |
| 1 | | 4.137 | | | | | |
| 1 | | 4.287 | | | | | |
| 1 | | 4.757 | | | | | |
| 2 | | 3.314 | | | | | |
| 2 | | 3.711 | | | | | |
| 2 | | 4.171 | | | | | |
| 2 | | 4.317 | | | | | |
| 2 | | 4.844 | | | | | |
| 10 | PCB-1242 | | | | | | U |
| 1 | | 3.650 | | | | ND | |
| 1 | | 4.140 | | | | | |
| 1 | | 4.757 | | | | | |
| 1 | | 5.274 | | | | | |
| 1 | | 5.290 | | | | | |
| 2 | | 3.710 | | | | | |
| 2 | | 4.170 | | | | | |
| 2 | | 4.317 | | | | | |
| 2 | | 4.844 | | | | | |
| 2 | | 4.984 | | | | | |
| 4 | PCB-1248 | | | | | | U |
| 1 | | 4.522 | | | | ND | |
| 1 | | 4.759 | | | | | |
| 1 | | 4.855 | | | | | |
| 1 | | 5.535 | | | | | |
| 1 | | 6.039 | | | | | |
| 2 | | 4.169 | | | | | |
| 2 | | 4.549 | | | | | |
| 2 | | 4.845 | | | | | |
| 2 | | 4.985 | | | | | |
| 2 | | 6.169 | | | | | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 9 PCB-1254 | | | | | | | U |
| 1 | | 5.540 | | | | ND | |
| 1 | | 5.883 | | | | | |
| 1 | | 6.040 | | | | | |
| 1 | | 6.406 | | | | | |
| 1 | | 7.030 | | | | | |
| 2 | | 5.593 | | | | | |
| 2 | | 6.020 | | | | | |
| 2 | | 6.166 | | | | | |
| 2 | | 6.720 | | | | | |
| 2 | | 7.193 | | | | | |
| 12 PCB-1260 | | | | | | | U |
| 1 | | 6.283 | | | | ND | |
| 1 | | 6.823 | | | | | |
| 1 | | 7.526 | | | | | |
| 1 | | 7.970 | | | | | |
| 1 | | 8.360 | | | | | |
| 2 | | 6.720 | | | | | |
| 2 | | 7.190 | | | | | |
| 2 | | 7.323 | | | | | |
| 2 | | 8.090 | | | | | |
| 2 | | 8.597 | | | | | |
| 5 PCB-1262 | | | | | | | U |
| 1 | | 6.657 | | | | ND | |
| 1 | | 7.194 | | | | | |
| 1 | | 7.527 | | | | | |
| 1 | | 7.971 | | | | | |
| 1 | | 8.361 | | | | | |
| 2 | | 6.721 | | | | | |
| 2 | | 7.324 | | | | | |
| 2 | | 7.724 | | | | | |
| 2 | | 8.091 | | | | | |
| 2 | | 8.597 | | | | | |
| 13 PCB-1268 | | | | | | | U |
| 1 | | 8.423 | | | | ND | |
| 1 | | 8.473 | | | | | |
| 1 | | 8.747 | | | | | |
| 1 | | 8.867 | | | | | |
| 1 | | 9.680 | | | | | |
| 2 | | 8.594 | | | | | |
| 2 | | 8.654 | | | | | |
| 2 | | 9.010 | | | | | |
| 2 | | 9.150 | | | | | |
| 2 | | 9.907 | | | | | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.951 | 9.953 | -0.002 | 7553072 | 20.0 | 15.7 | |
| 2 | 10.272 | 10.273 | -0.002 | 20775183 | 20.0 | 15.4 | |
| | | | | | | RPD = 2.36 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 2 PCB-5460 | | | | | | | |
| 1 | | 0.000 | | | | ND | |
| 1 | | 12.739 | | | | | |
| 1 | | 0.000 | | | | | |
| 1 | | 13.802 | | | | | |
| 1 | | 14.259 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| S 8 Polychlorinated biphenyls, Total | | | | | | | |
| 1 | | 0.000 | | | | ND | |
| 2 | | 0.000 | | | | | |
| 6 PCB-5432 | | | | | | | |
| 1 | | 7.063 | | | | ND | |
| 1 | | 7.693 | | | | | |
| 1 | | 8.203 | | | | | |
| 1 | | 9.029 | | | | | |
| 1 | | 9.459 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| 11 PCB-5442 | | | | | | | |
| 1 | | 9.459 | | | | ND | |
| 1 | | 9.923 | | | | | |
| 1 | | 10.079 | | | | | |
| 1 | | 10.289 | | | | | |
| 1 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |
| 2 | | 0.000 | | | | | |

## QC Flag Legend

Review Flags

U - Marked Undetected

## Reagents:

BNB IS_00013 Amount Added: 0.10 Units: mL Run Reagent

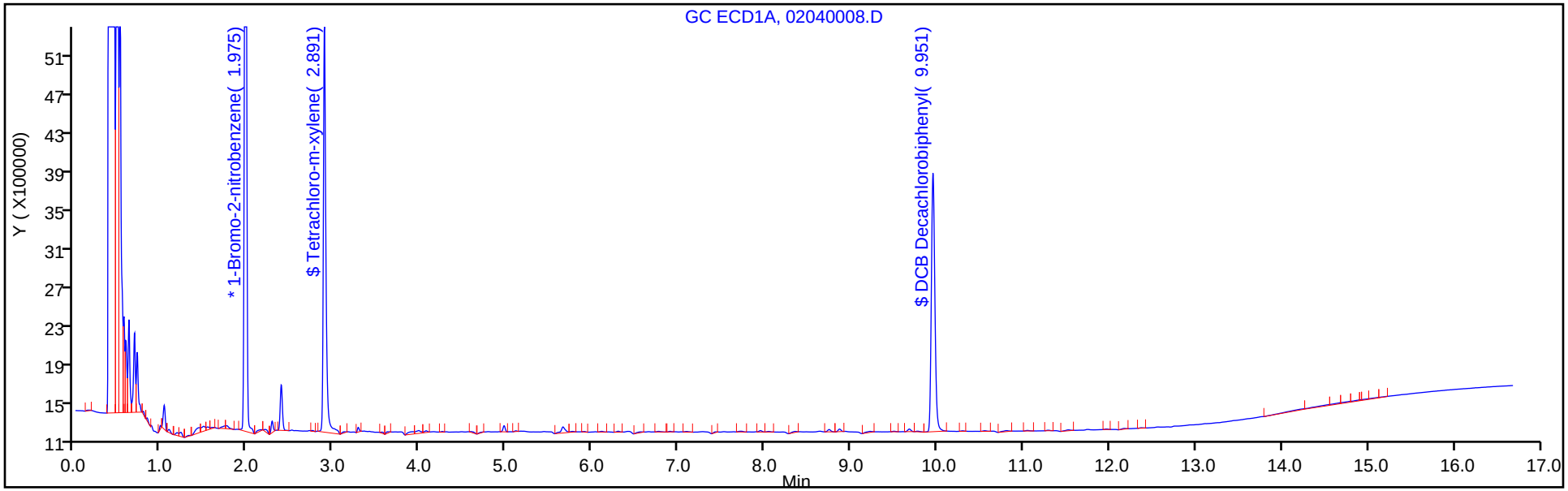
Report Date: 06-Feb-2019 10:46:23 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

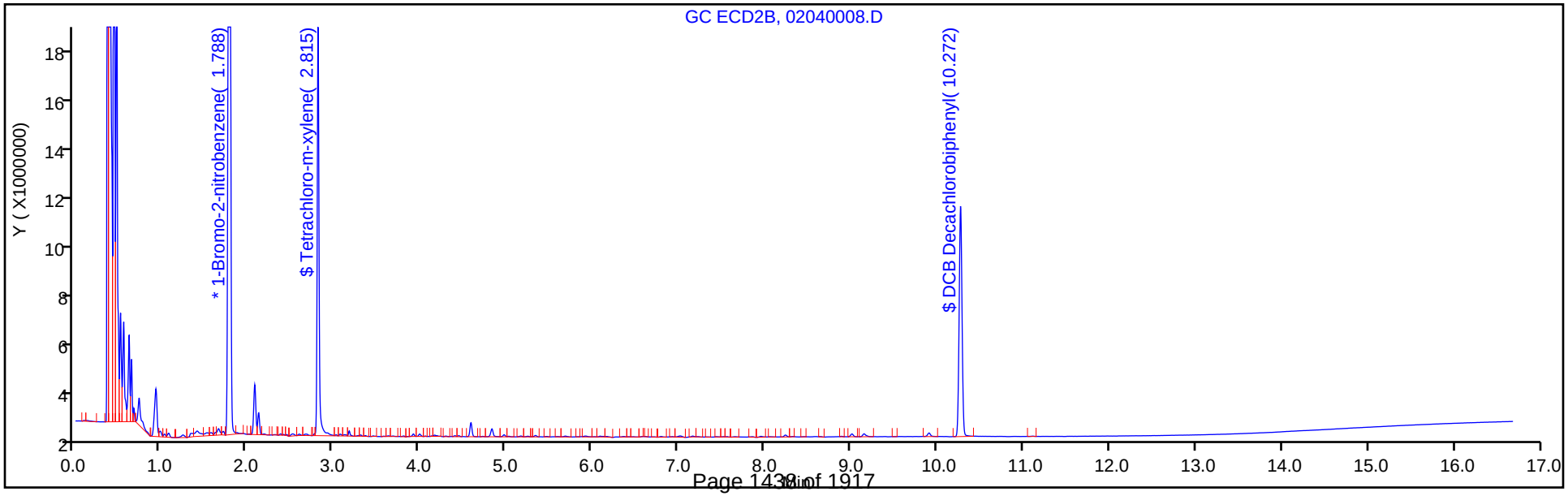
Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040008.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Feb-2019 14:49:53 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | MB 280-444887/1-A | | | Worklist Smp#: | 8 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 8 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040008.D | | | | |
| Lims ID: | MB 280-444887/1-A | | | | |
| Client ID: | | | | | |
| Sample Type: | MB | | | | |
| Inject. Date: | 05-Feb-2019 14:49:53 | ALS Bottle#: | 8 | Worklist Smp#: | 8 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | MB 280-444887/1- | | | | |
| Misc. Info.: | 280-0078693-008 | | | | |
| Operator ID: | TEM | Instrument ID: | SGC_J | | |
| Method: | \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\8082_J.m | | | | |
| Limit Group: | GCSV - 8082 - IS | | | | |
| Last Update: | 06-Feb-2019 10:46:07 | Calib Date: | 30-Jan-2019 04:15:34 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D | | | | |
| Column 1 : | CLP1 Pesticides Column 1 ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | CLP2 Pesticides Column 2 ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0325 | | | | |
| First Level Reviewer: mooret | | Date: | 06-Feb-2019 10:45:40 | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 14 Tetrachloro-m-xylene | 20.0 | 13.5 | 67.50 |
| $ 15 DCB Decachlorobiphenyl | 20.0 | 15.7 | 78.75 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 14 Tetrachloro-m-xylene | 20.0 | 14.5 | 72.70 |
| $ 15 DCB Decachlorobiphenyl | 20.0 | 15.4 | 76.91 |

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-444887/2-A

Matrix: Water | Lab File ID: 02040009.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3510C | Date Extracted: 01/21/2019 11:30

Sample wt/vol: 1000(mL) | Date Analyzed: 02/05/2019 15:11

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 446463 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 12674-11-2 | PCB-1016 | 1.85 | | 1.0 | 0.12 |
| 11096-82-5 | PCB-1260 | 1.92 | | 1.0 | 0.16 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 877-09-8 | Tetrachloro-m-xylene | 90 | | 25-120 |
| 2051-24-3 | DCB Decachlorobiphenyl | 84 | | 30-136 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040009.D
Lims ID: LCS 280-444887/2-A
Client ID:
Sample Type: LCS
Inject. Date: 05-Feb-2019 15:11:04 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-444887/2
Misc. Info.: 280-0078693-009
Operator ID: TEM Instrument ID: SGC_J

Method: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 06-Feb-2019 10:46:07 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0325

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.973 | 0.002 | 17684531 | 100.0 | 100.0 | |
| 2 | 1.786 | 1.787 | -0.001 | 98778426 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.892 | 2.890 | 0.002 | 13453715 | 20.0 | 18.2 | |
| 2 | 2.816 | 2.817 | -0.001 | 33912057 | 20.0 | 18.0 | |
| | | | | | | RPD = 0.80 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.282 | 3.283 | -0.001 | 3040704 | 200.0 | 207.1 | |
| 1 | 3.649 | 3.650 | -0.001 | 6503878 | 200.0 | 197.7 | |
| 1 | 4.139 | 4.140 | -0.001 | 10445539 | 200.0 | 174.6 | |
| 1 | 4.289 | 4.286 | 0.003 | 4793190 | 200.0 | 196.5 | |
| 1 | 4.759 | 4.760 | -0.001 | 5229865 | 200.0 | 201.0 | |
| | | Average of Peak Amounts = | | | | 195.4 | |
| 2 | 3.709 | 3.710 | -0.001 | 12735612 | 200.0 | 187.5 | |
| 2 | 4.172 | 4.173 | -0.001 | 25848380 | 200.0 | 176.1 | |
| 2 | 4.316 | 4.317 | -0.001 | 11402107 | 200.0 | 181.8 | |
| 2 | 4.552 | 4.553 | -0.001 | 6126730 | 200.0 | 180.7 | |
| 2 | 4.846 | 4.847 | -0.001 | 9511237 | 200.0 | 196.5 | |
| | | Average of Peak Amounts = | | | | 184.5 | |
| | | | | | | RPD = 5.73 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.282 | 6.283 | -0.001 | 8171476 | 200.0 | 222.5 | |
| 1 | 6.822 | 6.823 | -0.001 | 4113120 | 200.0 | 200.4 | |
| 1 | 7.529 | 7.526 | 0.003 | 6007405 | 200.0 | 187.1 | |
| 1 | 7.969 | 7.970 | -0.001 | 12805911 | 200.0 | 180.0 | |
| 1 | 8.359 | 8.360 | -0.001 | 5755864 | 200.0 | 192.6 | |
| | | Average of Peak Amounts = | | | | 196.5 | |
| 2 | 6.719 | 6.720 | -0.001 | 20269610 | 200.0 | 206.3 | |
| 2 | 7.192 | 7.190 | 0.002 | 29503563 | 200.0 | 209.2 | |
| 2 | 7.322 | 7.323 | -0.001 | 14470561 | 200.0 | 182.6 | |
| 2 | 8.092 | 8.090 | 0.002 | 32830073 | 200.0 | 179.3 | |
| 2 | 8.599 | 8.597 | 0.002 | 23948708 | 200.0 | 180.6 | |
| | | Average of Peak Amounts = | | | | 191.6 | |
| | | | | | | RPD = 2.55 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.952 | 9.953 | -0.001 | 9445788 | 20.0 | 17.1 | |
| 2 | 10.272 | 10.273 | -0.001 | 25970103 | 20.0 | 16.7 | |
| | | | | | | RPD = 2.07 | |

## Reagents:

BNB IS_00013 Amount Added: 0.10 Units: mL Run Reagent

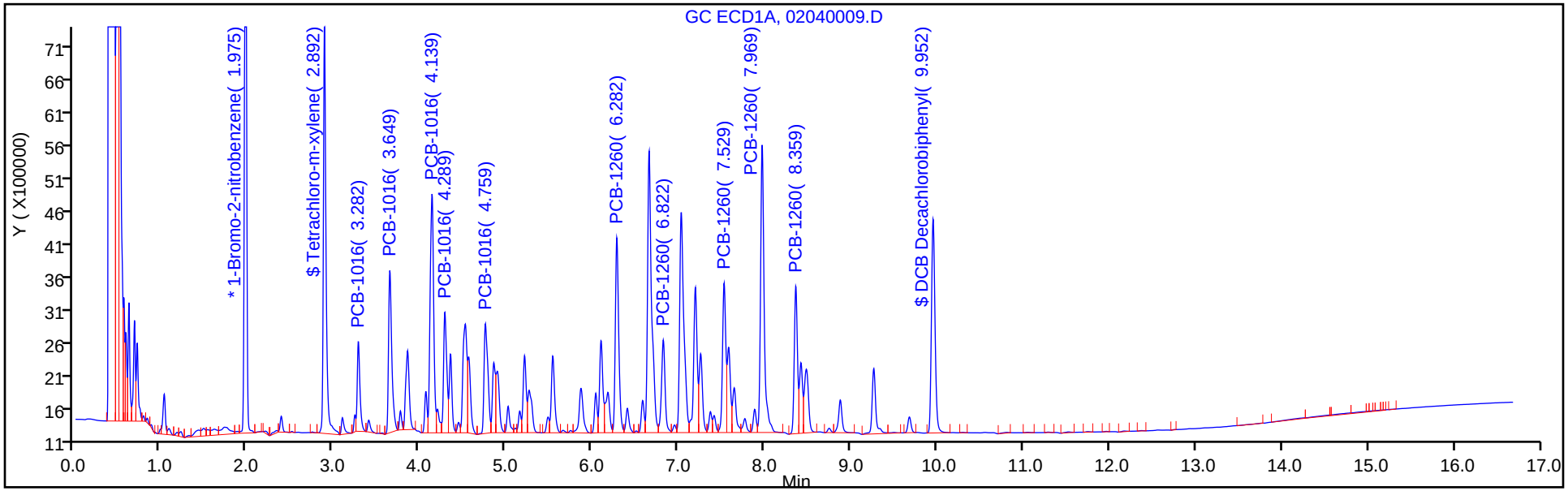
Report Date: 06-Feb-2019 10:46:29 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

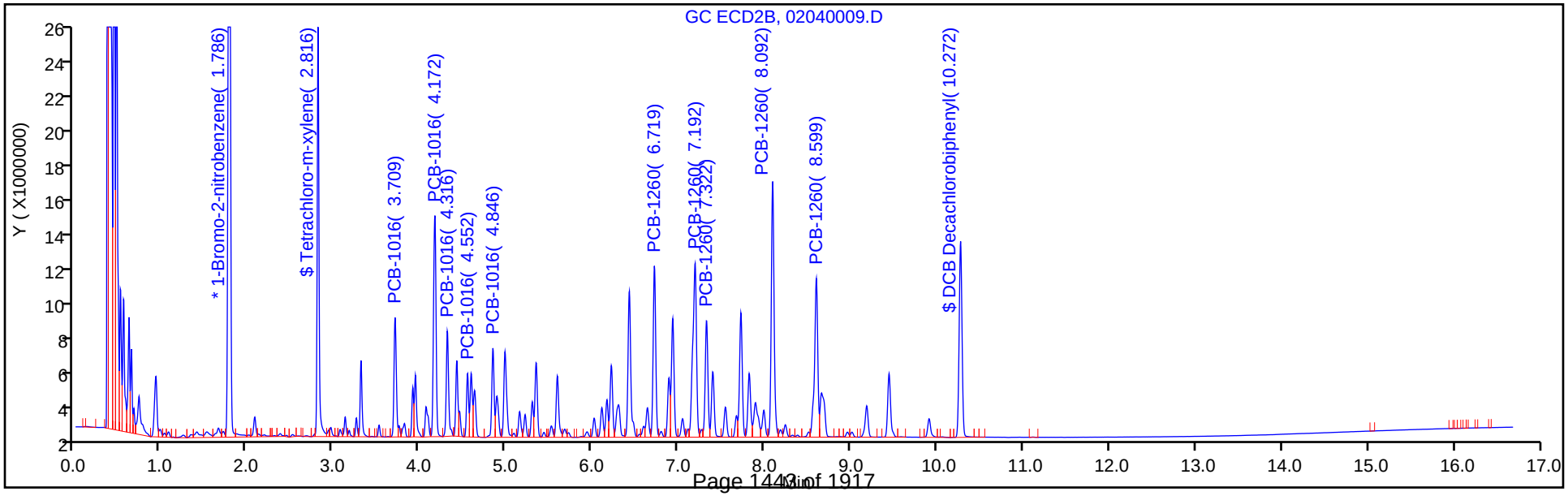
Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040009.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Feb-2019 15:11:04 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | LCS 280-444887/2-A | | | Worklist Smp#: | 9 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 9 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040009.D | | | | |
| Lims ID: | LCS 280-444887/2-A | | | | |
| Client ID: | | | | | |
| Sample Type: | LCS | | | | |
| Inject. Date: | 05-Feb-2019 15:11:04 | ALS Bottle#: | 9 | Worklist Smp#: | 9 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | LCS 280-444887/2 | | | | |
| Misc. Info.: | 280-0078693-009 | | | | |
| Operator ID: | TEM | Instrument ID: | SGC_J | | |
| Method: | \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\8082_J.m | | | | |
| Limit Group: | GCSV - 8082 - IS | | | | |
| Last Update: | 06-Feb-2019 10:46:07 | Calib Date: | 30-Jan-2019 04:15:34 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D | | | | |
| Column 1 : | CLP1 Pesticides Column 1 ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | CLP2 Pesticides Column 2 ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0325 | | | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 14 Tetrachloro-m-xylene | 20.0 | 18.2 | 90.96 |
| $ 15 DCB Decachlorobiphenyl | 20.0 | 17.1 | 85.34 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 14 Tetrachloro-m-xylene | 20.0 | 18.0 | 90.24 |
| $ 15 DCB Decachlorobiphenyl | 20.0 | 16.7 | 83.59 |

Report Date: 06-Feb-2019 10:46:29 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040009.D

Injection Date: 05-Feb-2019 15:11:04 Instrument ID: SGC_J

Lims ID: LCS 280-444887/2-A

Client ID:

Operator ID: TEM ALS Bottle#: 9 Worklist Smp#: 9

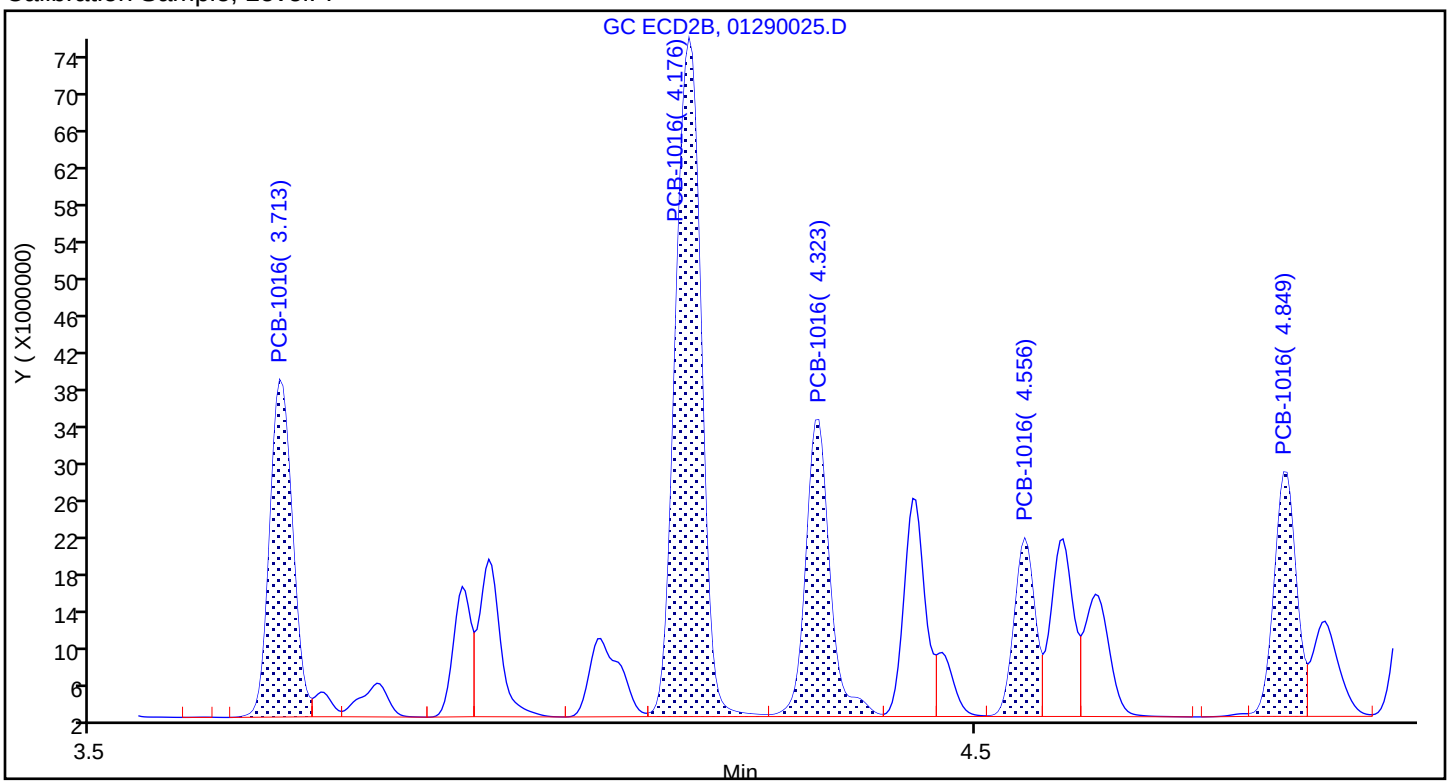
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

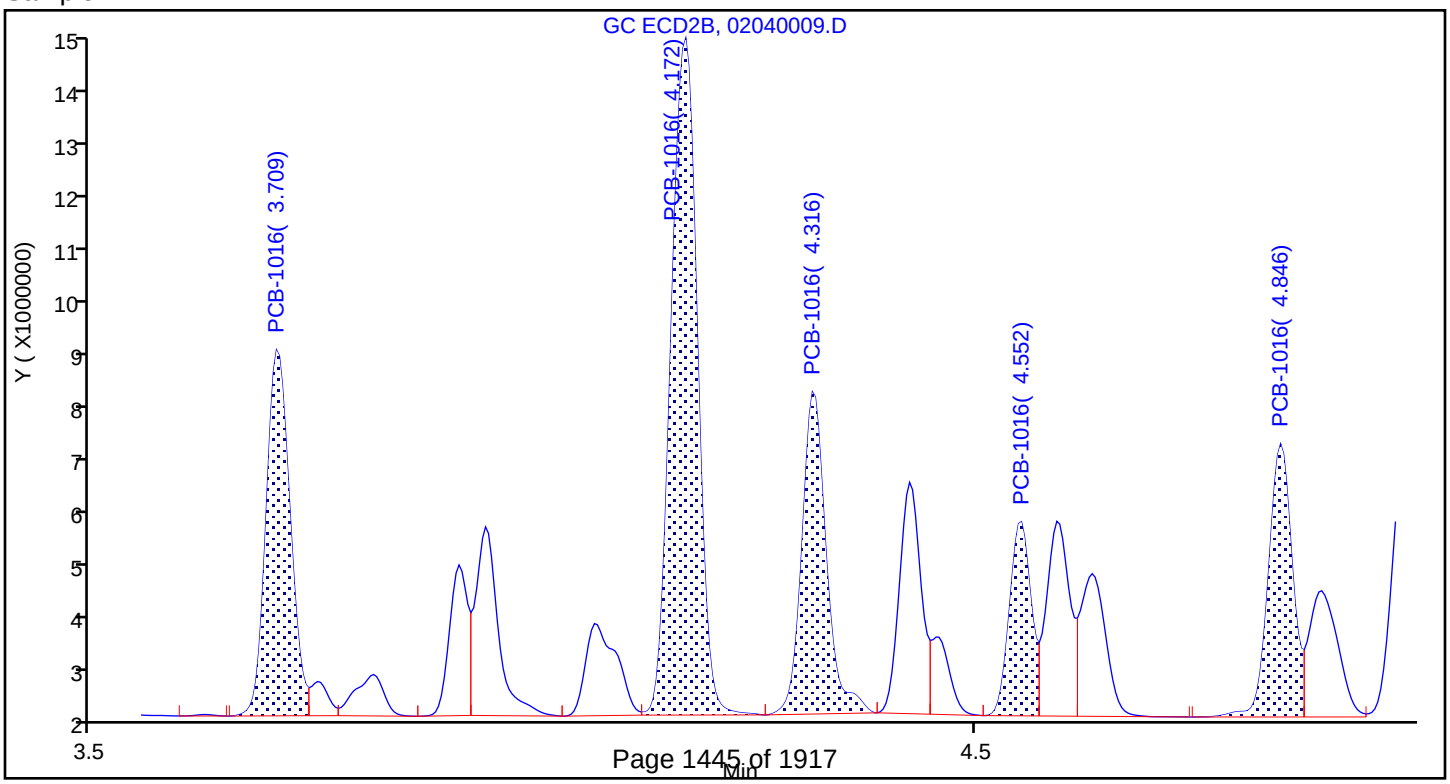
Column: CLP2 Pesticides Column 2 ( 0.32 mm) Detector GC ECD2B

## 1 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 7




Sample



Report Date: 06-Feb-2019 10:46:29 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040009.D

Injection Date: 05-Feb-2019 15:11:04 Instrument ID: SGC_J

Lims ID: LCS 280-444887/2-A

Client ID:

Operator ID: TEM ALS Bottle#: 9 Worklist Smp#: 9

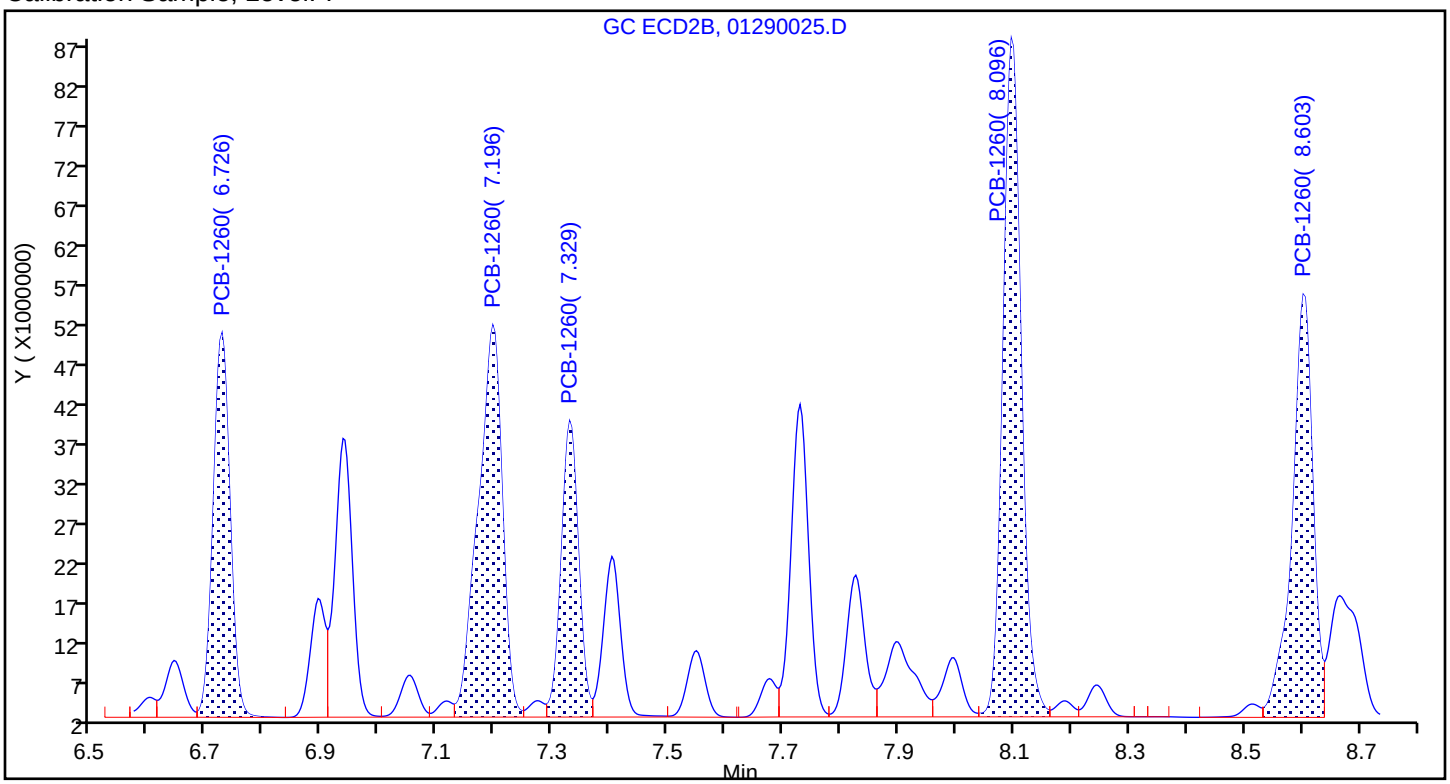
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

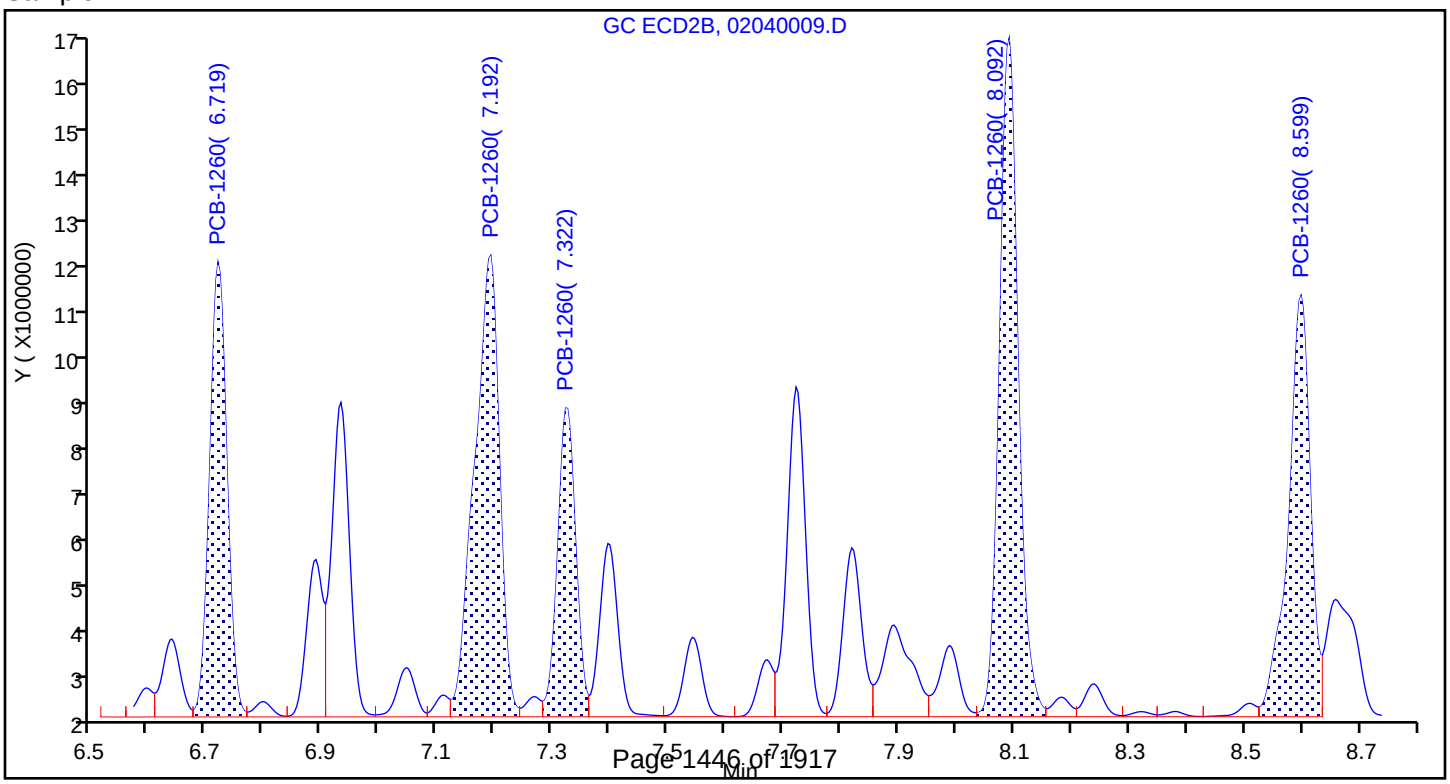
Column: CLP2 Pesticides Column 2 ( 0.32 mm) Detector GC ECD2B

## 12 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 7




Sample



FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-444887/3-A

Matrix: Water | Lab File ID: 02040010.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3510C | Date Extracted: 01/21/2019 11:30

Sample wt/vol: 1000(mL) | Date Analyzed: 02/05/2019 15:32

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 446463 | Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 12674-11-2 | PCB-1016 | 1.85 | | 1.0 | 0.12 |
| 11096-82-5 | PCB-1260 | 1.95 | | 1.0 | 0.16 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 877-09-8 | Tetrachloro-m-xylene | 93 | | 25-120 |
| 2051-24-3 | DCB Decachlorobiphenyl | 88 | | 30-136 |

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040010.D
Lims ID: LCSD 280-444887/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 05-Feb-2019 15:32:10 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-444887/
Misc. Info.: 280-0078693-010
Operator ID: TEM Instrument ID: SGC_J

Method: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 06-Feb-2019 10:46:07 Calib Date: 30-Jan-2019 04:15:34
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D

Column 1 : CLP1 Pesticides Column 1 ( 0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 ( 0.32 mm) Det: GC ECD2B
Process Host: CTX0325

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| * 17 1-Bromo-2-nitrobenzene | | | | | | | |
| 1 | 1.975 | 1.973 | 0.002 | 18878202 | 100.0 | 100.0 | |
| 2 | 1.785 | 1.787 | -0.002 | 104653224 | 100.0 | 100.0 | |
| | | | | | | RPD = 0.00 | |
| $ 14 Tetrachloro-m-xylene | | | | | | | |
| 1 | 2.891 | 2.890 | 0.001 | 14610834 | 20.0 | 18.5 | |
| 2 | 2.815 | 2.817 | -0.002 | 36987562 | 20.0 | 18.6 | |
| | | | | | | RPD = 0.39 | |
| 1 PCB-1016 | | | | | | | |
| 1 | 3.285 | 3.283 | 0.002 | 3262907 | 200.0 | 208.3 | |
| 1 | 3.648 | 3.650 | -0.002 | 6936605 | 200.0 | 197.5 | |
| 1 | 4.138 | 4.140 | -0.002 | 11125065 | 200.0 | 174.2 | |
| 1 | 4.288 | 4.286 | 0.002 | 5038527 | 200.0 | 193.4 | |
| 1 | 4.758 | 4.760 | -0.002 | 5505447 | 200.0 | 198.1 | |
| | | Average of Peak Amounts = | | | | 194.3 | |
| 2 | 3.711 | 3.710 | 0.001 | 13492789 | 200.0 | 187.5 | |
| 2 | 4.171 | 4.173 | -0.002 | 27760450 | 200.0 | 178.7 | |
| 2 | 4.318 | 4.317 | 0.001 | 12485330 | 200.0 | 188.4 | |
| 2 | 4.551 | 4.553 | -0.002 | 6431987 | 200.0 | 178.8 | |
| 2 | 4.845 | 4.847 | -0.002 | 9923957 | 200.0 | 193.1 | |
| | | Average of Peak Amounts = | | | | 185.3 | |
| | | | | | | RPD = 4.74 | |

| Col | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Response | Cal Amt ng/ml | OnCol Amt ng/ml | Flags |
|---|---|---|---|---|---|---|---|
| 12 PCB-1260 | | | | | | | |
| 1 | 6.281 | 6.283 | -0.002 | 8642715 | 200.0 | 220.4 | |
| 1 | 6.821 | 6.823 | -0.002 | 4388861 | 200.0 | 200.4 | |
| 1 | 7.528 | 7.526 | 0.002 | 6735369 | 200.0 | 196.9 | |
| 1 | 7.968 | 7.970 | -0.002 | 14074652 | 200.0 | 185.5 | |
| 1 | 8.361 | 8.360 | 0.001 | 6271082 | 200.0 | 196.7 | |
| | | Average of Peak Amounts = | | | | 199.9 | |
| 2 | 6.721 | 6.720 | 0.001 | 21511586 | 200.0 | 206.7 | |
| 2 | 7.191 | 7.190 | 0.001 | 31128869 | 200.0 | 208.3 | |
| 2 | 7.325 | 7.323 | 0.002 | 15595630 | 200.0 | 186.0 | |
| 2 | 8.091 | 8.090 | 0.001 | 35962044 | 200.0 | 185.7 | |
| 2 | 8.598 | 8.597 | 0.001 | 26092924 | 200.0 | 186.1 | |
| | | Average of Peak Amounts = | | | | 194.6 | |
| | | | | | | RPD = 2.73 | |
| $ 15 DCB Decachlorobiphenyl | | | | | | | |
| 1 | 9.955 | 9.953 | 0.002 | 10739884 | 20.0 | 18.2 | |
| 2 | 10.271 | 10.273 | -0.002 | 28996180 | 20.0 | 17.7 | |
| | | | | | | RPD = 3.08 | |

## Reagents:

BNB IS_00013 Amount Added: 0.10 Units: mL Run Reagent

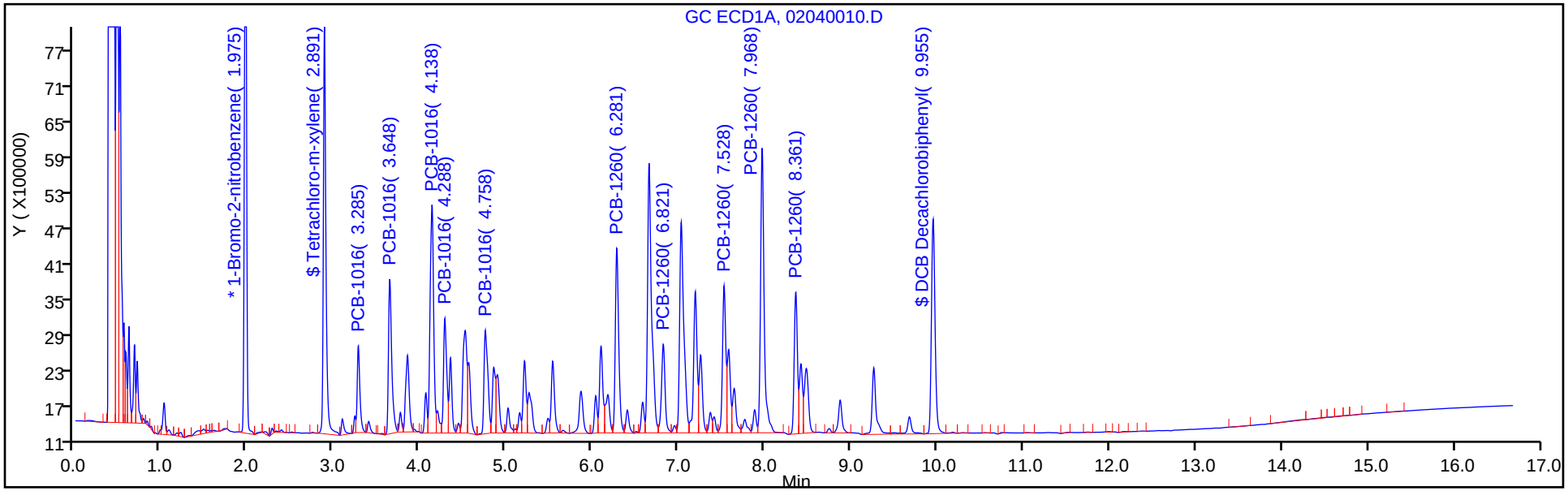
Report Date: 06-Feb-2019 10:46:31 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

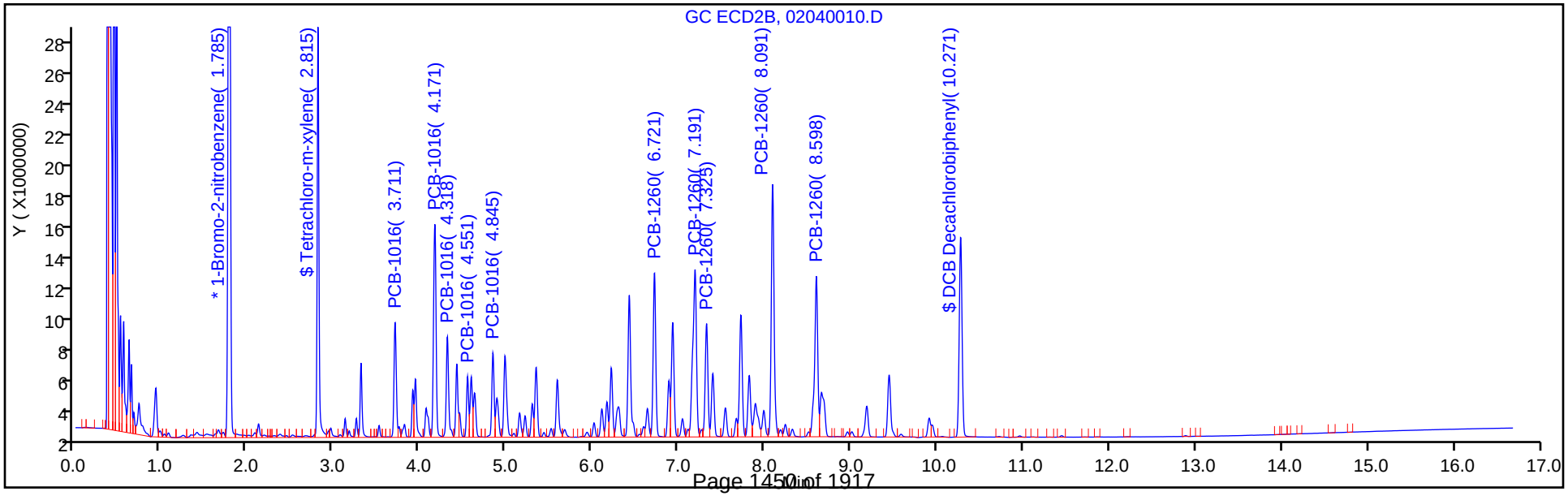
Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040010.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 05-Feb-2019 15:32:10 | Instrument ID: | SGC_J | Operator ID: | TEM |
| Lims ID: | LCSD 280-444887/3-A | | | Worklist Smp#: | 10 |
| Client ID: | | | | | |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | ALS Bottle#: | 10 |
| Method: | 8082_J | Limit Group: | GCSV - 8082 - IS | | |

Column: CLP1 Pesticides Column 1 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2




Column: CLP2 Pesticides Column 2 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040010.D | | | | |
| Lims ID: | LCSD 280-444887/3-A | | | | |
| Client ID: | | | | | |
| Sample Type: | LCSD | | | | |
| Inject. Date: | 05-Feb-2019 15:32:10 | ALS Bottle#: | 10 | Worklist Smp#: | 10 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Sample Info: | LCSD 280-444887/ | | | | |
| Misc. Info.: | 280-0078693-010 | | | | |
| Operator ID: | TEM | Instrument ID: | SGC_J | | |
| Method: | \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\8082_J.m | | | | |
| Limit Group: | GCSV - 8082 - IS | | | | |
| Last Update: | 06-Feb-2019 10:46:07 | Calib Date: | 30-Jan-2019 04:15:34 | | |
| Integrator: | Falcon | | | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromna\Denver\ChromData\SGC_J\20190128-78470.b\01290041.D | | | | |
| Column 1 : | CLP1 Pesticides Column 1 ( 0.32 mm) | | Det: GC ECD1A | | |
| Column 2 : | CLP2 Pesticides Column 2 ( 0.32 mm) | | Det: GC ECD2B | | |
| Process Host: | CTX0325 | | | | |

Surrogate Recovery, Detector: GC ECD1A

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 14 Tetrachloro-m-xylene | 20.0 | 18.5 | 92.53 |
| $ 15 DCB Decachlorobiphenyl | 20.0 | 18.2 | 91.06 |

Surrogate Recovery, Detector: GC ECD2B

| Compound | Amount Added | Amount Recovered | % Rec. |
|---|---|---|---|
| $ 14 Tetrachloro-m-xylene | 20.0 | 18.6 | 92.89 |
| $ 15 DCB Decachlorobiphenyl | 20.0 | 17.7 | 88.29 |

Report Date: 06-Feb-2019 10:46:31 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040010.D

Injection Date: 05-Feb-2019 15:32:10 Instrument ID: SGC_J

Lims ID: LCSD 280-444887/3-A

Client ID:

Operator ID: TEM ALS Bottle#: 10 Worklist Smp#: 10

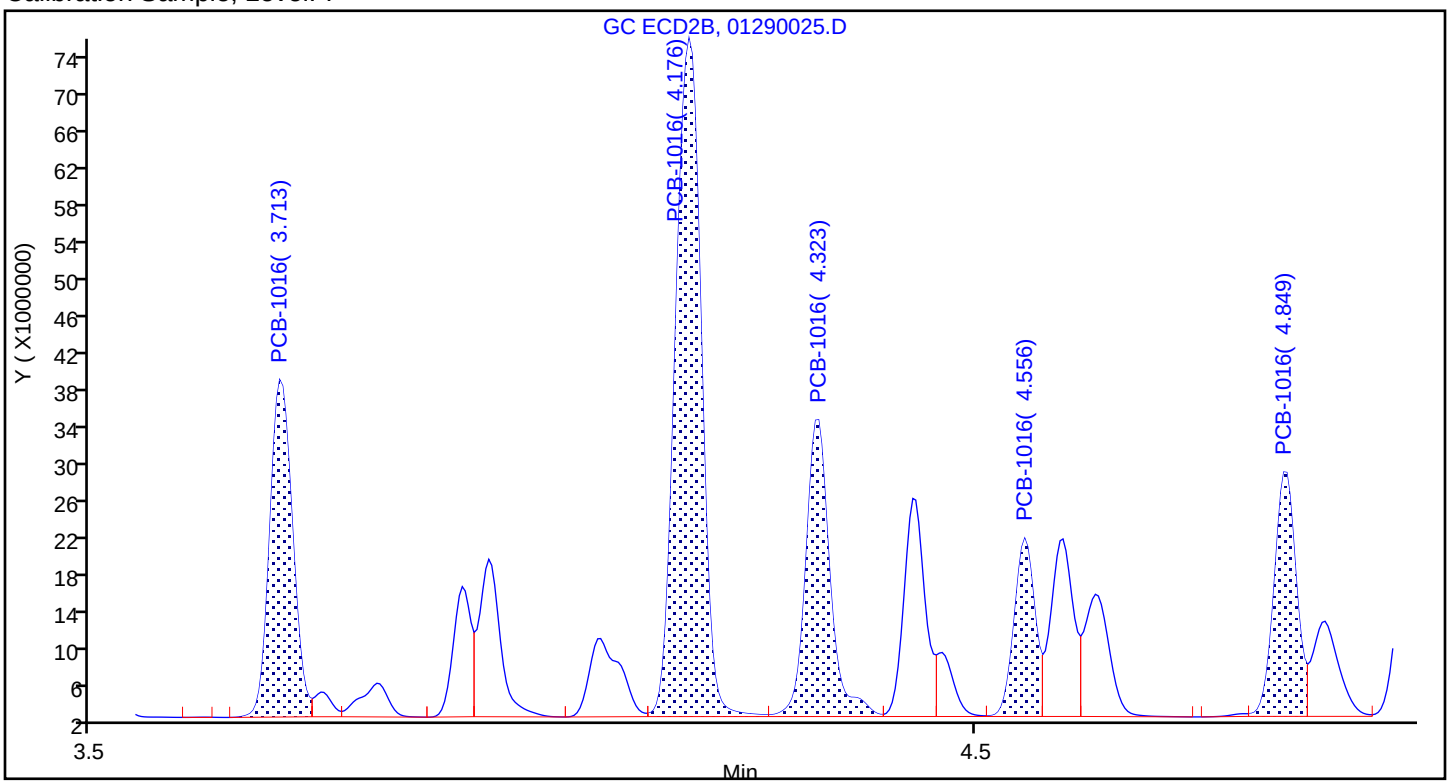
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

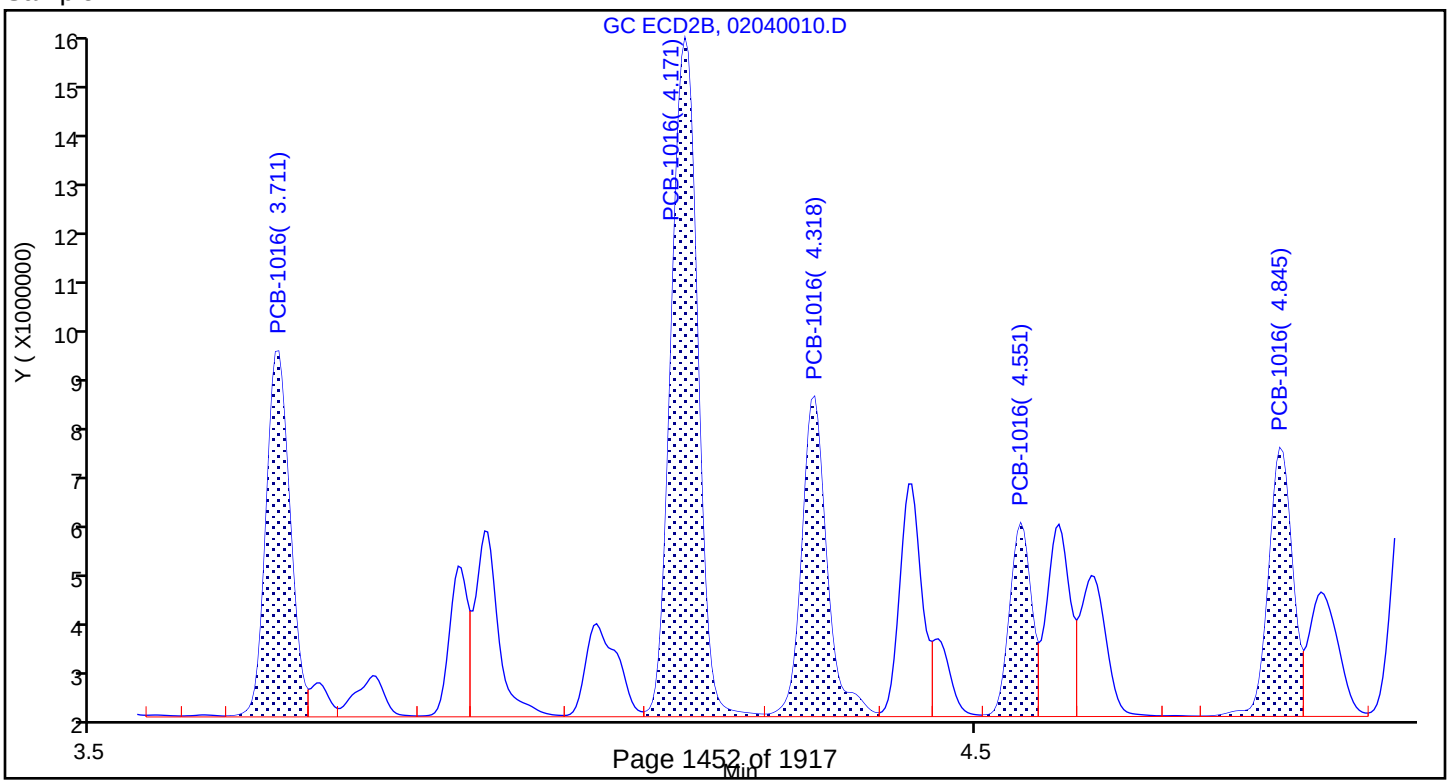
Column: CLP2 Pesticides Column 2 ( 0.32 mm) Detector GC ECD2B

## 1 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 7




Sample



Report Date: 06-Feb-2019 10:46:31 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Denver

Data File: \\chromna\Denver\ChromData\SGC_J\20190204-78693.b\02040010.D

Injection Date: 05-Feb-2019 15:32:10 Instrument ID: SGC_J

Lims ID: LCSD 280-444887/3-A

Client ID:

Operator ID: TEM ALS Bottle#: 10 Worklist Smp#: 10

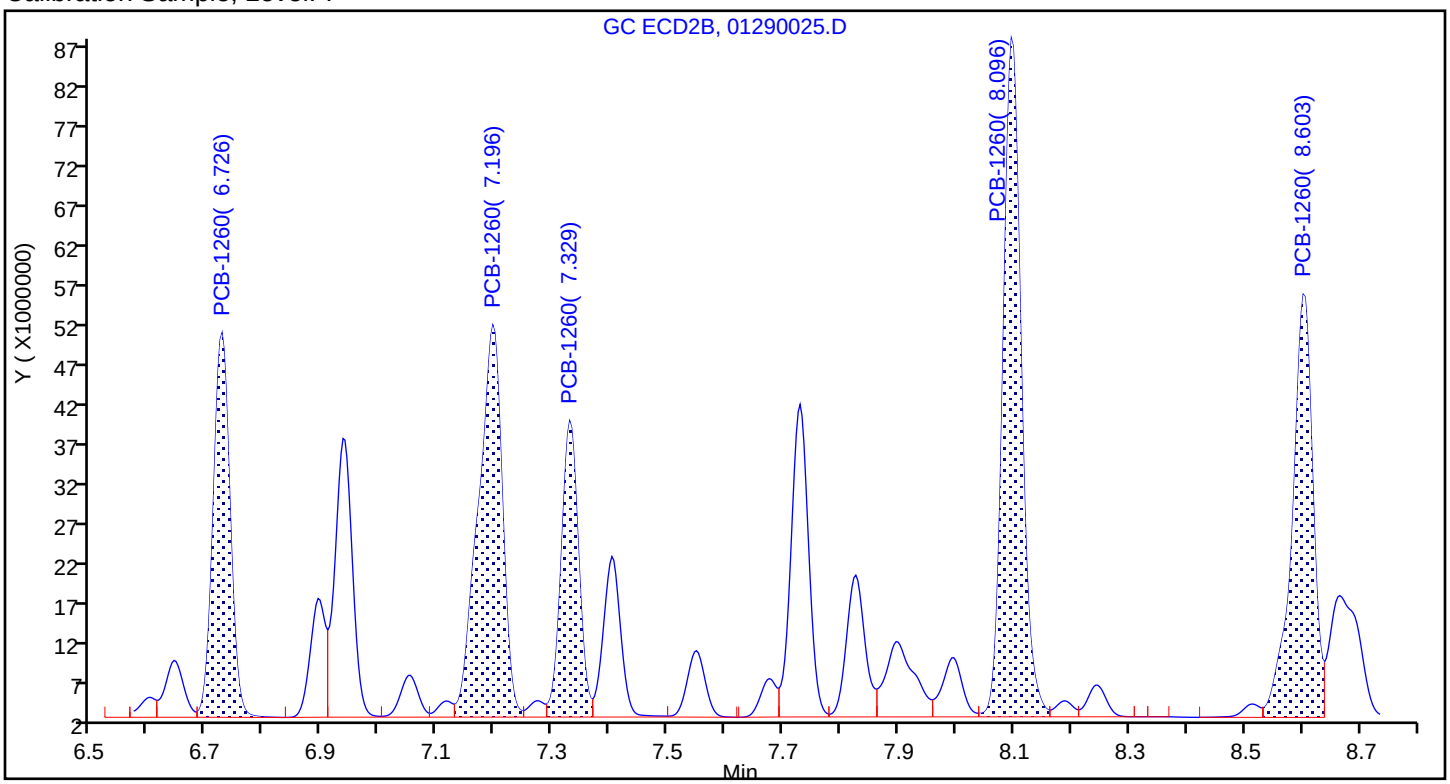
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

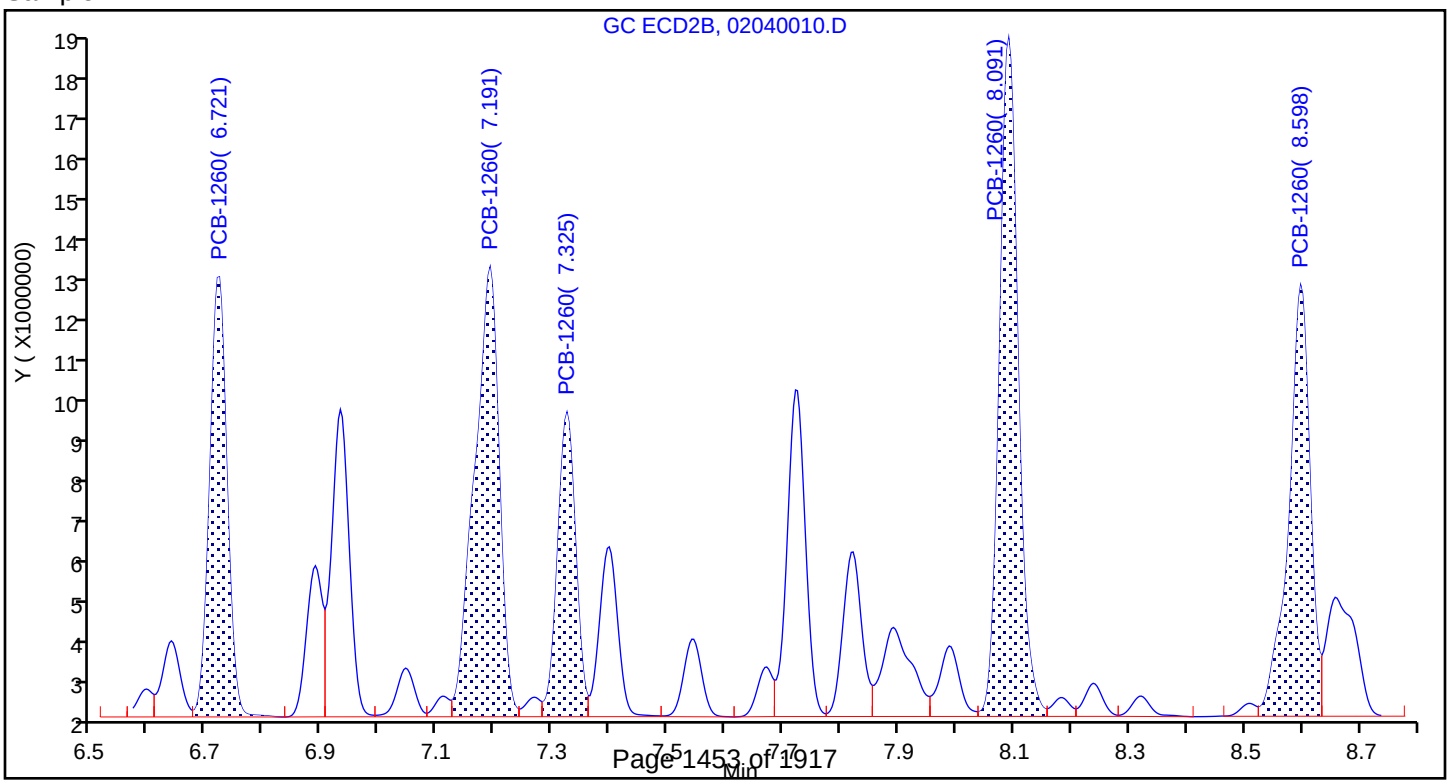
Column: CLP2 Pesticides Column 2 ( 0.32 mm) Detector GC ECD2B

## 12 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 7




Sample



PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Start Date: 01/29/2019 14:54

Analysis Batch Number: 445745 End Date: 01/30/2019 09:10

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| STD1 280-445745/3 IC | | 01/29/2019 14:54 | 1 | 01290003.D | CLP1 0.32(mm) |
| STD1 280-445745/3 IC | | 01/29/2019 14:54 | 1 | 01290003.D | CLP2 0.32(mm) |
| STD2 280-445745/4 IC | | 01/29/2019 15:15 | 1 | 01290004.D | CLP1 0.32(mm) |
| STD2 280-445745/4 IC | | 01/29/2019 15:15 | 1 | 01290004.D | CLP2 0.32(mm) |
| STD3 280-445745/5 IC | | 01/29/2019 15:36 | 1 | 01290005.D | CLP1 0.32(mm) |
| STD3 280-445745/5 IC | | 01/29/2019 15:36 | 1 | 01290005.D | CLP2 0.32(mm) |
| STD4 280-445745/6 IC | | 01/29/2019 15:57 | 1 | 01290006.D | CLP1 0.32(mm) |
| STD4 280-445745/6 IC | | 01/29/2019 15:57 | 1 | 01290006.D | CLP2 0.32(mm) |
| STD5 280-445745/7 IC | | 01/29/2019 16:18 | 1 | 01290007.D | CLP1 0.32(mm) |
| STD5 280-445745/7 IC | | 01/29/2019 16:18 | 1 | 01290007.D | CLP2 0.32(mm) |
| STD6 280-445745/8 IC | | 01/29/2019 16:39 | 1 | 01290008.D | CLP1 0.32(mm) |
| STD6 280-445745/8 IC | | 01/29/2019 16:39 | 1 | 01290008.D | CLP2 0.32(mm) |
| STD7 280-445745/9 IC | | 01/29/2019 17:00 | 1 | 01290009.D | CLP1 0.32(mm) |
| STD7 280-445745/9 IC | | 01/29/2019 17:00 | 1 | 01290009.D | CLP2 0.32(mm) |
| ICV 280-445745/10 | | 01/29/2019 17:21 | 1 | 01290010.D | CLP1 0.32(mm) |
| ICV 280-445745/10 | | 01/29/2019 17:21 | 1 | 01290010.D | CLP2 0.32(mm) |
| STD1 280-445745/11 IC | | 01/29/2019 17:42 | 1 | 01290011.D | CLP1 0.32(mm) |
| STD1 280-445745/11 IC | | 01/29/2019 17:42 | 1 | 01290011.D | CLP2 0.32(mm) |
| STD2 280-445745/12 IC | | 01/29/2019 18:04 | 1 | 01290012.D | CLP1 0.32(mm) |
| STD2 280-445745/12 IC | | 01/29/2019 18:04 | 1 | 01290012.D | CLP2 0.32(mm) |
| STD3 280-445745/13 IC | | 01/29/2019 18:25 | 1 | 01290013.D | CLP1 0.32(mm) |
| STD3 280-445745/13 IC | | 01/29/2019 18:25 | 1 | 01290013.D | CLP2 0.32(mm) |
| STD4 280-445745/14 IC | | 01/29/2019 18:46 | 1 | 01290014.D | CLP1 0.32(mm) |
| STD4 280-445745/14 IC | | 01/29/2019 18:46 | 1 | 01290014.D | CLP2 0.32(mm) |
| STD5 280-445745/15 IC | | 01/29/2019 19:07 | 1 | 01290015.D | CLP1 0.32(mm) |
| STD5 280-445745/15 IC | | 01/29/2019 19:07 | 1 | 01290015.D | CLP2 0.32(mm) |
| STD6 280-445745/16 IC | | 01/29/2019 19:28 | 1 | 01290016.D | CLP1 0.32(mm) |
| STD6 280-445745/16 IC | | 01/29/2019 19:28 | 1 | 01290016.D | CLP2 0.32(mm) |
| STD7 280-445745/17 IC | | 01/29/2019 19:49 | 1 | 01290017.D | CLP1 0.32(mm) |
| STD7 280-445745/17 IC | | 01/29/2019 19:49 | 1 | 01290017.D | CLP2 0.32(mm) |
| ICV 280-445745/18 | | 01/29/2019 20:10 | 1 | 01290018.D | CLP1 0.32(mm) |
| ICV 280-445745/18 | | 01/29/2019 20:10 | 1 | 01290018.D | CLP2 0.32(mm) |
| STD1 280-445745/19 IC | | 01/29/2019 20:31 | 1 | 01290019.D | CLP1 0.32(mm) |
| STD1 280-445745/19 IC | | 01/29/2019 20:31 | 1 | 01290019.D | CLP2 0.32(mm) |
| STD2 280-445745/20 IC | | 01/29/2019 20:52 | 1 | 01290020.D | CLP1 0.32(mm) |
| STD2 280-445745/20 IC | | 01/29/2019 20:52 | 1 | 01290020.D | CLP2 0.32(mm) |
| STD3 280-445745/21 IC | | 01/29/2019 21:13 | 1 | 01290021.D | CLP1 0.32(mm) |

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Start Date: 01/29/2019 14:54

Analysis Batch Number: 445745 End Date: 01/30/2019 09:10

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| STD3 280-445745/21 IC | | 01/29/2019 21:13 | 1 | 01290021.D | CLP2 0.32(mm) |
| STD4 280-445745/22 IC | | 01/29/2019 21:34 | 1 | 01290022.D | CLP1 0.32(mm) |
| STD4 280-445745/22 IC | | 01/29/2019 21:34 | 1 | 01290022.D | CLP2 0.32(mm) |
| STD5 280-445745/23 ICIS | | 01/29/2019 21:55 | 1 | 01290023.D | CLP1 0.32(mm) |
| STD5 280-445745/23 ICIS | | 01/29/2019 21:55 | 1 | 01290023.D | CLP2 0.32(mm) |
| STD6 280-445745/24 IC | | 01/29/2019 22:17 | 1 | 01290024.D | CLP1 0.32(mm) |
| STD6 280-445745/24 IC | | 01/29/2019 22:17 | 1 | 01290024.D | CLP2 0.32(mm) |
| STD7 280-445745/25 IC | | 01/29/2019 22:38 | 1 | 01290025.D | CLP1 0.32(mm) |
| STD7 280-445745/25 IC | | 01/29/2019 22:38 | 1 | 01290025.D | CLP2 0.32(mm) |
| ICV 280-445745/26 | | 01/29/2019 22:59 | 1 | 01290026.D | CLP1 0.32(mm) |
| ICV 280-445745/26 | | 01/29/2019 22:59 | 1 | 01290026.D | CLP2 0.32(mm) |
| STD1 280-445745/27 IC | | 01/29/2019 23:20 | 1 | 01290027.D | CLP1 0.32(mm) |
| STD1 280-445745/27 IC | | 01/29/2019 23:20 | 1 | 01290027.D | CLP2 0.32(mm) |
| STD2 280-445745/28 IC | | 01/29/2019 23:41 | 1 | 01290028.D | CLP1 0.32(mm) |
| STD2 280-445745/28 IC | | 01/29/2019 23:41 | 1 | 01290028.D | CLP2 0.32(mm) |
| STD3 280-445745/29 IC | | 01/30/2019 00:02 | 1 | 01290029.D | CLP1 0.32(mm) |
| STD3 280-445745/29 IC | | 01/30/2019 00:02 | 1 | 01290029.D | CLP2 0.32(mm) |
| STD4 280-445745/30 IC | | 01/30/2019 00:23 | 1 | 01290030.D | CLP1 0.32(mm) |
| STD4 280-445745/30 IC | | 01/30/2019 00:23 | 1 | 01290030.D | CLP2 0.32(mm) |
| STD5 280-445745/31 IC | | 01/30/2019 00:44 | 1 | 01290031.D | CLP1 0.32(mm) |
| STD5 280-445745/31 IC | | 01/30/2019 00:44 | 1 | 01290031.D | CLP2 0.32(mm) |
| STD6 280-445745/32 IC | | 01/30/2019 01:05 | 1 | 01290032.D | CLP1 0.32(mm) |
| STD6 280-445745/32 IC | | 01/30/2019 01:05 | 1 | 01290032.D | CLP2 0.32(mm) |
| STD7 280-445745/33 IC | | 01/30/2019 01:26 | 1 | 01290033.D | CLP1 0.32(mm) |
| STD7 280-445745/33 IC | | 01/30/2019 01:26 | 1 | 01290033.D | CLP2 0.32(mm) |
| ICV 280-445745/34 | | 01/30/2019 01:48 | 1 | 01290034.D | CLP1 0.32(mm) |
| ICV 280-445745/34 | | 01/30/2019 01:48 | 1 | 01290034.D | CLP2 0.32(mm) |
| STD1 280-445745/35 IC | | 01/30/2019 02:09 | 1 | 01290035.D | CLP1 0.32(mm) |
| STD1 280-445745/35 IC | | 01/30/2019 02:09 | 1 | 01290035.D | CLP2 0.32(mm) |
| STD2 280-445745/36 IC | | 01/30/2019 02:30 | 1 | 01290036.D | CLP1 0.32(mm) |
| STD2 280-445745/36 IC | | 01/30/2019 02:30 | 1 | 01290036.D | CLP2 0.32(mm) |
| STD3 280-445745/37 IC | | 01/30/2019 02:51 | 1 | 01290037.D | CLP1 0.32(mm) |
| STD3 280-445745/37 IC | | 01/30/2019 02:51 | 1 | 01290037.D | CLP2 0.32(mm) |

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J  Start Date: 01/29/2019 14:54

Analysis Batch Number: 445745  End Date: 01/30/2019 09:10

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| STD4 280-445745/38 IC | | 01/30/2019 03:12 | 1 | 01290038.D | CLP1 0.32(mm) |
| STD4 280-445745/38 IC | | 01/30/2019 03:12 | 1 | 01290038.D | CLP2 0.32(mm) |
| STD5 280-445745/39 IC | | 01/30/2019 03:33 | 1 | 01290039.D | CLP1 0.32(mm) |
| STD5 280-445745/39 IC | | 01/30/2019 03:33 | 1 | 01290039.D | CLP2 0.32(mm) |
| STD6 280-445745/40 IC | | 01/30/2019 03:54 | 1 | 01290040.D | CLP1 0.32(mm) |
| STD6 280-445745/40 IC | | 01/30/2019 03:54 | 1 | 01290040.D | CLP2 0.32(mm) |
| STD7 280-445745/41 IC | | 01/30/2019 04:15 | 1 | 01290041.D | CLP1 0.32(mm) |
| STD7 280-445745/41 IC | | 01/30/2019 04:15 | 1 | 01290041.D | CLP2 0.32(mm) |
| ICV 280-445745/42 | | 01/30/2019 04:36 | 1 | 01290042.D | CLP1 0.32(mm) |
| ICV 280-445745/42 | | 01/30/2019 04:36 | 1 | 01290042.D | CLP2 0.32(mm) |
| ZZZZZ | | 01/30/2019 05:18 | 1 | | CLP1 0.32(mm) |
| ZZZZZ | | 01/30/2019 05:18 | 1 | | CLP2 0.32(mm) |
| ZZZZZ | | 01/30/2019 07:04 | 1 | | CLP1 0.32(mm) |
| ZZZZZ | | 01/30/2019 07:04 | 1 | | CLP2 0.32(mm) |
| ZZZZZ | | 01/30/2019 07:25 | 1 | | CLP1 0.32(mm) |
| ZZZZZ | | 01/30/2019 07:25 | 1 | | CLP2 0.32(mm) |
| ZZZZZ | | 01/30/2019 07:46 | 1 | | CLP1 0.32(mm) |
| ZZZZZ | | 01/30/2019 07:46 | 1 | | CLP2 0.32(mm) |
| ZZZZZ | | 01/30/2019 08:07 | 1 | | CLP1 0.32(mm) |
| ZZZZZ | | 01/30/2019 08:07 | 1 | | CLP2 0.32(mm) |
| ZZZZZ | | 01/30/2019 08:28 | 1 | | CLP1 0.32(mm) |
| ZZZZZ | | 01/30/2019 08:28 | 1 | | CLP2 0.32(mm) |
| ZZZZZ | | 01/30/2019 08:49 | 1 | | CLP1 0.32(mm) |
| ZZZZZ | | 01/30/2019 08:49 | 1 | | CLP2 0.32(mm) |
| ZZZZZ | | 01/30/2019 09:10 | 1 | | CLP1 0.32(mm) |
| ZZZZZ | | 01/30/2019 09:10 | 1 | | CLP2 0.32(mm) |

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 160-32649-1

SDG No.:

Instrument ID: SGC_J Start Date: 02/05/2019 13:46

Analysis Batch Number: 446463 End Date: 02/05/2019 16:14

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| CCVIS 280-446463/5 | | 02/05/2019 13:46 | 1 | 02040005.D | CLP1 0.32(mm) |
| CCVIS 280-446463/5 | | 02/05/2019 13:46 | 1 | 02040005.D | CLP2 0.32(mm) |
| MB 280-444887/1-A | | 02/05/2019 14:49 | 1 | 02040008.D | CLP1 0.32(mm) |
| MB 280-444887/1-A | | 02/05/2019 14:49 | 1 | 02040008.D | CLP2 0.32(mm) |
| LCS 280-444887/2-A | | 02/05/2019 15:11 | 1 | 02040009.D | CLP1 0.32(mm) |
| LCS 280-444887/2-A | | 02/05/2019 15:11 | 1 | 02040009.D | CLP2 0.32(mm) |
| LCSD 280-444887/3-A | | 02/05/2019 15:32 | 1 | 02040010.D | CLP1 0.32(mm) |
| LCSD 280-444887/3-A | | 02/05/2019 15:32 | 1 | 02040010.D | CLP2 0.32(mm) |
| ZZZZZ | | 02/05/2019 15:53 | 1 | | CLP1 0.32(mm) |
| ZZZZZ | | 02/05/2019 15:53 | 1 | | CLP2 0.32(mm) |
| 160-32649-1 | | 02/05/2019 16:14 | 1 | 02040012.D | CLP1 0.32(mm) |
| 160-32649-1 | | 02/05/2019 16:14 | 1 | 02040012.D | CLP2 0.32(mm) |

# PCBS BATCH WORKSHEET

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Batch Number: 444887  Batch Start Date: 01/21/19 11:30  Batch Analyst: Getahun, Abaynesh A

Batch Method: 3510C  Batch End Date: 01/22/19 11:03

| Lab Sample ID | Client Sample ID | Method Chain | Basis | GrossWeight | TareWeight | InitialAmount | FinalAmount | ReceivedpH | 8081/82 Surr 00106 |
|---|---|---|---|---|---|---|---|---|---|
| MB 280-444887/1 | | 3510C, 8082A | | | | 1000 mL | 10 mL | 7 SU | 1 mL |
| LCS 280-444887/2 | | 3510C, 8082A | | | | 1000 mL | 10 mL | 7 SU | 1 mL |
| LCSD 280-444887/3 | | 3510C, 8082A | | | | 1000 mL | 10 mL | 7 SU | 1 mL |
| 160-32649-G-1 | CRC-MW-1-011519 | 3510C, 8082A | T | 1378.7 g | 395.1 g | 983.6 mL | 10 mL | 6 SU | 1 mL |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | 8082 LCS 00050 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| MB 280-444887/1 | | 3510C, 8082A | | | | | | | |
| LCS 280-444887/2 | | 3510C, 8082A | | 1 mL | | | | | |
| LCSD 280-444887/3 | | 3510C, 8082A | | 1 mL | | | | | |
| 160-32649-G-1 | CRC-MW-1-011519 | 3510C, 8082A | T | | | | | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# PCBS BATCH WORKSHEET

Lab Name: TestAmerica Denver  Job No.: 160-32649-1

SDG No.:

Batch Number: 444887  Batch Start Date: 01/21/19 11:30  Batch Analyst: Getahun, Abaynesh A

Batch Method: 3510C  Batch End Date: 01/22/19 11:03

| Batch Notes | |
|---|---|
| Balance ID | 24750399 |
| Batch Comment | DV-OP-0006/0007 r2d2 @ 5.00mL x2 |
| Analyst ID - Concentration | KS(under supervision of MM) |
| Concentration 1 Corrected Temperature | 88 Degrees C |
| Equipment ID - Concentration 1 | C |
| Exchange Solvent ID | Hexane_Cycl_00054 |
| Analyst ID - Extraction | AAG |
| Method/Fraction | 3510C/8082 |
| Na2SO4 ID | 0000213903_00002 |
| NaCl ID | 184223 |
| Pipette/Syringe/Dispenser ID | 1n2s |
| Prep Solvent ID | MeCl2_Cycl_00422/423 |
| Prep Solvent Volume Used | 180 mL |
| Analyst ID - Spike Analyst | AAG |
| Analyst ID - Spike Witness Analyst | Reviewer: MM |
| Sufficient Volume for Batch QC | no |
| Concentration 1 Uncorrected Temperature | 87 Degrees C |
| Reagent Water ID | S. ELGA |

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Method 1613B

## Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville  Job No.: 160-32649-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): RTX-5  ID: 0.32(mm)

| Client Sample ID | Lab Sample ID | TCDD # | 37TCDD # |
|---|---|---|---|
| | LCS 140-27087/11-A | 83 | 100 |

| | QC LIMITS |
|---|---|
| TCDD = 13C-2,3,7,8-TCDD | 20-175 |
| 37TCDD = 37Cl4-2,3,7,8-TCDD | 31-191 |

# Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville  Job No.: 160-32649-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): RTX-5  ID: 0.32(mm)

| Client Sample ID | Lab Sample ID | TCDD # | 37TCDD # |
|---|---|---|---|
| CRC-MW-1-011519 | 160-32649-1 | 63 | 95 |
| | MB 140-27087/10-A | 84 | 97 |

| | QC LIMITS |
|---|---|
| TCDD = 13C-2,3,7,8-TCDD | 25-164 |
| 37TCDD = 37Cl4-2,3,7,8-TCDD | 35-197 |

# Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

Matrix: Water Level: Low Lab File ID: LCS140-270885-Aa.d

Lab ID: LCS 140-27087/11-A Client ID:

| COMPOUND | SPIKE ADDED (pg/L) | LCS CONCENTRATION (pg/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 200 | 183 | 92 | 67-158 | |
| 13C-2,3,7,8-TCDD | 1000 | 826 | 83 | 20-175 | |

# Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville  Job No.: 160-32649-1

SDG No.:

Lab File ID: MB140-270884-Aa.d  Lab Sample ID: MB 140-27087/10-A

Matrix: Water  Date Extracted: 01/22/2019 13:19

Instrument ID: D2A  Date Analyzed: 01/28/2019 03:56

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| | LCS 140-27087/11-A | LCS140-270885-Aa.d | 01/28/2019 02:07 |
| CRC-MW-1-011519 | 160-32649-1 | 160-32649-n-1-a.d | 01/29/2019 12:43 |

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 160-32649-1

SDG No.:

Client Sample ID: CRC-MW-1-011519 | Lab Sample ID: 160-32649-1

Matrix: Water | Lab File ID: 160-32649-n-1-a.d

Analysis Method: 1613B | Date Collected: 01/15/2019 12:30

Extract. Method: HRMS-Sepf | Date Extracted: 01/22/2019 13:19

Sample wt/vol: 953.4(mL) | Date Analyzed: 01/29/2019 12:43

Con. Extract Vol.: 20(uL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 27242 | Units: pg/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | EDL |
|---|---|---|---|---|---|
| 1746-01-6 | 2,3,7,8-TCDD | 0.35 | U | 10 | 0.35 |

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| 76523-40-5 | 13C-2,3,7,8-TCDD | 63 | | 25-164 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 85508-50-5 | 37Cl4-2,3,7,8-TCDD | 95 | | 35-197 |

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\160-32649-n-1-a.d
Lims ID: 160-32649-N-1-A
Client ID: CRC-MW-1-011519
Sample Type: Client
Inject. Date: 29-Jan-2019 12:43:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010667-007
Operator ID: Xcalibur_System Instrument ID: D2A

Method: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 29-Jan-2019 13:51:58 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX1017

First Level Reviewer: davidsonm Date: 29-Jan-2019 13:51:58

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 30:59 | | | | | | 0.0166 | 0.0166 | | |
| A Non-2,3,7,8-sub-TCDD | 29:36 | | | | | | 0.0166 | 0.0373 | | RQU |
| S Total TCDD | | | | | | | 0.0373 | 0.0373 | | |
| A Non-2,3,7,8-sub-TCDF | 28:18 | 10421 | 0.77 | 0.0000 | | | | | | RQ |
| S Total TCDF | | | | | | | 0.0 | 0.0 | | RQ |
| A Non-2,3,7,8-sub-PeCDD | 39:30 | 5449 | 1.55 | 0.0000 | | | | | | RQ |
| S Total PeCDD | | | | | | | 0.0 | 0.0 | | RQ |
| A Non-2,3,7,8-sub-PeCDF | 38:06 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDF | | | | | | | 0.0 | 0.0 | | |
| A Non-2,3,7,8-sub-HxCDD | 44:21 | 2744 | 1.20 | 0.0000 | | | | | | |
| S Total HxCDD | | | | | | | 0.0 | 0.0 | | |
| A Non-2,3,7,8-sub-HxCDF | 44:13 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDF | | | | | | | 0.0 | 0.0 | | |
| A Non-2,3,7,8-sub-HpCDD | 49:07 | 9449 | 1.04 | 0.0000 | | | | | | RQ |
| S Total HpCDD | | | | | | | 0.0 | 0.0 | | RQ |
| A Non-2,3,7,8-sub-HpCDF | 49:20 | 4268 | 1.04 | 0.0000 | | | | | | RQ |
| S Total HpCDF | | | | | | | 0.0 | 0.0 | | RQ |
| D 13C-2,3,7,8-TCDD | 31:01 | 1680418 | 0.82 | 1.0709 | 31.5 | 31.5 | 0.2921 | 0.2921 | 62.93 | |
| $ 37Cl4-2,3,7,8-TCDD | 31:03 | 579525 | | 1.2266 | 9.475 | 9.475 | 0.0399 | 0.0399 | 94.75 | |
| * 13C-1,2,3,4-TCDD | 30:30 | 4986536 | 0.79 | 9.1E+04 | 100.0 | 100.0 | | | | |
| * 13C-1,2,3,7,8,9-HxCDD | 45:24 | 5600820 | 1.26 | 1E+05 | 100.0 | 100.0 | | | | |

## QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
U - Marked Undetected

Report Date: 29-Jan-2019 13:51:58 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\160-32649-n-1-a.d
Lims ID: 160-32649-N-1-A
Client ID: CRC-MW-1-011519
Sample Type: Client
Inject. Date: 29-Jan-2019 12:43:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010667-007
Operator ID: Xcalibur_System Instrument ID: D2A

Method: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 29-Jan-2019 13:51:58 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX1017

First Level Reviewer: davidsonm Date: 29-Jan-2019 13:51:58

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | |
| 319.8965 | 30:59 | | | | | | 11 | 27 | | | |
| 321.8936 | 30:59 | | | | | | 17 | 42 | | | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | U |
| 319.8965 | 25:07 | 29:36 | -268 | 0.810 | 320 | 139 | 11 | 27 | 13 | | |
| 321.8936 | 25:07 | 29:36 | -268 | 0.810 | 450 | 141 | 17 | 42 | 8 | 0.71(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | RQ |
| 303.9016 | 25:15 | 28:18 | -183 | 0.871 | 661 | 152 | 21 | 52 | 7 | | |
| 305.8987 | 25:16 | 28:18 | -182 | 0.872 | 1316 | 342 | 47 | 117 | 7 | 0.50(0.65-0.89) | |
| 303.9016 | 28:28 | 28:18 | 10 | 0.982 | 1954 | 160 | 21 | 52 | 8 | | |
| 305.8987 | 28:28 | 28:18 | 10 | 0.982 | 2962 | 314 | 47 | 117 | 7 | 0.66(0.65-0.89) | |
| 303.9016 | 33:53 | 28:18 | 334 | 1.168 | 1584 | 228 | 21 | 52 | 11 | | |
| 305.8987 | 33:52 | 28:18 | 333 | 1.168 | 2402 | 272 | 47 | 117 | 6 | 0.66(0.65-0.89) | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | RQ |
| 355.8546 | 37:46 | 39:30 | -104 | 0.929 | 1088 | 111 | 16 | 40 | 7 | | |
| 357.8516 | 37:53 | 39:30 | -97 | 0.932 | 1921 | 380 | 27 | 67 | 14 | 0.57(1.32-1.78) | |
| 355.8546 | 39:55 | 39:30 | 25 | 0.982 | 2225 | 403 | 16 | 40 | 25 | | |
| 357.8516 | 39:55 | 39:30 | 25 | 0.982 | 1731 | 289 | 27 | 67 | 11 | 1.29(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | |
| 339.8597 | 38:06 | | | | | | 58 | 145 | | | |
| 341.8567 | 38:06 | | | | | | 72 | 180 | | | |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | |
| 389.8158 | 43:21 | 44:21 | -60 | 0.963 | 1494 | 342 | 75 | 187 | 5 | | |
| 391.8127 | 43:20 | 44:21 | -61 | 0.962 | 1250 | 297 | 40 | 100 | 7 | 1.20(1.05-1.43) | |

| Signal | RT (min.) | Adj RT (min.) | Δ Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:13 | | | | | | 40 | 100 | | | |
| 375.8178 | 44:13 | | | | | | 76 | 190 | | | |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | RQ |
| 423.7767 | 48:34 | 49:07 | -33 | 0.977 | 2279 | 494 | 13 | 32 | 38 | | |
| 425.7737 | 48:33 | 49:07 | -34 | 0.977 | 4107 | 638 | 61 | 152 | 10 | 0.55(0.88-1.20) | |
| 423.7767 | 49:44 | 49:07 | 37 | 1.000 | 2537 | 602 | 13 | 32 | 46 | | |
| 425.7737 | 49:45 | 49:07 | 38 | 1.001 | 2442 | 310 | 61 | 152 | 5 | 1.04(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | RQ |
| 407.7817 | 48:05 | 49:20 | -76 | 1.000 | 2176 | 533 | 55 | 137 | 10 | | |
| 409.7788 | 48:05 | 49:20 | -76 | 1.000 | 2909 | 714 | 33 | 82 | 22 | 0.75(0.88-1.20) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 31:01 | 31:04 | 1 | 1.017 | 757156 | 81815 | 391 | 977 | 209 | | |
| 333.9338 | 31:00 | 31:04 | 0 | 1.017 | 923262 | 98007 | 279 | 697 | 351 | 0.82(0.65-0.89) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31:03 | 31:03 | 3 | 1.018 | 579525 | 61650 | 105 | 262 | 587 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 30:30 | 30:26 | 3 | | 2204558 | 242544 | 391 | 977 | 620 | | |
| 333.9338 | 30:30 | 30:26 | 3 | | 2781978 | 292949 | 279 | 697 | 1050 | 0.79(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:24 | 45:22 | 2 | | 3126278 | 730114 | 226 | 565 | 3231 | | |
| 403.8529 | 45:24 | 45:22 | 2 | | 2474542 | 576150 | 130 | 325 | 4432 | 1.26(1.05-1.43) | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

Report Date: 29-Jan-2019 13:51:58 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\160-32649-n-1-a.d
Lims ID: 160-32649-N-1-A
Client ID: CRC-MW-1-011519
Inject. Date: 29-Jan-2019 12:43:00 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27242 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDD, RT: 29.595

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 1.173 | D 13C-2,3,7,8-TCDD | 50.000 | 1680418 | 179822 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.173 | | 50.000 | 1680418 | 179822 |

Sum the Uncalibrated Results

| RT | 319.8965 Area | 319.8965 Height | 321.8936 Area | 321.8936 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 25:07 | 320 | 139 | 450 | 141 | 0.0195 | 0.71 | |
| 27:58 | 1037 | 141 | 674 | 180 | 0.0434 | 1.54 | RQ |
| 27:58 | 518 | 138 | 674 | 180 | 0.0302 | | Empc Correction |
| 28:54 | 495 | 105 | 374 | 101 | 0.0220 | 1.32 | RQ |
| 28:54 | 287 | 77 | 374 | 101 | 0.0168 | | Empc Correction |
| 29:37 | 481 | 103 | 588 | 97 | 0.0271 | 0.82 | |
| 30:29 | 640 | 107 | 1299 | 236 | 0.0492 | 0.49 | RQ |
| 30:29 | 640 | 107 | 831 | 138 | 0.0373 | | Empc Correction |
| 33:34 | 321 | 93 | 925 | 177 | 0.0316 | 0.35 | RQ |
| 33:34 | 321 | 93 | 416 | 120 | 0.0187 | | Empc Correction |
| 34:08 | 682 | 182 | 503 | 207 | 0.0301 | 1.36 | RQ |
| 34:08 | 387 | 159 | 503 | 207 | 0.0226 | | Empc Correction |

Compound is Marked ND

Report Date: 29-Jan-2019 13:51:58 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\160-32649-n-1-a.d
Lims ID: 160-32649-N-1-A
Client ID: CRC-MW-1-011519
Inject. Date: 29-Jan-2019 12:43:00 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27242 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDF, RT: 28.298

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 2,3,7,8-TCDF | 1.088 | | | | |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 0.000 | | 0.0 | 0 | 0 |

Sum the Uncalibrated Results

| RT | 303.9016 Area | 303.9016 Height | 305.8987 Area | 305.8987 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 25:15 | 661 | 152 | 1316 | 342 | | 0.50 | R |
| 28:28 | 1954 | 160 | 2962 | 314 | | 0.66 | |
| 33:53 | 1584 | 228 | 2402 | 272 | | 0.66 | |
| Signal Totals: | | | | | | | |
| | 4199 | 540 | 6680 | 928 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 10879 | 1468 | | | | 0.63 | RQ |
| | 10421 | 1323 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (10879 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (10421 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\160-32649-n-1-a.d
Lims ID: 160-32649-N-1-A
Client ID: CRC-MW-1-011519
Inject. Date: 29-Jan-2019 12:43:00 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27242 Lims Sample ID: 7

Non-2,3,7,8-sub-PeCDD, RT: 39.487

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,7,8-PeCDD | 1.043 | | | | |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 0.000 | | 0.0 | 0 | 0 |

Sum the Uncalibrated Results

| RT | 355.8546 Area | 355.8546 Height | 357.8516 Area | 357.8516 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 37:46 | 1088 | 111 | 1921 | 380 | | 0.57 | R |
| 39:55 | 2225 | 403 | 1731 | 289 | | 1.29 | R |
| Signal Totals: | | | | | | | |
| | 3313 | 514 | 3652 | 669 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 6965 | 1183 | | | | 0.91 | RQ |
| | 5449 | 845 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (6965 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (5449 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 29-Jan-2019 13:51:58 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\160-32649-n-1-a.d
Lims ID: 160-32649-N-1-A
Client ID: CRC-MW-1-011519
Inject. Date: 29-Jan-2019 12:43:00 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27242 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDD, RT: 44.344

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,4,7,8-HxCDD | 1.141 | | | | |
| 1,2,3,6,7,8-HxCDD | 1.148 | | | | |
| 1,2,3,7,8,9-HxCDD | 1.221 | | | | |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 0.000 | | 0.0 | 0 | 0 |

Sum the Uncalibrated Results

| RT | 389.8158 Area | 389.8158 Height | 391.8127 Area | 391.8127 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 43:21 | 1494 | 342 | 1250 | 297 | | 1.20 | |
| Signal Totals: | | | | | | | |
| | 1494 | 342 | 1250 | 297 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 2744 | 639 | | | | 1.20 | |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (2744 * 0.0) / (0 * 0.000)

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\160-32649-n-1-a.d
Lims ID: 160-32649-N-1-A
Client ID: CRC-MW-1-011519
Inject. Date: 29-Jan-2019 12:43:00 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27242 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDD, RT: 49.112

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 1.120 | | | | |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 0.000 | | 0.0 | 0 | 0 |

Sum the Uncalibrated Results

| RT | 423.7767 Area | 423.7767 Height | 425.7737 Area | 425.7737 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 48:34 | 2279 | 494 | 4107 | 638 | | 0.55 | R |
| 49:44 | 2537 | 602 | 2442 | 310 | | 1.04 | |
| Signal Totals: | | | | | | | |
| | 4816 | 1096 | 6549 | 948 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 11365 | 2044 | | | | 0.74 | RQ |
| | 9449 | 1881 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (11365 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (9449 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 29-Jan-2019 13:51:58 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\160-32649-n-1-a.d
Lims ID: 160-32649-N-1-A
Client ID: CRC-MW-1-011519
Inject. Date: 29-Jan-2019 12:43:00 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27242 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDF, RT: 49.331

Initial Calibration RRF

IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDF | 1.498 | | | | |
| 1,2,3,4,7,8,9-HpCDF | 1.381 | | | | |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 0.000 | | 0.0 | 0 | 0 |

Sum the Uncalibrated Results

| RT | 407.7817 Area | 407.7817 Height | 409.7788 Area | 409.7788 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 48:05 | 2176 | 533 | 2909 | 714 | | 0.75 | R |
| Signal Totals: | | | | | | | |
| | 2176 | 533 | 2909 | 714 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 5085 | 1247 | | | | 0.75 | RQ |
| | 4268 | 1045 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (5085 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (4268 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

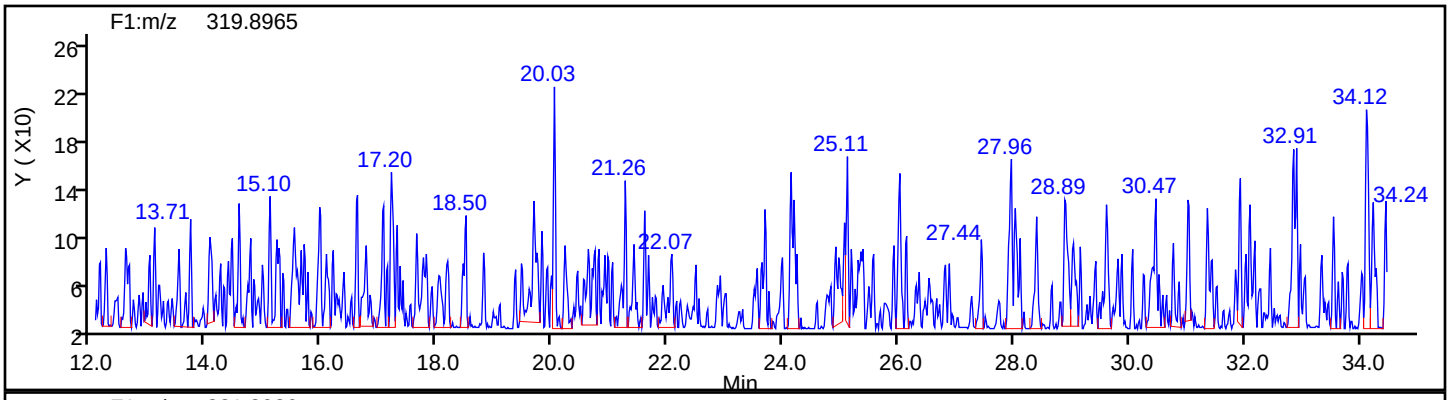
Report Date: 29-Jan-2019 13:51:58 Chrom Revision: 2.3 28-Jan-2019 09:43:36

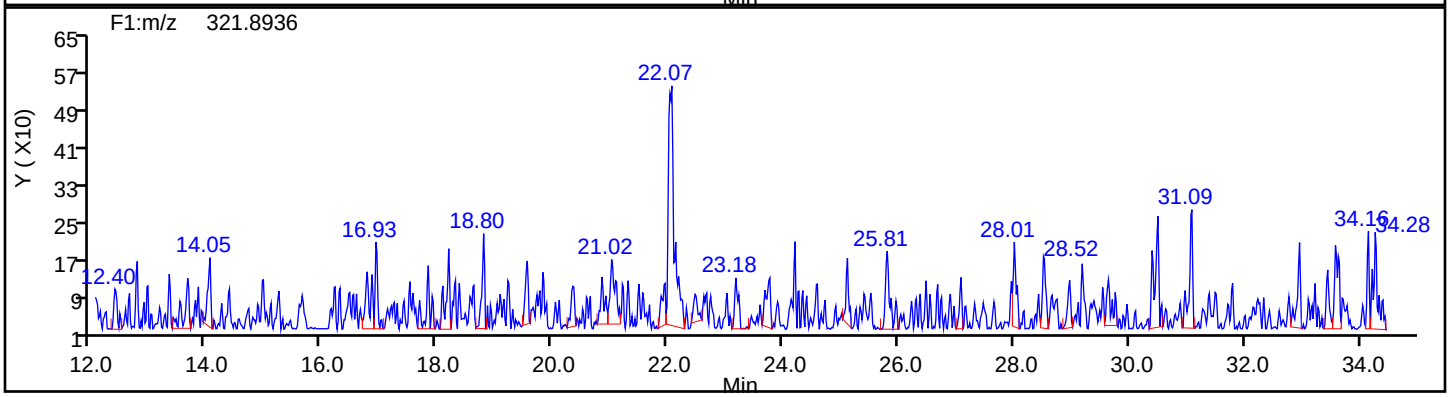
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\160-32649-n-1-a.d

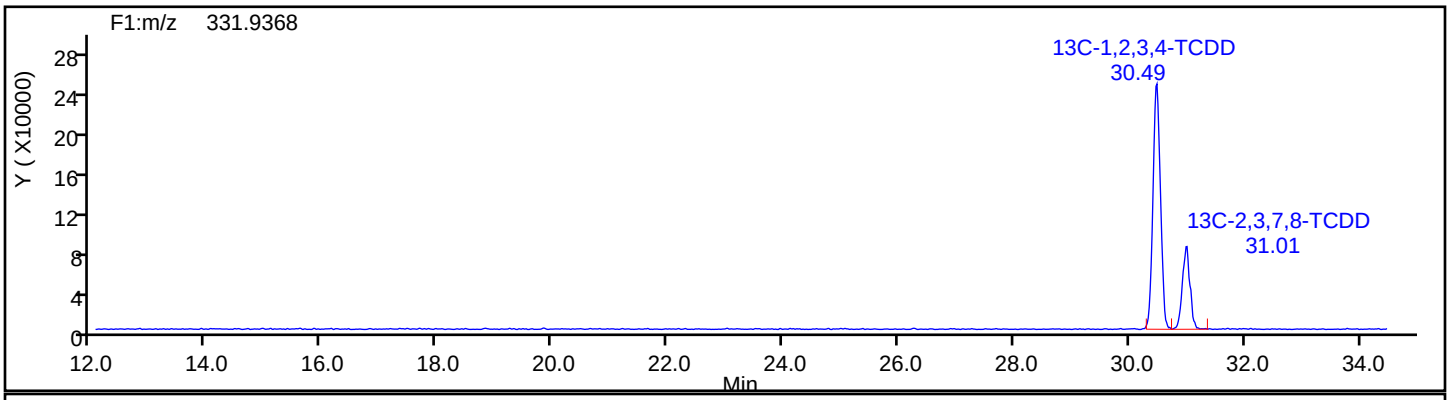
| | | | |
|---|---|---|---|
| Injection Date: | 29-Jan-2019 12:43:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | CRC-MW-1-011519 | | |
| Worklist#: | 27242 | Sample Line#: | 7 |
| Column Type: | | Column Dia: | |

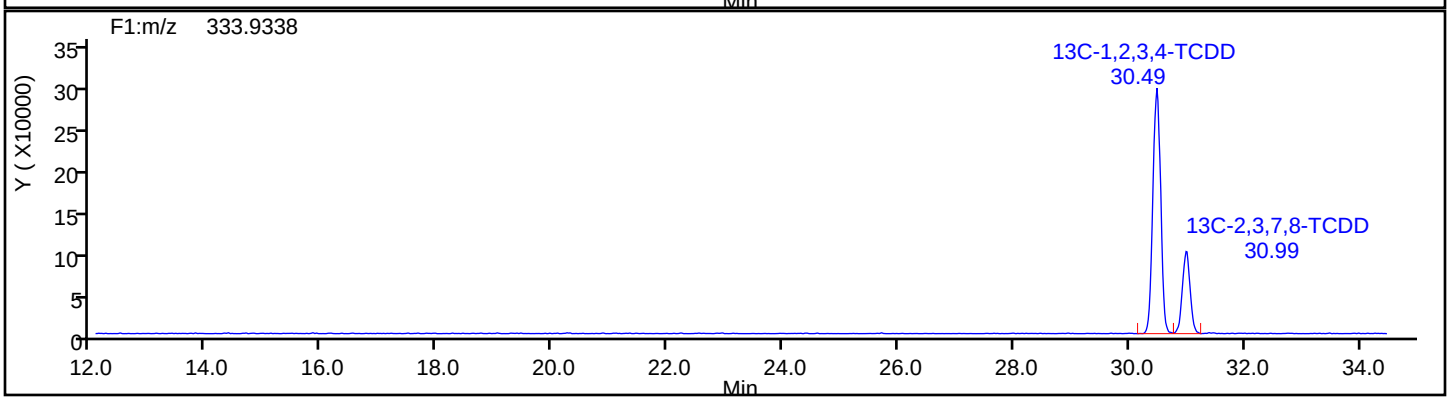
TCDD




TCDD Standards



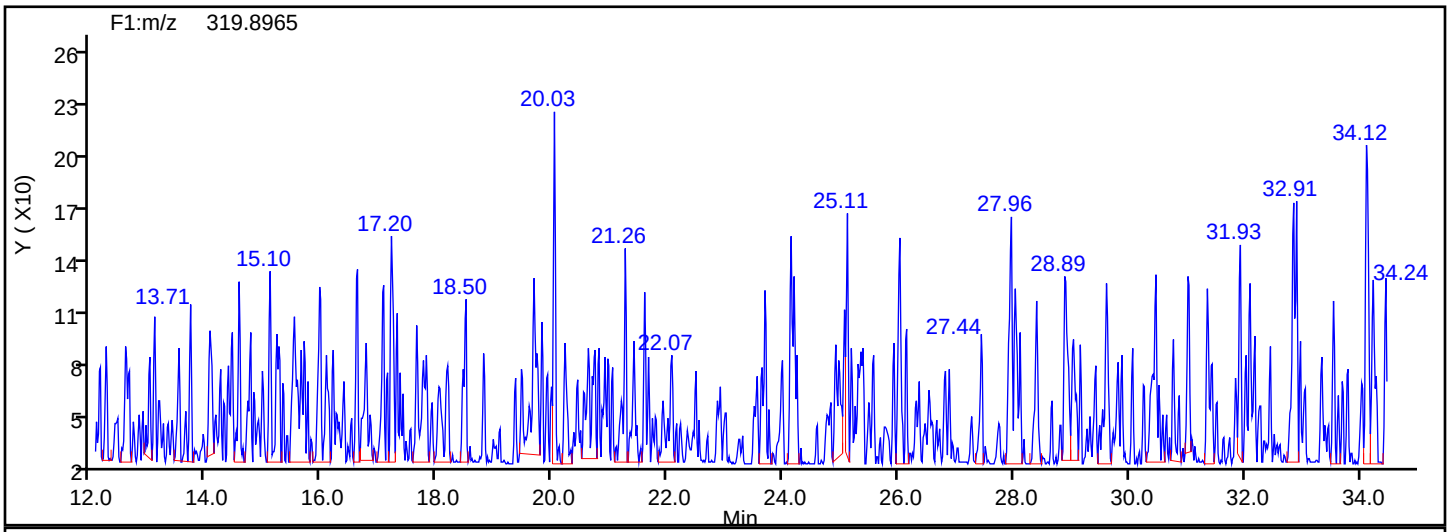



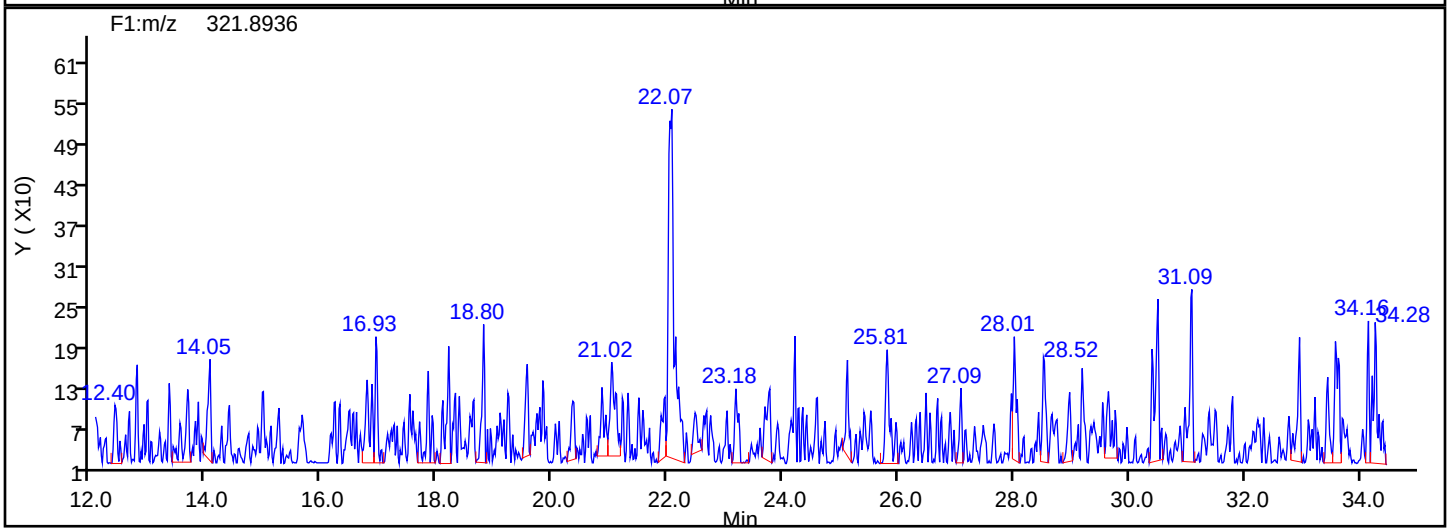
Report Date: 29-Jan-2019 13:51:58 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

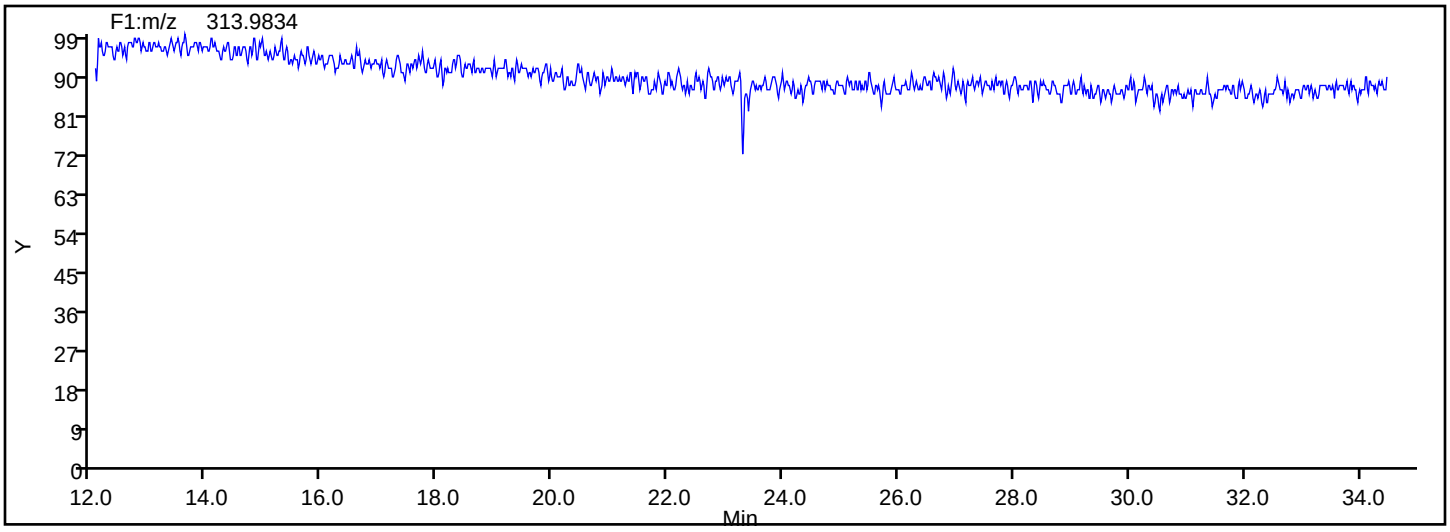
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| Injection Date: | 29-Jan-2019 12:43:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | CRC-MW-1-011519 | | |
| Worklist#: | 27242 | Sample Line#: | 7 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



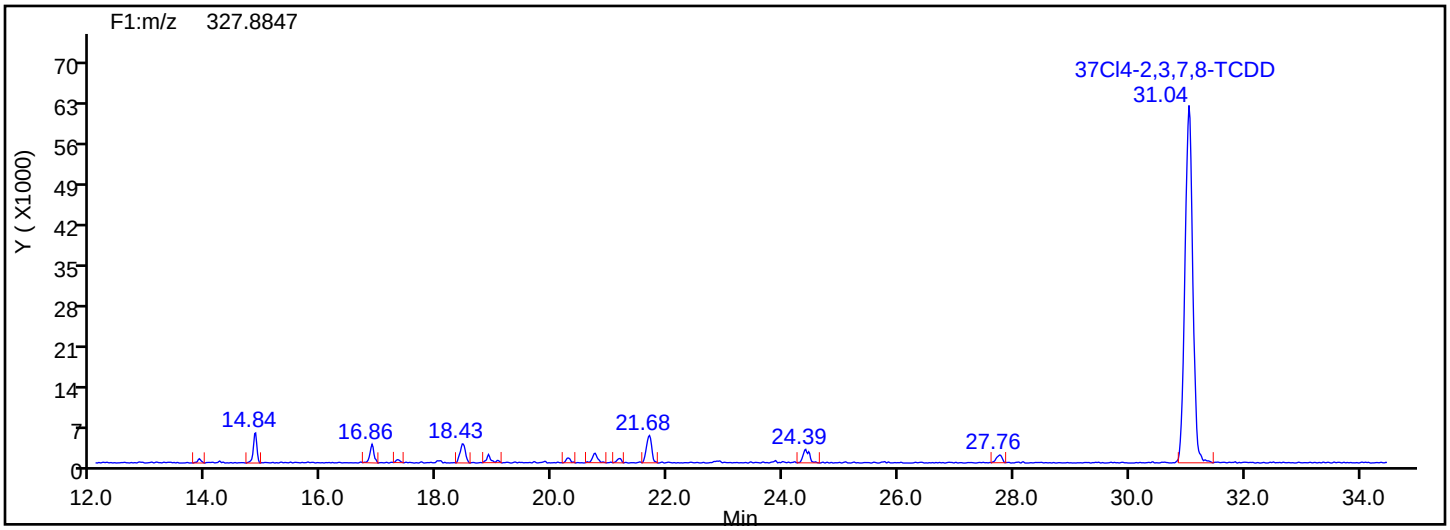
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TestAmerica Knoxville

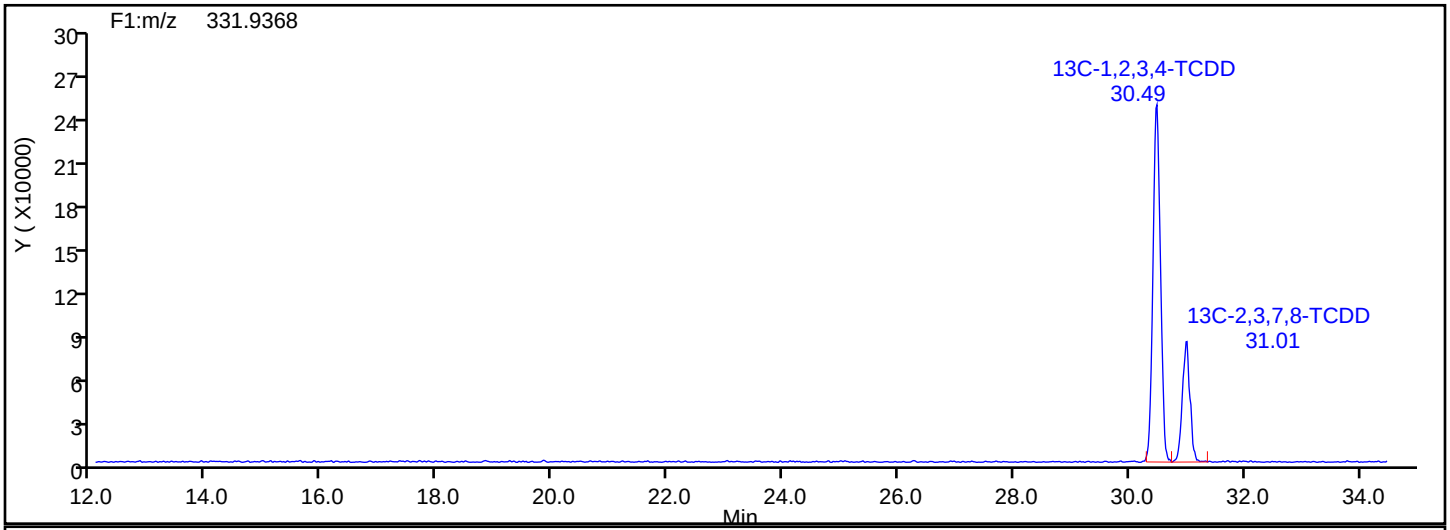
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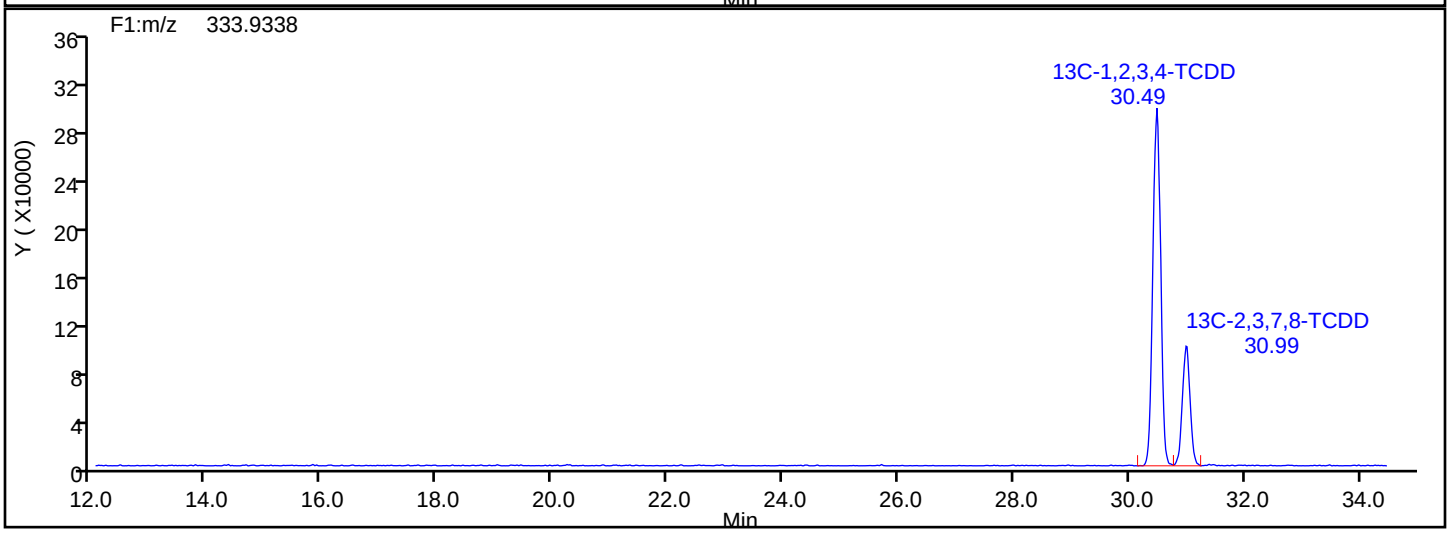
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| Injection Date: | 29-Jan-2019 12:43:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | CRC-MW-1-011519 | | |
| Worklist#: | 27242 | Sample Line#: | 7 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



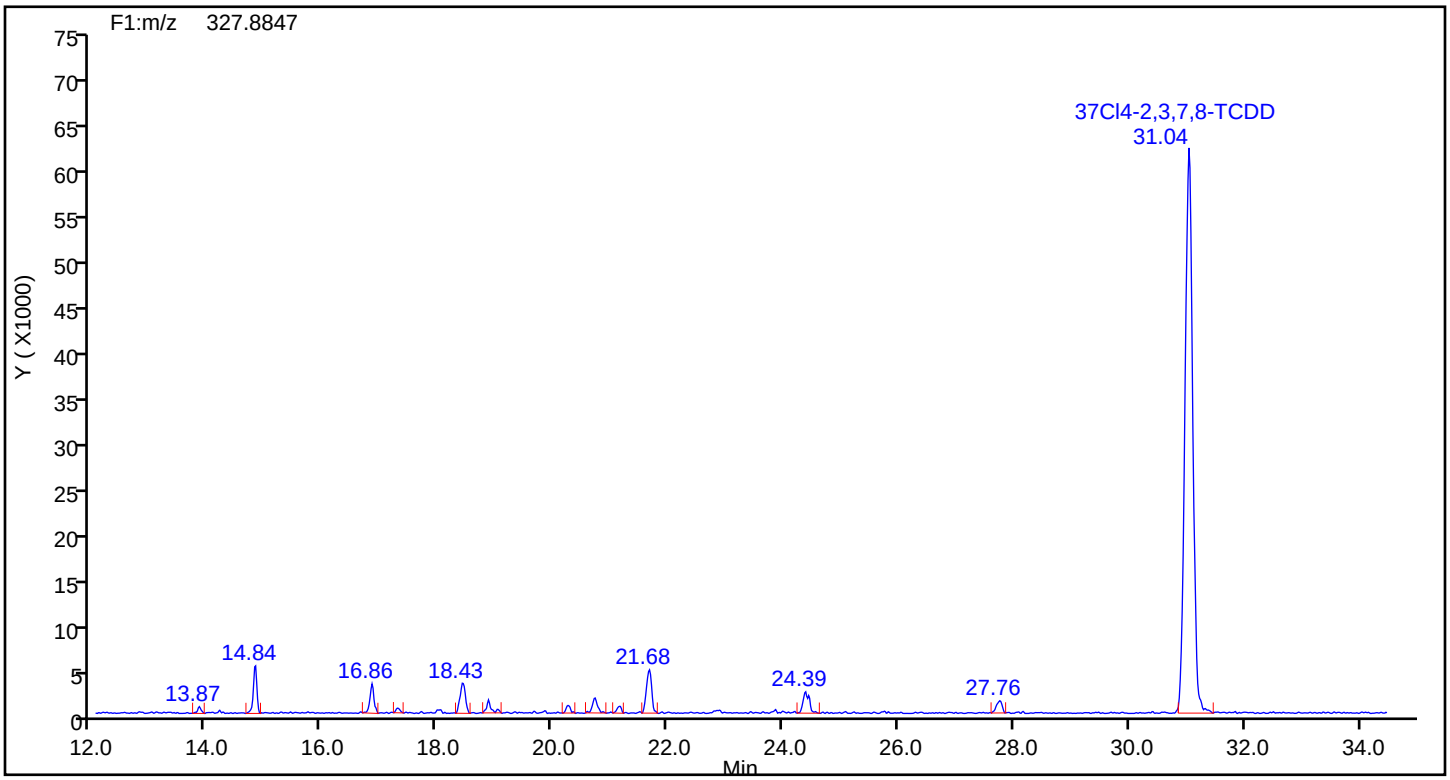
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TestAmerica Knoxville

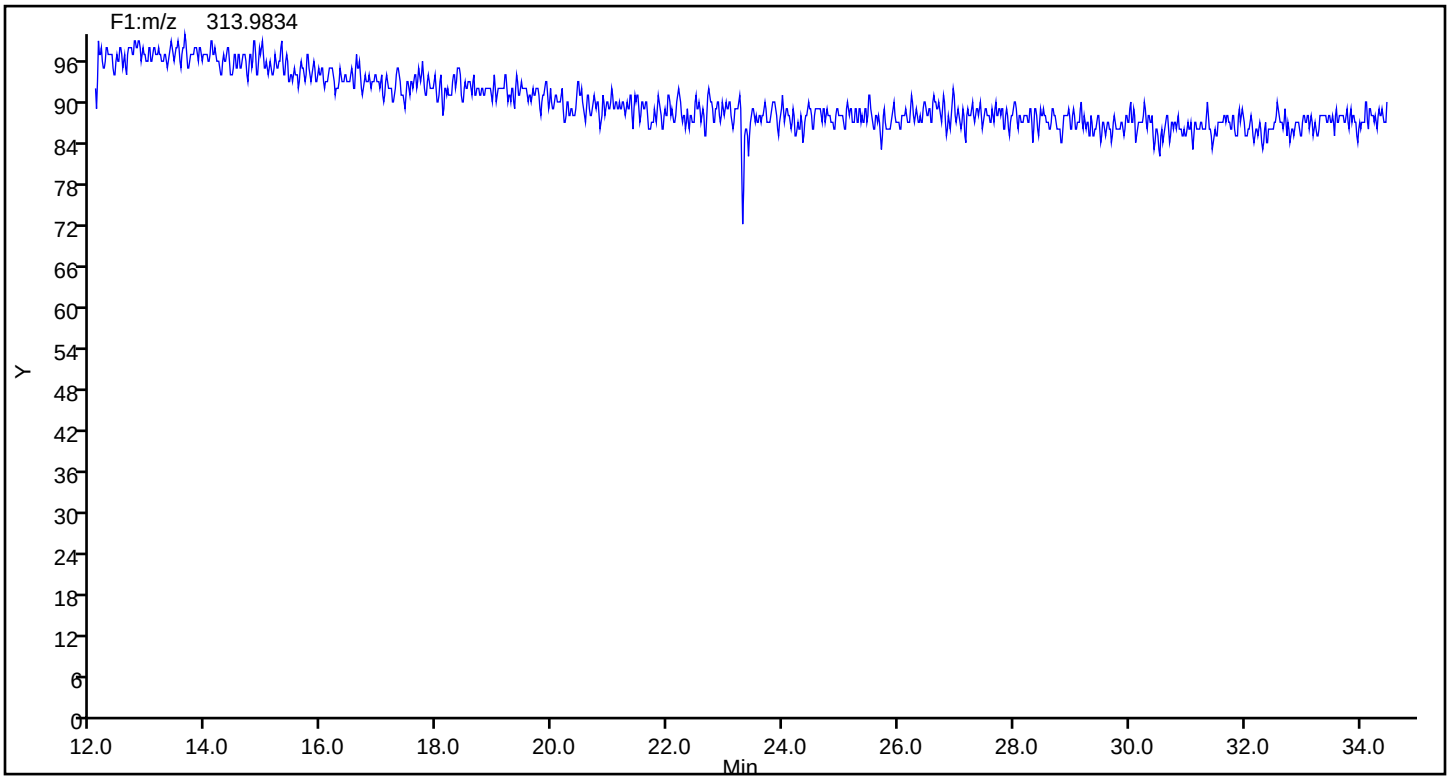
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|---|---|---|---|
| Injection Date: | 29-Jan-2019 12:43:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | CRC-MW-1-011519 | | |
| Worklist#: | 27242 | Sample Line#: | 7 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Lock Mass



FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1 Analy Batch No.: 7768

SDG No.:

Instrument ID: D2A GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/16/2014 14:26 Calibration End Date: 05/16/2014 18:31 Calibration ID: 825

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 140-7768/2 | d3140516i1.d |
| Level 2 | IC 140-7768/3 | d3140516i2.d |
| Level 3 | IC 140-7768/4 | d3140516i3.d |
| Level 4 | IC 140-7768/5 | d3140516i4.d |
| Level 5 | IC 140-7768/6 | d3140516i5.d |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| 2,3,7,8-TCDF | 1.1620 | 1.0787 | 1.0761 | 1.0664 | 1.0575 | AveID | | 1.0881 | | | | 3.9 | | 20.0 | | | |
| 2,3,7,8-TCDD | 1.1914 | 1.2413 | 1.1477 | 1.1335 | 1.1525 | AveID | | 1.1733 | | | | 3.7 | | 20.0 | | | |
| 1,2,3,7,8-PeCDF | 1.2525 | 1.1873 | 1.1447 | 1.1539 | 1.2106 | AveID | | 1.1898 | | | | 3.7 | | 20.0 | | | |
| 2,3,4,7,8-PeCDF | 1.1621 | 1.1000 | 1.0763 | 1.0701 | 1.1388 | AveID | | 1.1095 | | | | 3.6 | | 20.0 | | | |
| 1,2,3,7,8-PeCDD | 1.1072 | 1.0520 | 1.0113 | 1.0030 | 1.0435 | AveID | | 1.0434 | | | | 4.0 | | 20.0 | | | |
| 1,2,3,4,7,8-HxCDF | 1.4252 | 1.3521 | 1.3239 | 1.3123 | 1.4010 | AveID | | 1.3629 | | | | 3.6 | | 20.0 | | | |
| 1,2,3,6,7,8-HxCDF | 1.4070 | 1.2610 | 1.2346 | 1.2159 | 1.2627 | AveID | | 1.2762 | | | | 5.9 | | 20.0 | | | |
| 2,3,4,6,7,8-HxCDF | 1.3654 | 1.2309 | 1.2243 | 1.2236 | 1.2827 | AveID | | 1.2654 | | | | 4.8 | | 20.0 | | | |
| 1,2,3,4,7,8-HxCDD | 1.2224 | 1.1235 | 1.1211 | 1.1013 | 1.1360 | AveID | | 1.1409 | | | | 4.1 | | 20.0 | | | |
| 1,2,3,6,7,8-HxCDD | 1.1974 | 1.1789 | 1.1380 | 1.0905 | 1.1358 | AveID | | 1.1481 | | | | 3.6 | | 20.0 | | | |
| 1,2,3,7,8,9-HxCDD | 1.2071 | 1.2833 | 1.1953 | 1.1788 | 1.2414 | AveID | | 1.2212 | | | | 3.4 | | 35.0 | | | |
| 1,2,3,7,8,9-HxCDF | 1.2857 | 1.2741 | 1.2331 | 1.2330 | 1.2608 | AveID | | 1.2573 | | | | 1.9 | | 20.0 | | | |
| 1,2,3,4,6,7,8-HpCDF | 1.6046 | 1.5139 | 1.4534 | 1.4467 | 1.4732 | AveID | | 1.4984 | | | | 4.3 | | 20.0 | | | |
| 1,2,3,4,6,7,8-HpCDD | 1.1769 | 1.1205 | 1.1094 | 1.0801 | 1.1151 | AveID | | 1.1204 | | | | 3.1 | | 20.0 | | | |
| 1,2,3,4,7,8,9-HpCDF | 1.4220 | 1.4030 | 1.3414 | 1.3478 | 1.3894 | AveID | | 1.3807 | | | | 2.5 | | 20.0 | | | |
| OCDD | 1.2833 | 1.1839 | 1.1963 | 1.1493 | 1.2234 | AveID | | 1.2073 | | | | 4.2 | | 20.0 | | | |
| OCDF | 1.1506 | 1.1271 | 1.0957 | 1.0561 | 1.1513 | AveID | | 1.1162 | | | | 3.6 | | 35.0 | | | |
| 13C-2,3,7,8-TCDF | 1.7281 | 1.7612 | 1.7382 | 1.7730 | 1.7721 | Ave | | 1.7545 | | | | 1.2 | | 35.0 | | | |
| 13C-2,3,7,8-TCDD | 1.0524 | 1.0711 | 1.0580 | 1.0797 | 1.0934 | Ave | | 1.0709 | | | | 1.5 | | 35.0 | | | |
| 13C-1,2,3,7,8-PeCDF | 1.3121 | 1.2910 | 1.3370 | 1.4108 | 1.5012 | Ave | | 1.3704 | | | | 6.3 | | 35.0 | | | |
| 13C-2,3,4,7,8-PeCDF | 1.3287 | 1.3226 | 1.3322 | 1.4302 | 1.5050 | Ave | | 1.3837 | | | | 5.9 | | 35.0 | | | |
| 13C-1,2,3,7,8-PeCDD | 0.8255 | 0.8165 | 0.8307 | 0.9110 | 0.9879 | Ave | | 0.8743 | | | | 8.5 | | 35.0 | | | |
| 13C-1,2,3,4,7,8-HxCDF | 1.1989 | 1.1941 | 1.2026 | 1.2023 | 1.1481 | Ave | | 1.1892 | | | | 2.0 | | 35.0 | | | |
| 13C-1,2,3,6,7,8-HxCDF | 1.4353 | 1.4571 | 1.4933 | 1.4944 | 1.4322 | Ave | | 1.4625 | | | | 2.1 | | 35.0 | | | |
| 13C-2,3,4,6,7,8-HxCDF | 1.3243 | 1.3372 | 1.3420 | 1.3289 | 1.2660 | Ave | | 1.3197 | | | | 2.3 | | 35.0 | | | |
| 13C-1,2,3,4,7,8-HxCDD | 0.8799 | 0.8733 | 0.8778 | 0.8876 | 0.8675 | Ave | | 0.8772 | | | | 0.9 | | 35.0 | | | |
| 13C-1,2,3,6,7,8-HxCDD | 0.9056 | 0.9046 | 0.9264 | 0.9561 | 0.8927 | Ave | | 0.9171 | | | | 2.7 | | 35.0 | | | |
| 13C-1,2,3,7,8,9-HxCDF | 1.1673 | 1.2100 | 1.2020 | 1.2237 | 1.1977 | Ave | | 1.2001 | | | | 1.7 | | 35.0 | | | |
| 13C-1,2,3,4,6,7,8-HpCDF | 1.0428 | 1.0485 | 1.0503 | 1.0601 | 1.0464 | Ave | | 1.0496 | | | | 0.6 | | 35.0 | | | |
| 13C-1,2,3,4,6,7,8-HpCDD | 0.8259 | 0.8151 | 0.8034 | 0.8291 | 0.8039 | Ave | | 0.8155 | | | | 1.5 | | 35.0 | | | |
| 13C-1,2,3,4,7,8,9-HpCDF | 0.8929 | 0.8842 | 0.8895 | 0.9041 | 0.9030 | Ave | | 0.8947 | | | | 1.0 | | 35.0 | | | |
| 13C-OCDD | 0.6790 | 0.6985 | 0.6669 | 0.7374 | 0.7401 | Ave | | 0.7044 | | | | 4.7 | | 35.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1 Analy Batch No.: 7768

SDG No.:

Instrument ID: D2A GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/16/2014 14:26 Calibration End Date: 05/16/2014 18:31 Calibration ID: 825

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| 13C-OCDF | 1.0271 | 1.0311 | 1.0122 | 1.1195 | 1.1174 | Ave | | 1.0615 | | | | 4.9 | | 35.0 | | | |
| 37Cl4-2,3,7,8-TCDD | 1.2785 | 1.2086 | 1.1875 | 1.2224 | 1.2357 | Ave | | 1.2266 | | | | 2.8 | | | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1 Analy Batch No.: 7768

SDG No.:

Instrument ID: D2A GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/16/2014 14:26 Calibration End Date: 05/16/2014 18:31 Calibration ID: 825

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 140-7768/2 | d3140516i1.d |
| Level 2 | IC 140-7768/3 | d3140516i2.d |
| Level 3 | IC 140-7768/4 | d3140516i3.d |
| Level 4 | IC 140-7768/5 | d3140516i4.d |
| Level 5 | IC 140-7768/6 | d3140516i5.d |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (PG/UL) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 | LVL 1 | LVL 2 | LVL 3 | LVL 4 | LVL 5 |
| 2,3,7,8-TCDF | | AveID | 94226 | 328832 | 1699244 | 6586510 | 35566472 | 0.500 | 2.00 | 10.0 | 40.0 | 200 |
| 2,3,7,8-TCDD | | AveID | 58834 | 230135 | 1103093 | 4263534 | 23916178 | 0.500 | 2.00 | 10.0 | 40.0 | 200 |
| 1,2,3,7,8-PeCDF | | AveID | 385579 | 1326472 | 6951995 | 28353659 | 172459555 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 2,3,4,7,8-PeCDF | | AveID | 362268 | 1259085 | 6512875 | 26657615 | 162647050 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 1,2,3,7,8-PeCDD | | AveID | 214444 | 743339 | 3815716 | 15915139 | 97828013 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 1,2,3,4,7,8-HxCDF | | AveID | 433645 | 1500520 | 7655800 | 31660907 | 205245281 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 1,2,3,6,7,8-HxCDF | | AveID | 512529 | 1707727 | 8864531 | 36461883 | 230766405 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 2,3,4,6,7,8-HxCDF | | AveID | 458923 | 1529879 | 7899628 | 32628769 | 207212834 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 1,2,3,4,7,8-HxCDD | | AveID | 272992 | 911864 | 4731492 | 19615008 | 125745795 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 1,2,3,6,7,8-HxCDD | | AveID | 275227 | 991123 | 5069185 | 20922527 | 129376084 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 1,2,3,7,8,9-HxCDD | | AveID | 273517 | 1060210 | 5184383 | 21806109 | 139413717 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 1,2,3,7,8,9-HxCDF | | AveID | 380908 | 1432850 | 7126497 | 30276117 | 192682603 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 1,2,3,4,6,7,8-HpCDF | | AveID | 424692 | 1475215 | 7340131 | 30775593 | 196710947 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 1,2,3,4,6,7,8-HpCDD | | AveID | 246709 | 848864 | 4285504 | 17971175 | 114386892 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| 1,2,3,4,7,8,9-HpCDF | | AveID | 322253 | 1153014 | 5736971 | 24451442 | 160075574 | 2.50 | 10.0 | 50.0 | 200 | 1000 |
| OCDD | | AveID | 442341 | 1537141 | 7672456 | 34014604 | 231071676 | 5.00 | 20.0 | 100 | 400 | 2000 |
| OCDF | | AveID | 599861 | 2160278 | 10665891 | 47454024 | 328275681 | 5.00 | 20.0 | 100 | 400 | 2000 |
| 13C-2,3,7,8-TCDF | 13CTC | Ave | 16217882 | 15241754 | 15790178 | 15441140 | 16816585 | 100 | 100 | 100 | 100 | 100 |
| 13C-2,3,7,8-TCDD | 13CTC | Ave | 9876576 | 9269717 | 9611208 | 9403373 | 10375862 | 100 | 100 | 100 | 100 | 100 |
| 13C-1,2,3,7,8-PeCDF | 13CTC | Ave | 12314088 | 11172583 | 12146075 | 12286310 | 14246063 | 100 | 100 | 100 | 100 | 100 |
| 13C-2,3,4,7,8-PeCDF | 13CTC | Ave | 12469187 | 11446462 | 12102314 | 12455454 | 14282105 | 100 | 100 | 100 | 100 | 100 |
| 13C-1,2,3,7,8-PeCDD | 13CTC | Ave | 7747378 | 7066036 | 7546076 | 7933559 | 9374768 | 100 | 100 | 100 | 100 | 100 |
| 13C-1,2,3,4,7,8-HxCDF | 13CHx | Ave | 12171006 | 11097986 | 11565241 | 12063156 | 14649659 | 100 | 100 | 100 | 100 | 100 |
| 13C-1,2,3,6,7,8-HxCDF | 13CHx | Ave | 14571209 | 13542561 | 14360417 | 14993755 | 18275058 | 100 | 100 | 100 | 100 | 100 |
| 13C-2,3,4,6,7,8-HxCDF | 13CHx | Ave | 13444179 | 12428502 | 12905207 | 13333182 | 16154097 | 100 | 100 | 100 | 100 | 100 |
| 13C-1,2,3,4,7,8-HxCDD | 13CHx | Ave | 8933187 | 8116369 | 8441043 | 8905352 | 11068991 | 100 | 100 | 100 | 100 | 100 |
| 13C-1,2,3,6,7,8-HxCDD | 13CHx | Ave | 9193835 | 8407393 | 8908892 | 9593131 | 11391028 | 100 | 100 | 100 | 100 | 100 |
| 13C-1,2,3,7,8,9-HxCDF | 13CHx | Ave | 11850370 | 11246135 | 11559055 | 12277599 | 15282343 | 100 | 100 | 100 | 100 | 100 |
| 13C-1,2,3,4,6,7,8-HpCDF | 13CHx | Ave | 10586908 | 9744462 | 10100696 | 10636138 | 13352459 | 100 | 100 | 100 | 100 | 100 |
| 13C-1,2,3,4,6,7,8-HpCDD | 13CHx | Ave | 8384746 | 7575508 | 7725803 | 8319073 | 10257853 | 100 | 100 | 100 | 100 | 100 |
| 13C-1,2,3,4,7,8,9-HpCDF | 13CHx | Ave | 9064964 | 8217931 | 8553669 | 9071146 | 11521506 | 100 | 100 | 100 | 100 | 100 |
| 13C-OCDD | 13CHx | Ave | 13787078 | 12983405 | 12827376 | 14797795 | 18887158 | 200 | 200 | 200 | 200 | 200 |
| 13C-OCDF | 13CHx | Ave | 20853570 | 19166588 | 19467909 | 22466050 | 28514559 | 200 | 200 | 200 | 200 | 200 |
| 37Cl4-2,3,7,8-TCDD | 13CTC | Ave | 59993 | 209201 | 1078771 | 4258282 | 23452691 | 0.500 | 2.00 | 10.0 | 40.0 | 200 |

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville | Job No.: 160-32649-1 | Analy Batch No.: 7768

SDG No.:

Instrument ID: D2A | GC Column: RTX-5 | ID: 0.32(mm) | Heated Purge: (Y/N) N

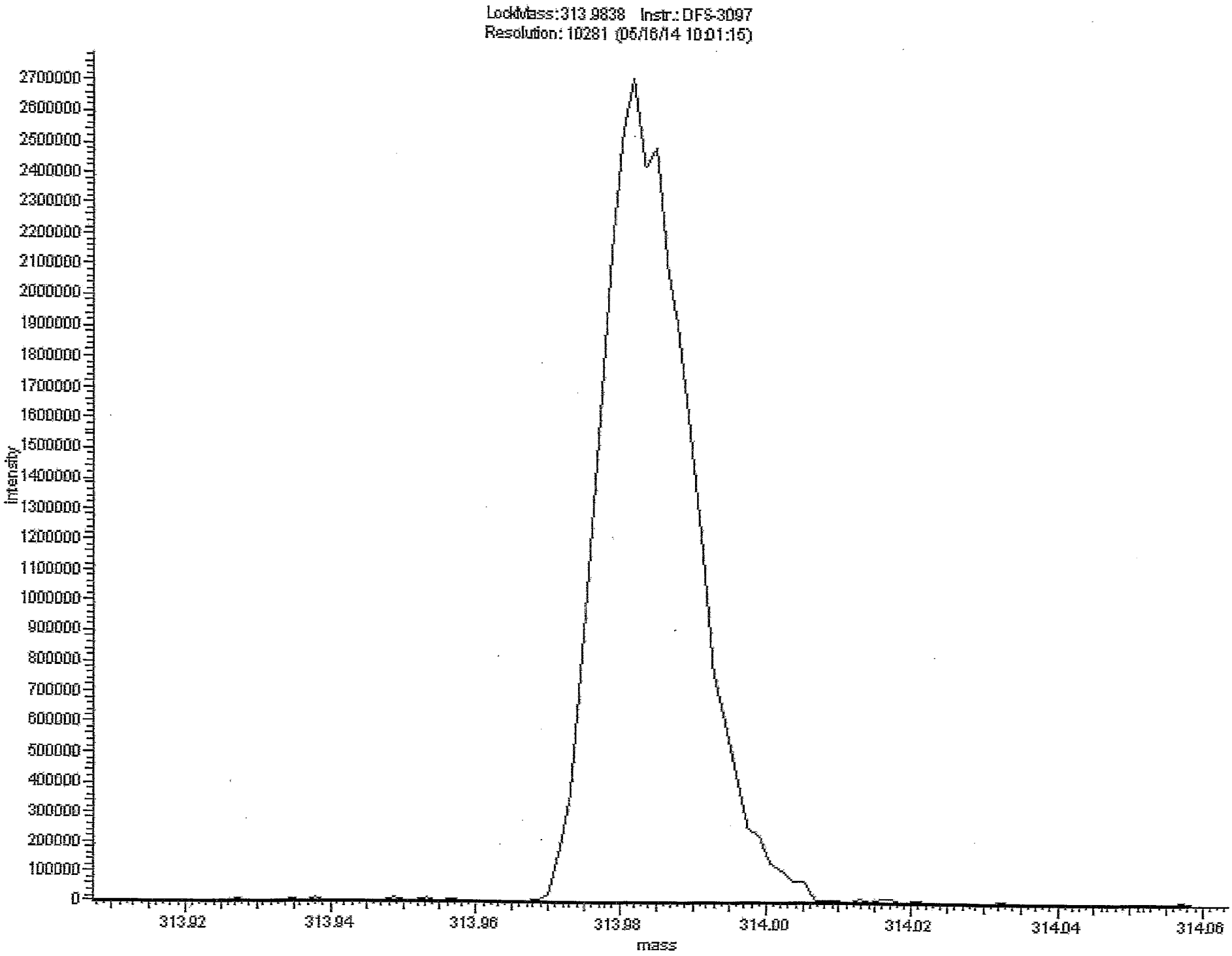
Calibration Start Date: 05/16/2014 14:26 | Calibration End Date: 05/16/2014 18:31 | Calibration ID: 825

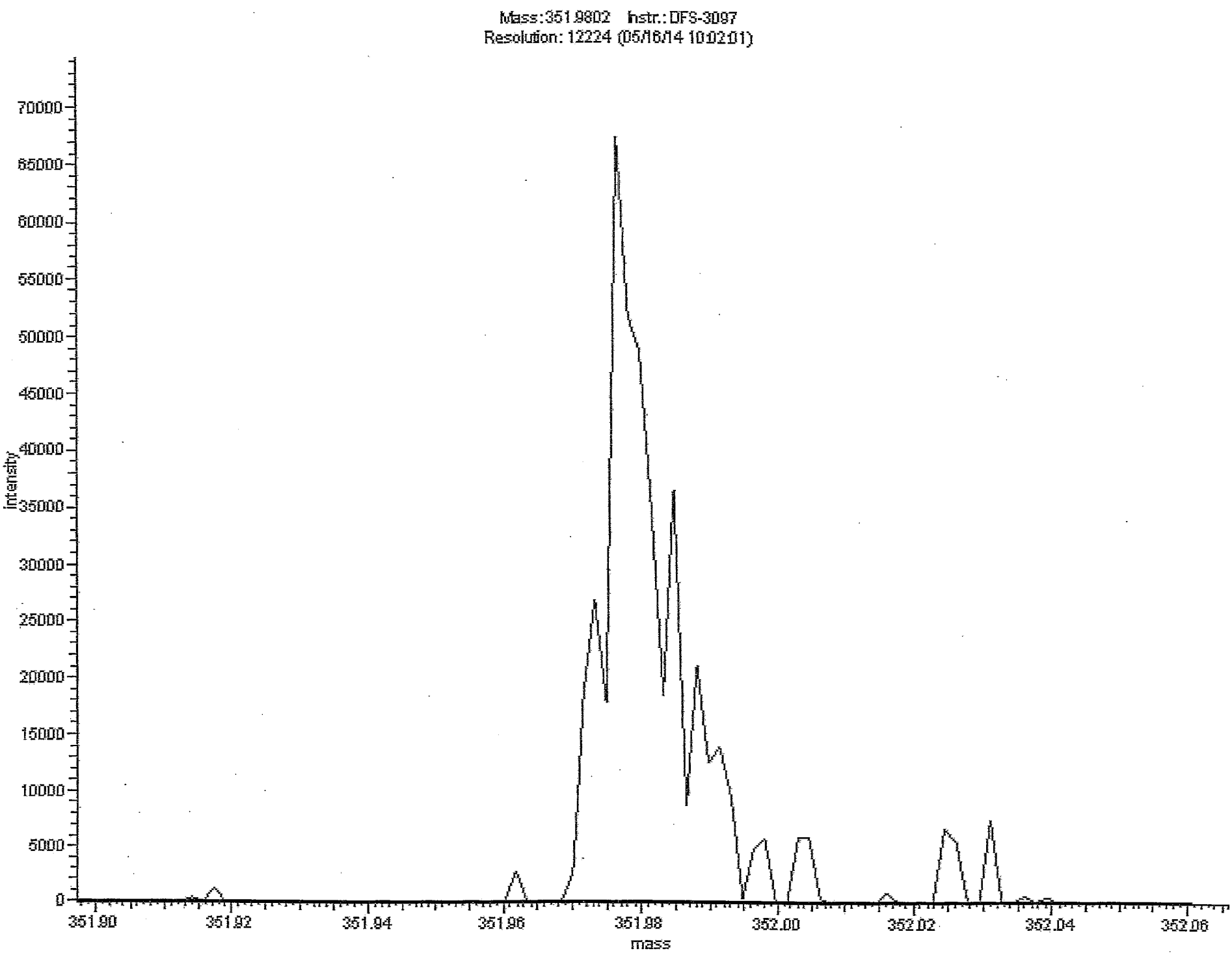
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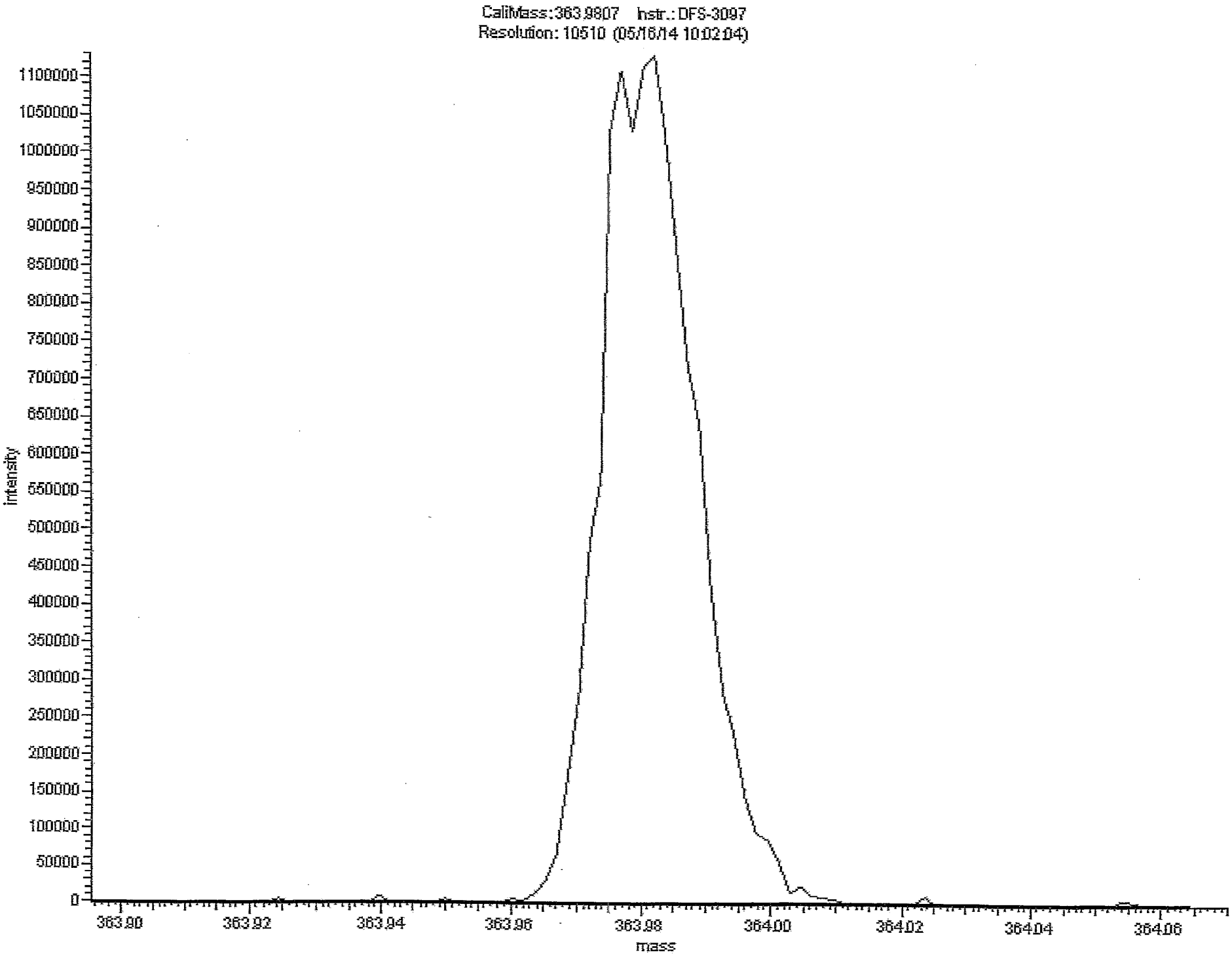
| |
|---|
| Ave = Average ISTD |
| AveID = Average isotope dilution |

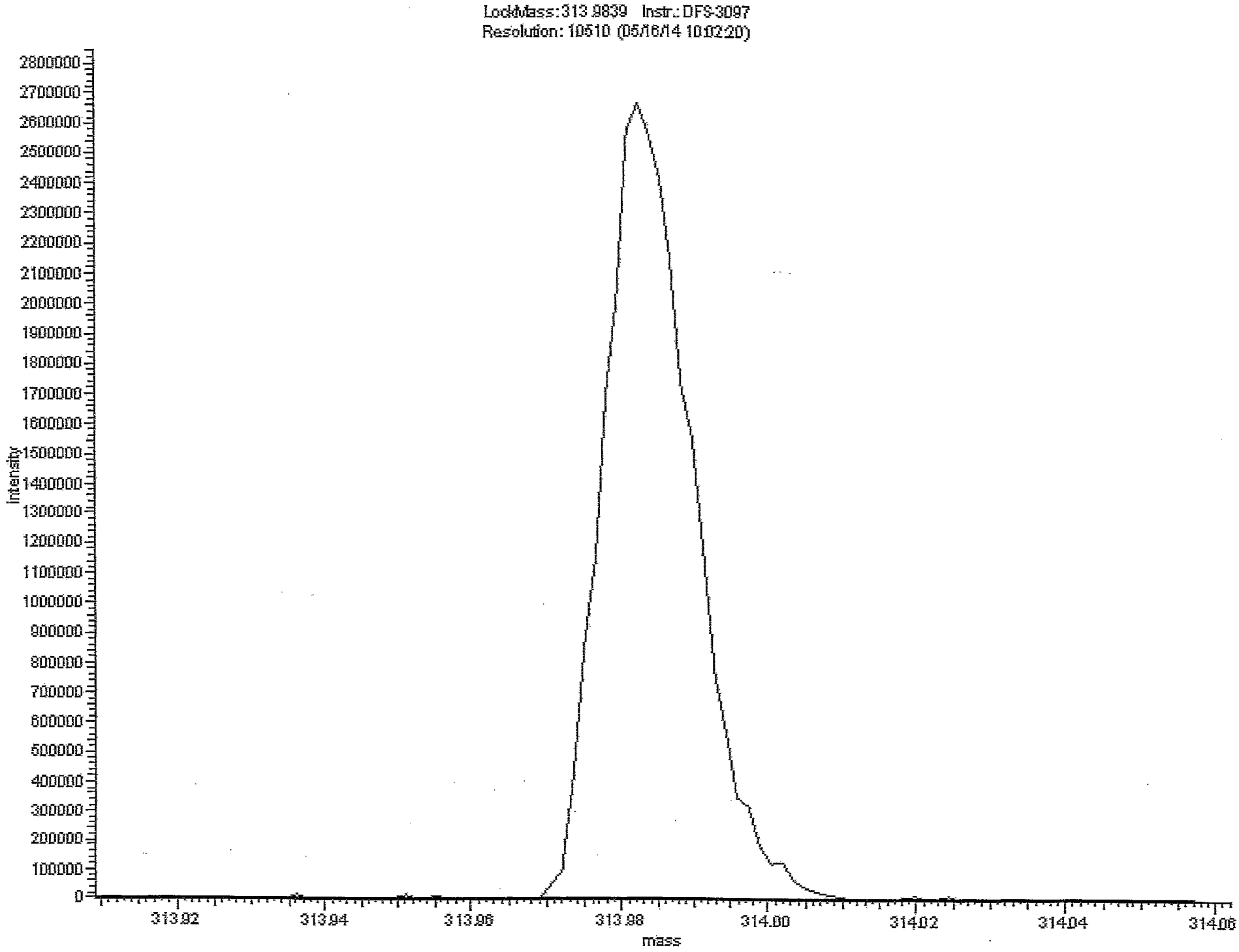
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Reports
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10:08:14:
10:08:14:  Reference mass: 313.98336
10:08:15:  Sample mass: 364.0
10:08:15:
10:08:16:  Finding reference mass
10:08:17:  Finding sample mass
10:08:17:
10:08:23:  [1]   363.9794 amu, mean: 363.9794
10:08:26:  [2]   363.9801 amu, mean: 363.9798     SD: 0.48 mmu or: 1.31 ppm
10:08:29:  [3]   363.9812 amu, mean: 363.9802     SD: 0.90 mmu or: 2.48 ppm
10:08:32:  [4]   363.9808 amu, mean: 363.9804     SD: 0.79 mmu or: 2.18 ppm
10:08:36:  [5]   363.9802 amu, mean: 363.9804     SD: 0.69 mmu or: 1.90 ppm
10:08:39:  [6]   363.9808 amu, mean: 363.9804     SD: 0.65 mmu or: 1.78 ppm
10:08:42:  [7]   363.9798 amu, mean: 363.9803     SD: 0.64 mmu or: 1.76 ppm
10:08:45:  [8]   363.9810 amu, mean: 363.9804     SD: 0.64 mmu or: 1.76 ppm
10:08:48:  [9]   363.9810 amu, mean: 363.9805     SD: 0.63 mmu or: 1.73 ppm
10:08:51:  [10]   363.9806 amu, mean: 363.9805     SD: 0.59 mmu or: 1.63 ppm
10:08:52:
10:08:52:  Stop requested. Please wait for procedure to finish.
10:08:52:
```

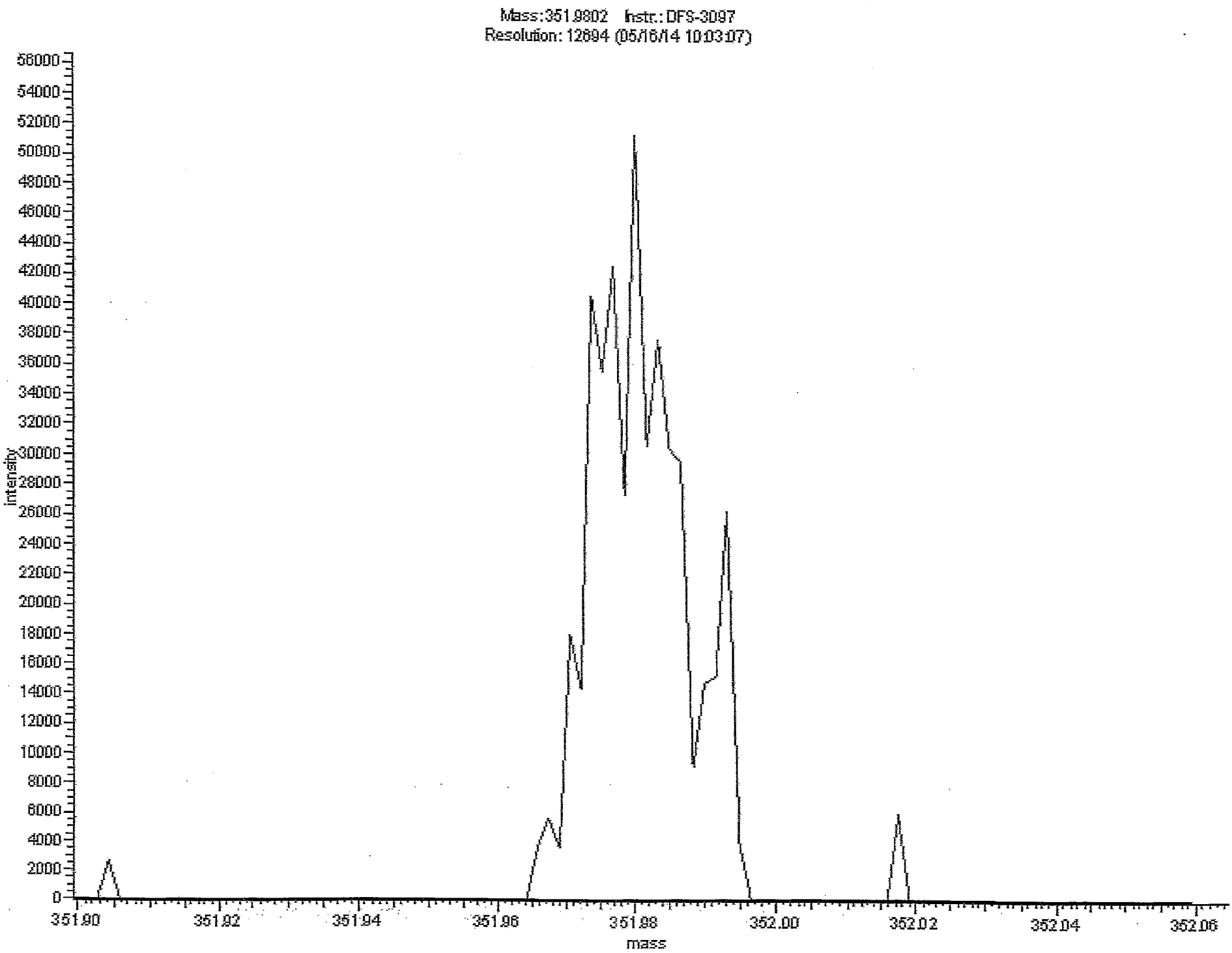
Signature MD 5/16/14

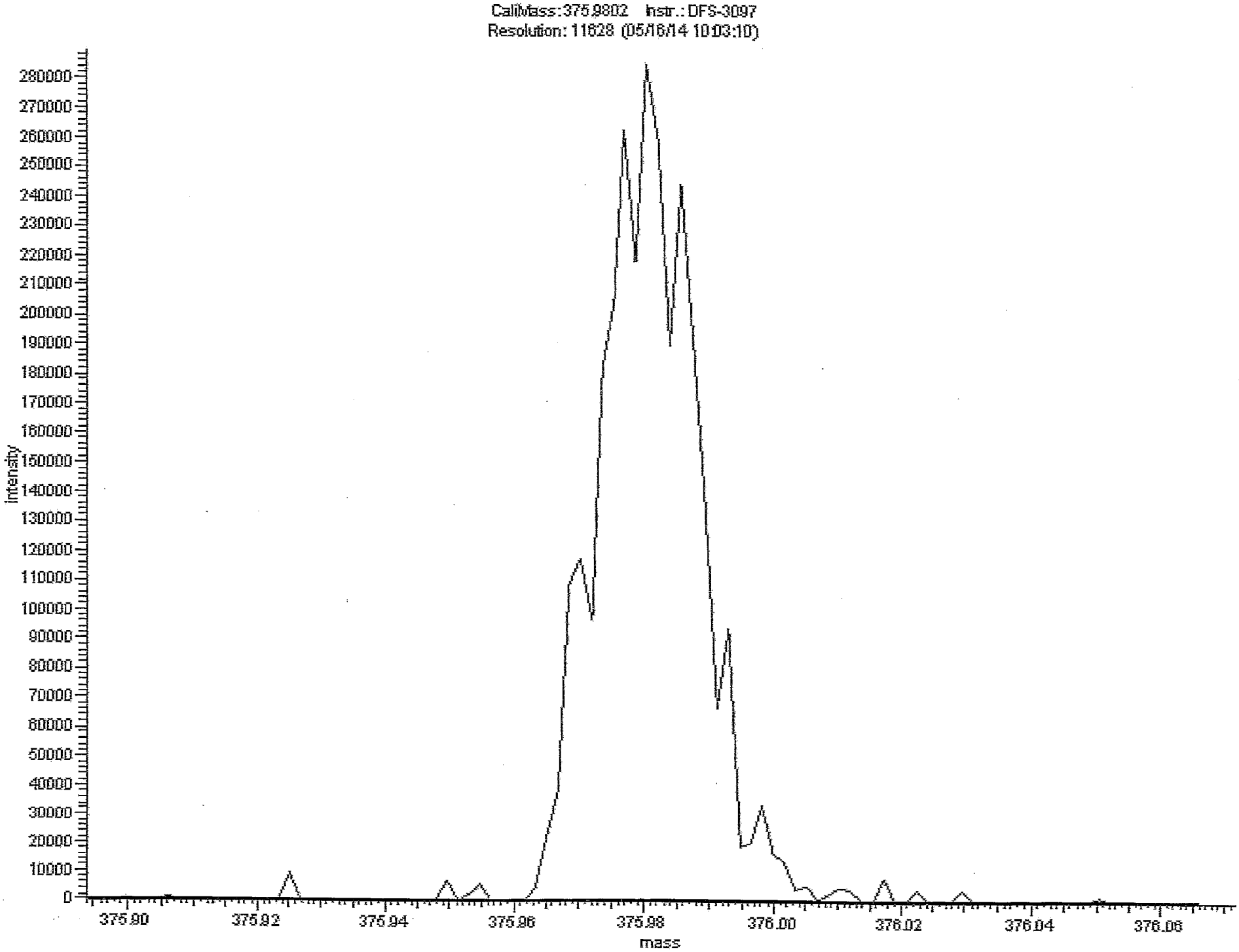

Lockmass:313.9838 Instr.: DFS-3097
Resolution: 10281 (05/16/14 10:01:15)
2700000
2600000
2500000
2400000
2300000
2200000
2100000
2000000
1900000
1800000
1700000
1600000
1500000
1400000
1300000
1200000
1100000
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
Intensity
313.92
313.94
313.96
313.98
314.00
314.02
314.04
314.06
mass

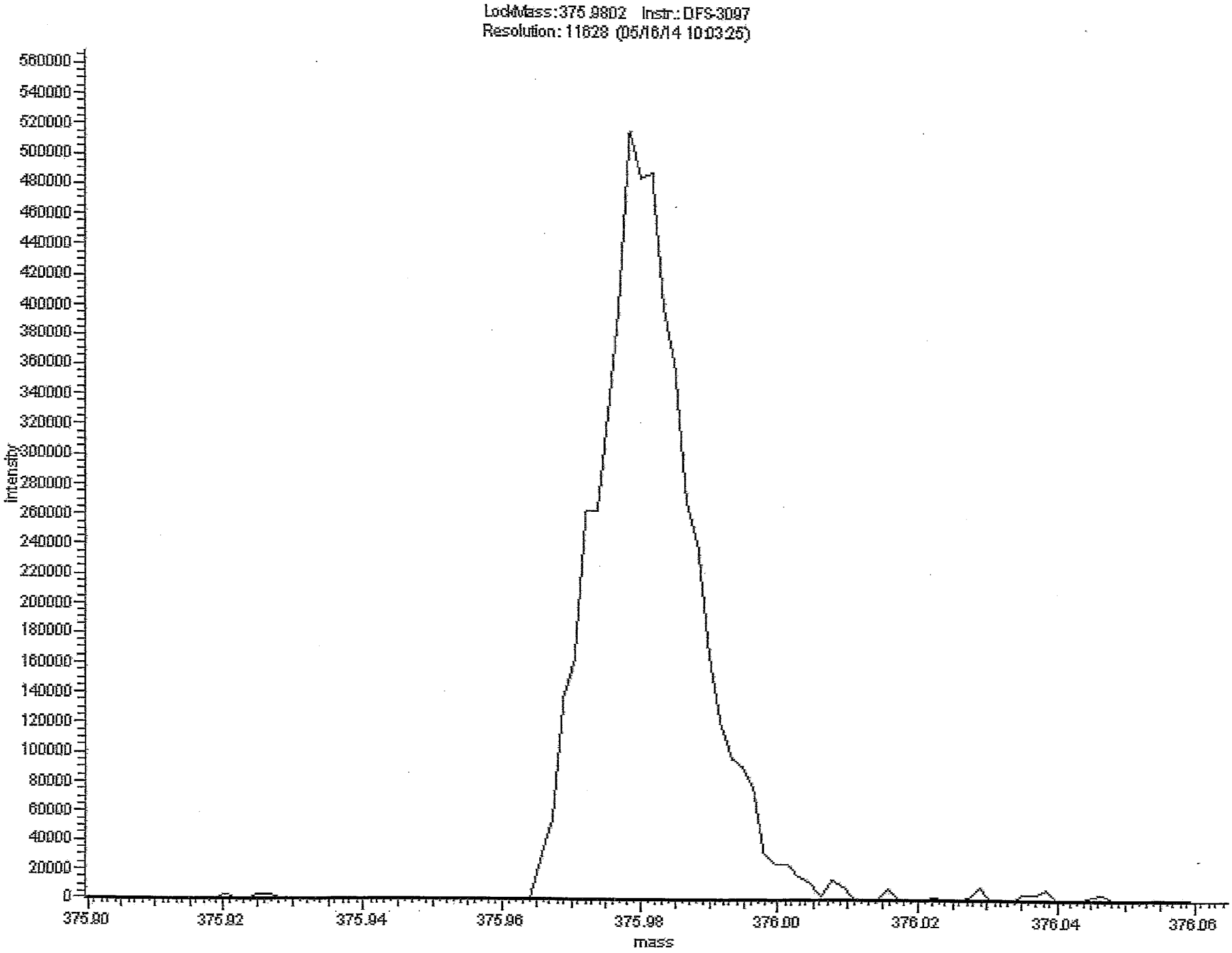

Mass:351.9802 Instr.: DFS-3097
Resolution: 12224 (05/16/14 10:02:01)
70000
65000
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
Intensity
351.90
351.92
351.94
351.96
351.98
352.00
352.02
352.04
352.06
mass

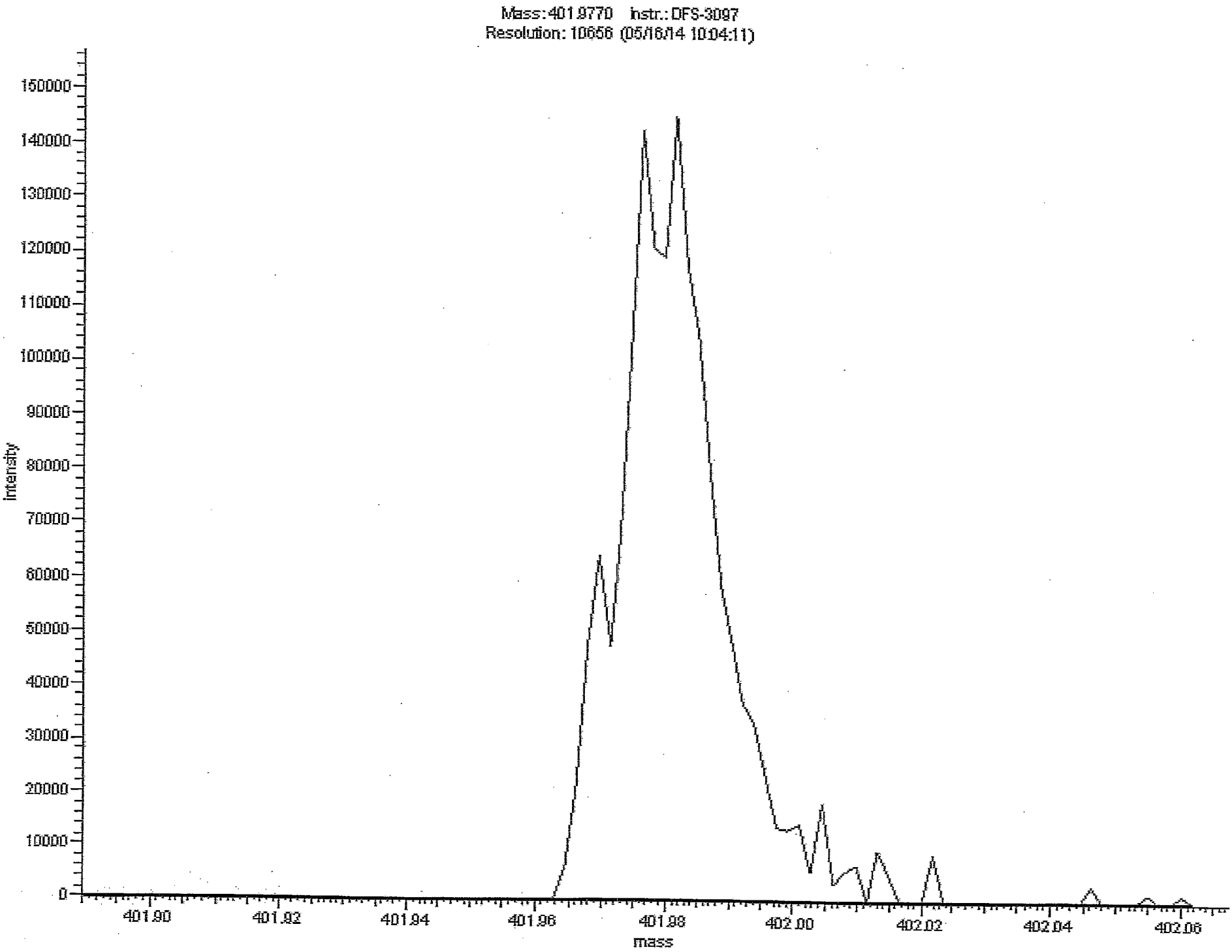

CaliMass:363.9807 Instr.: DFS-3097
Resolution: 10510 (05/16/14 10:02:04)
Intensity
1100000
1050000
1000000
950000
900000
850000
800000
750000
700000
650000
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
363.90
363.92
363.94
363.96
363.98
364.00
364.02
364.04
364.06
mass

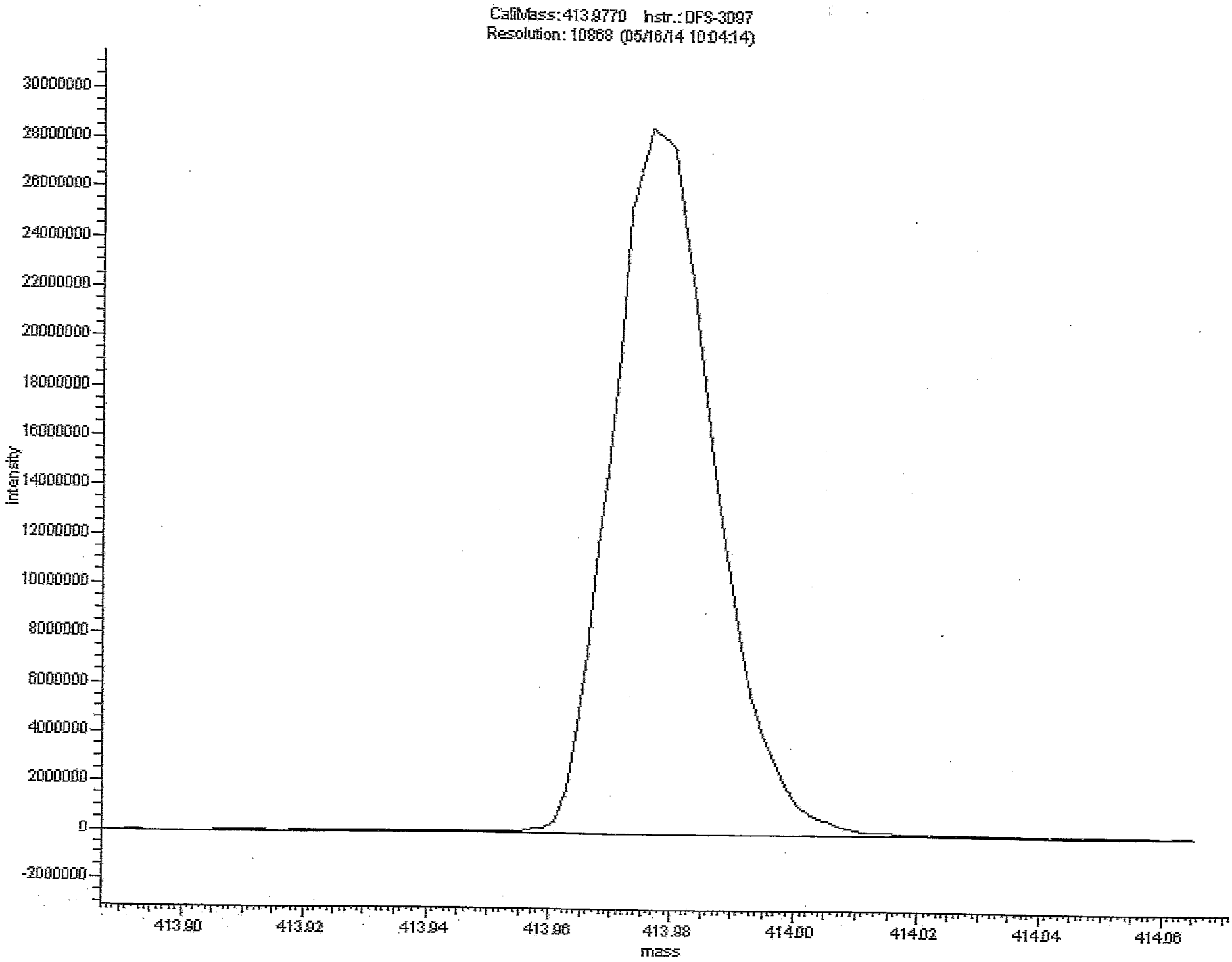

LockMass:313.9839 Instr.: DFS-3097
Resolution: 10510 (05/16/14 10:02:20)
Intensity
2800000
2700000
2600000
2500000
2400000
2300000
2200000
2100000
2000000
1900000
1800000
1700000
1600000
1500000
1400000
1300000
1200000
1100000
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
313.92
313.94
313.96
313.98
314.00
314.02
314.04
314.06
mass

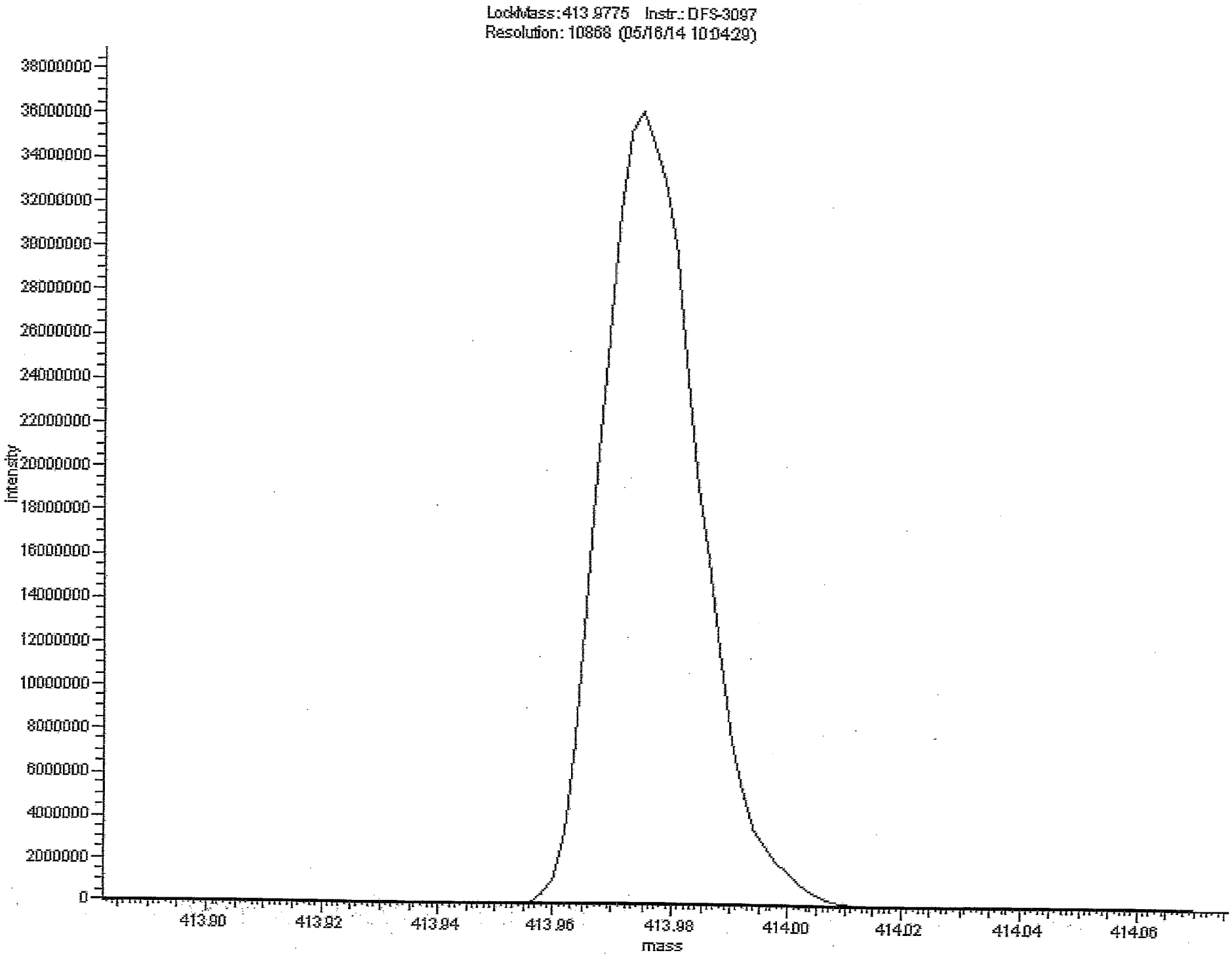

Mass:351.9802 Instr.: DFS-3097
Resolution: 12694 (05/16/14 10:03:07)
intensity
mass
58000
54000
52000
50000
48000
46000
44000
42000
40000
38000
36000
34000
32000
30000
28000
26000
24000
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
351.90
351.92
351.94
351.96
351.98
352.00
352.02
352.04
352.06

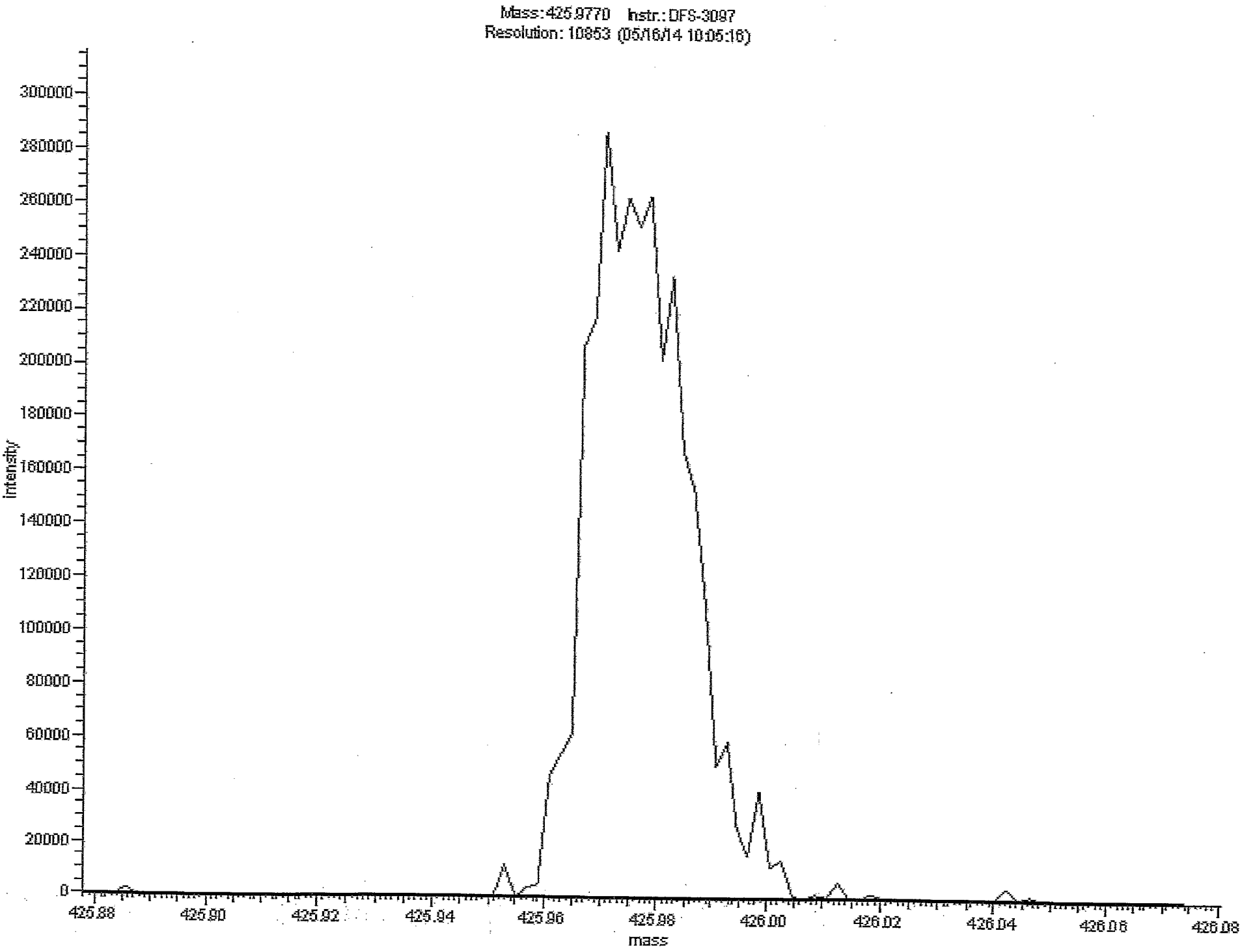

CaliMass:375.9802 Instr.: DFS-3097
Resolution: 11628 (05/16/14 10:03:10)
Intensity
mass
280000
270000
260000
250000
240000
230000
220000
210000
200000
190000
180000
170000
160000
150000
140000
130000
120000
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
375.90
375.92
375.94
375.96
375.98
376.00
376.02
376.04
376.06

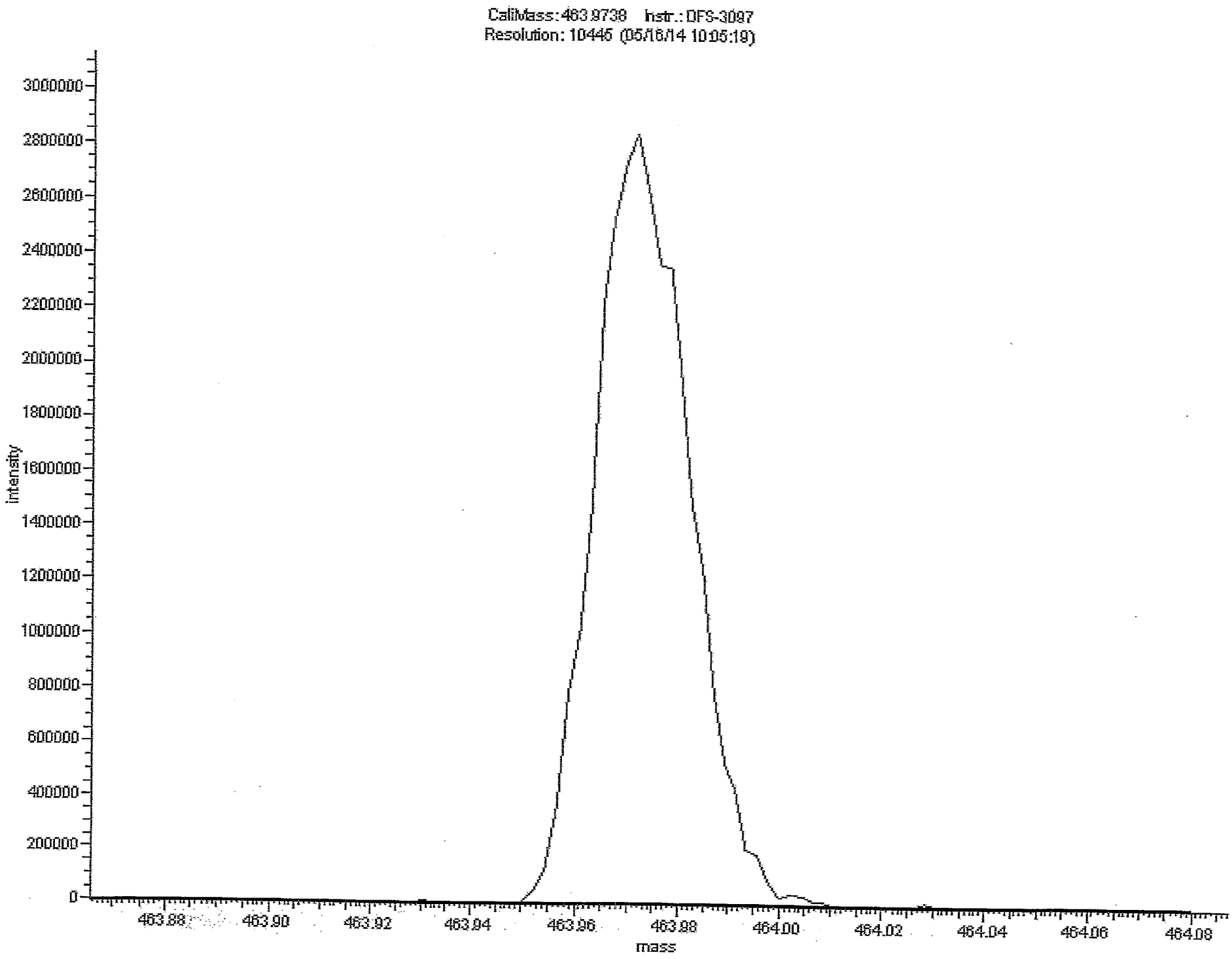

LockMass:375.9802 Instr.:DFS-3097
Resolution: 11628 (05/16/14 10:03:25)
Intensity
mass
560000
540000
520000
500000
480000
460000
440000
420000
400000
380000
360000
340000
320000
300000
280000
260000
240000
220000
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
375.90
375.92
375.94
375.96
375.98
376.00
376.02
376.04
376.06

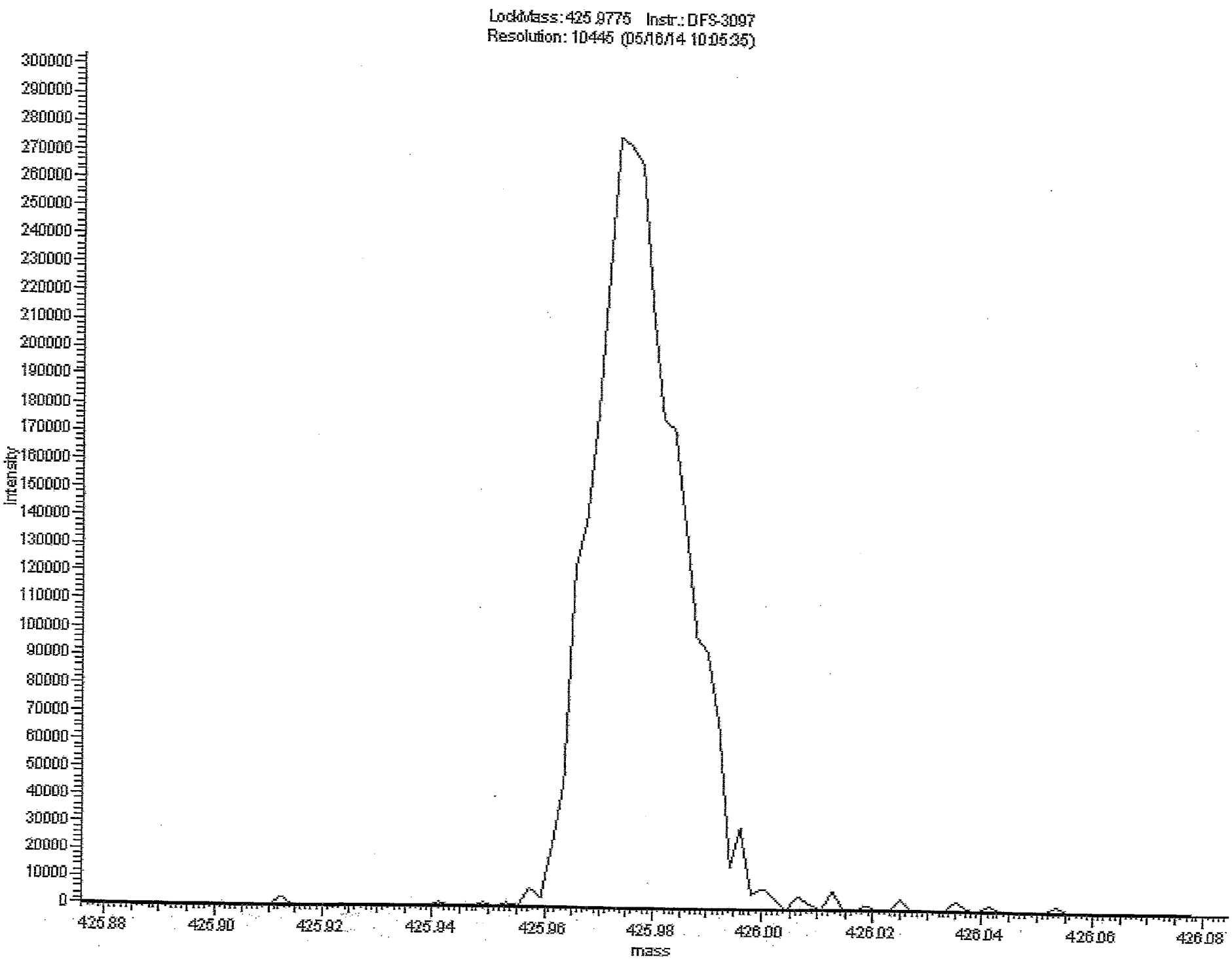

Mass:401.9770 Instr.: DFS-3097
Resolution: 10656 (05/16/14 10:04:11)
150000
140000
130000
120000
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
Intensity
401.90
401.92
401.94
401.96
401.98
402.00
402.02
402.04
402.06
mass

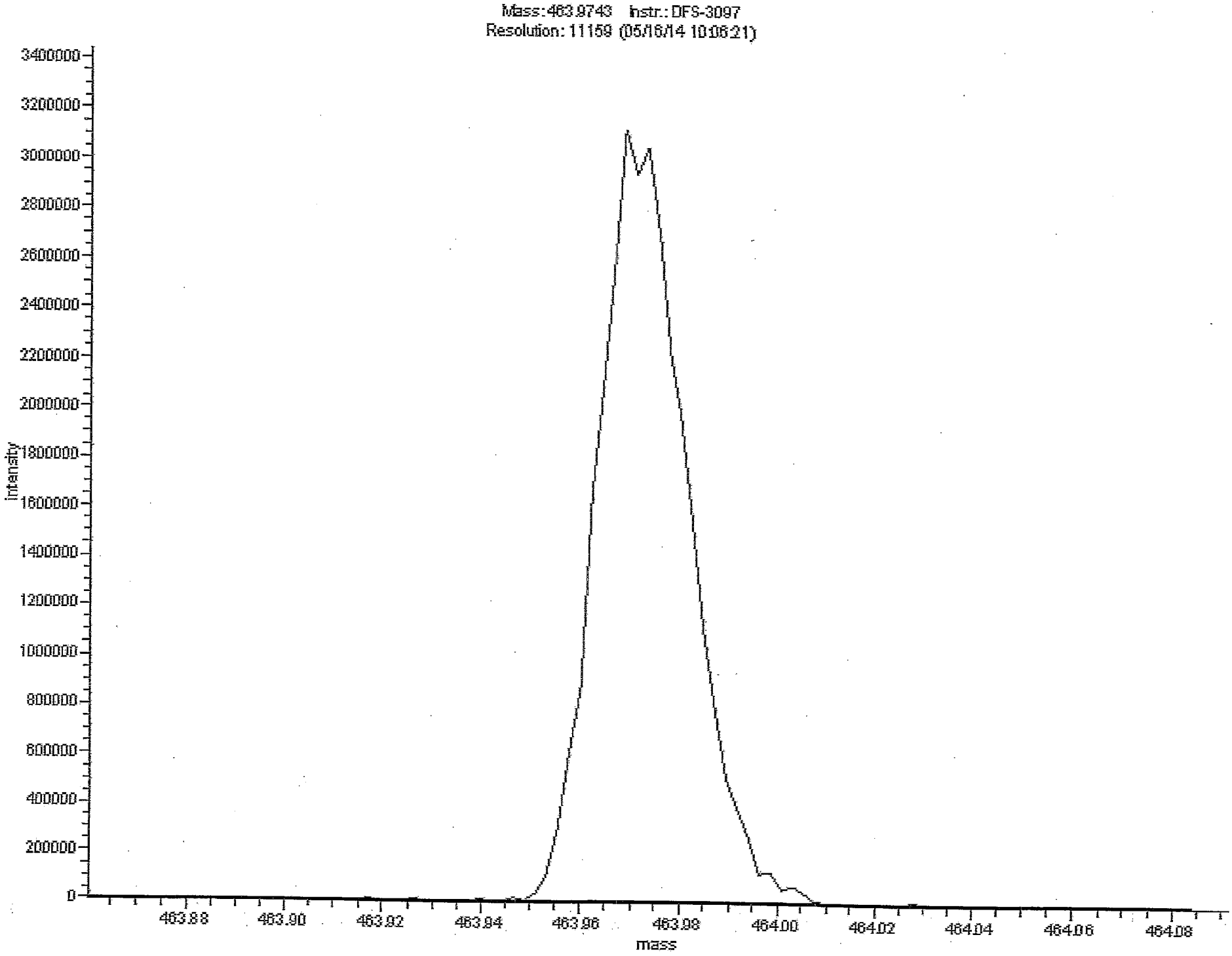

CaliMass:413.9770 Instr.: DFS-3097
Resolution: 10868 (05/16/14 10:04:14)
30000000
28000000
26000000
24000000
22000000
20000000
18000000
16000000
14000000
12000000
10000000
8000000
6000000
4000000
2000000
0
-2000000
Intensity
413.90
413.92
413.94
413.96
413.98
414.00
414.02
414.04
414.06
mass

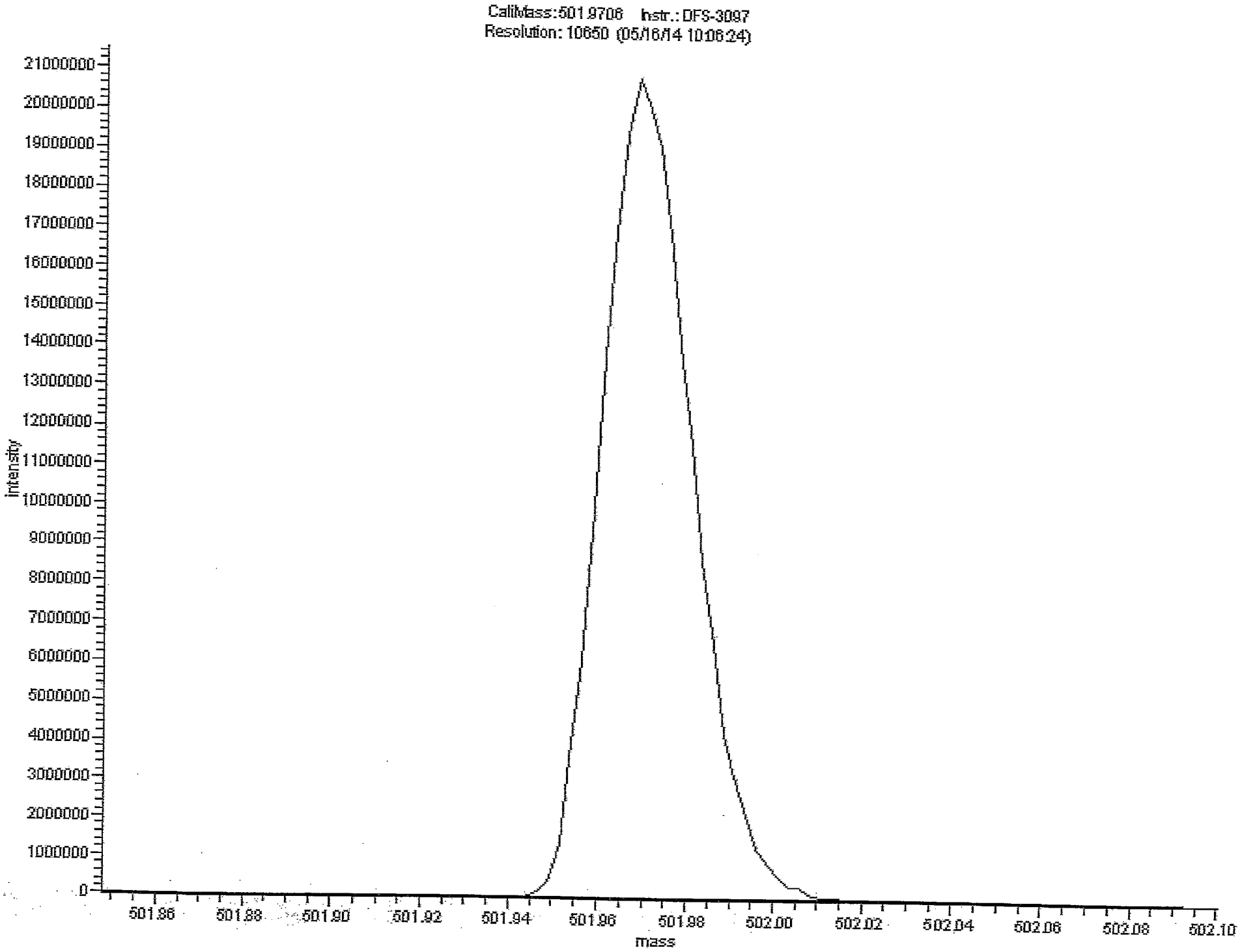

LockMass:413.9775 Instr.: DFS-3097
Resolution: 10868 (05/16/14 101429)
Intensity
38000000
36000000
34000000
32000000
30000000
28000000
26000000
24000000
22000000
20000000
18000000
16000000
14000000
12000000
10000000
8000000
6000000
4000000
2000000
0
413.90
413.92
413.94
413.96
413.98
414.00
414.02
414.04
414.06
mass


Mass:425.9770 Instr.:DFS-3097
Resolution: 10853 (05/16/14 10:05:16)
300000
280000
260000
240000
220000
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
Intensity
425.88
425.90
425.92
425.94
425.96
425.98
426.00
426.02
426.04
426.06
426.08
mass


CaliMass: 463.9738 Instr.: DFS-3097
Resolution: 10445 (05/16/14 10:05:19)
3000000
2800000
2600000
2400000
2200000
2000000
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
Intensity
463.88
463.90
463.92
463.94
463.96
463.98
464.00
464.02
464.04
464.06
464.08
mass


Lockmass: 425.9775 Instr.: DFS-3097
Resolution: 10445 (05/16/14 10:05:35)
Intensity
mass
300000
290000
280000
270000
260000
250000
240000
230000
220000
210000
200000
190000
180000
170000
160000
150000
140000
130000
120000
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
425.88
425.90
425.92
425.94
425.96
425.98
426.00
426.02
426.04
426.06
426.08


Mass:463.9743 Instr.: DFS-3097
Resolution: 11159 (05/16/14 10:06:21)
Intensity
3400000
3200000
3000000
2800000
2600000
2400000
2200000
2000000
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
463.88
463.90
463.92
463.94
463.96
463.98
464.00
464.02
464.04
464.06
464.08
mass


CaliMass:501.9706 Instr.: DFS-3097
Resolution: 10650 (05/16/14 10:06:24)
intensity
21000000
20000000
19000000
18000000
17000000
16000000
15000000
14000000
13000000
12000000
11000000
10000000
9000000
8000000
7000000
6000000
5000000
4000000
3000000
2000000
1000000
0
501.86
501.88
501.90
501.92
501.94
501.96
501.98
502.00
502.02
502.04
502.06
502.08
502.10
mass

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 16-May-2014 14:26:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:74cs1 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 12-Jan-2017 08:09:11 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK029

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:11:15

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 31.872 | 58834 | 0.71 | 1.1733 | 0.5077 | 0.5077 | 0.008979 | 0.008979 | 102 | M |
| A Non-2,3,7,8-sub-TCDD | 30.308 | 1807 | 0.77 | 0.0000 | | | | | | RQ |
| S Total TCDD | | | | | 0.5077 | 0.5077 | 0.008979 | 0.008979 | | RQ |
| 2,3,7,8-TCDF | 29.761 | 94226 | 0.75 | 1.0881 | 0.5339 | 0.5339 | 0.007514 | 0.007514 | 107 | M |
| A Non-2,3,7,8-sub-TCDF | 28.995 | 5764 | 0.77 | 0.0000 | | | | | | RQ |
| S Total TCDF | | | | | 0.5339 | 0.5339 | 0.007514 | 0.007514 | | RQ |
| 1,2,3,7,8-PeCDD | 41.018 | 214444 | 1.73 | 1.0434 | 2.653 | 2.653 | 0.0167 | 0.0167 | 106 | M |
| A Non-2,3,7,8-sub-PeCDD | 39.915 | 9515 | 1.55 | 0.0000 | | | | | | RQ |
| S Total PeCDD | | | | | 2.653 | 2.653 | 0.0167 | 0.0167 | | RQ |
| 1,2,3,7,8-PeCDF | 39.296 | 385579 | 1.56 | 1.1898 | 2.632 | 2.632 | 0.0410 | 0.0410 | 105 | |
| 2,3,4,7,8-PeCDF | 40.502 | 362268 | 1.54 | 1.1095 | 2.619 | 2.619 | 0.0392 | 0.0392 | 105 | |
| A Non-2,3,7,8-sub-PeCDF | 38.623 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDF | | | | | 5.250 | 5.250 | 0.0401 | 0.0401 | | |
| 1,2,3,4,7,8-HxCDD | 45.253 | 272992 | 1.21 | 1.1409 | 2.679 | 2.679 | 0.0596 | 0.0596 | 107 | |
| 1,2,3,6,7,8-HxCDD | 45.371 | 275227 | 1.26 | 1.1481 | 2.607 | 2.607 | 0.0639 | 0.0639 | 104 | |
| 1,2,3,7,8,9-HxCDD | 45.759 | 273517 | 1.28 | 1.2212 | 2.471 | 2.471 | 0.0578 | 0.0578 | 98.85 | M |
| A Non-2,3,7,8-sub-HxCDD | 44.687 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDD | | | | | 7.757 | 7.757 | 0.0604 | 0.0604 | | |
| 1,2,3,4,7,8-HxCDF | 44.190 | 433645 | 1.27 | 1.3629 | 2.614 | 2.614 | 0.0448 | 0.0448 | 105 | |
| 1,2,3,6,7,8-HxCDF | 44.325 | 512529 | 1.17 | 1.2762 | 2.756 | 2.756 | 0.0425 | 0.0425 | 110 | |
| 2,3,4,6,7,8-HxCDF | 45.067 | 458923 | 1.25 | 1.2654 | 2.698 | 2.698 | 0.0454 | 0.0454 | 108 | |
| 1,2,3,7,8,9-HxCDF | 46.029 | 380908 | 1.28 | 1.2573 | 2.556 | 2.556 | 0.0581 | 0.0581 | 102 | M |
| A Non-2,3,7,8-sub-HxCDF | 44.552 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDF | | | | | 10.6 | 10.6 | 0.0477 | 0.0477 | | |
| 1,2,3,4,6,7,8-HpCDD | 50.184 | 246709 | 1.04 | 1.1204 | 2.626 | 2.626 | 0.0231 | 0.0231 | 105 | |
| A Non-2,3,7,8-sub-HpCDD | 49.566 | 11997 | 1.03 | 0.0000 | | | | | | |
| S Total HpCDD | | | | | 2.626 | 2.626 | 0.0231 | 0.0231 | | |
| 1,2,3,4,6,7,8-HpCDF | 48.464 | 424692 | 1.05 | 1.4984 | 2.677 | 2.677 | 0.0197 | 0.0197 | 107 | |
| 1,2,3,4,7,8,9-HpCDF | 50.808 | 322253 | 1.06 | 1.3807 | 2.575 | 2.575 | 0.0270 | 0.0270 | 103 | |

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HpCDF | 49.625 | | | | | | 0.0 | 0.0 | | |
| S Total HpCDF | | | | | 5.252 | 5.252 | 0.0233 | 0.0233 | | |
| OCDD | 54.297 | 442341 | 0.82 | 1.2073 | 5.315 | 5.315 | 0.0289 | 0.0289 | 106 | M |
| OCDF | 54.435 | 599861 | 0.89 | 1.1162 | 5.154 | 5.154 | 0.0184 | 0.0184 | 103 | |
| D 13C-2,3,7,8-TCDD | 31.806 | 9876576 | 0.82 | 1.0709 | 98.3 | 98.3 | 0.2664 | 0.2664 | 98.27 | |
| D 13C-2,3,7,8-TCDF | 29.728 | 16217882 | 0.80 | 1.7545 | 98.5 | 98.5 | 0.1062 | 0.1062 | 98.50 | |
| D 13C-1,2,3,7,8-PeCDD | 41.001 | 7747378 | 1.61 | 0.8743 | 94.4 | 94.4 | 0.2068 | 0.2068 | 94.42 | |
| D 13C-1,2,3,7,8-PeCDF | 39.279 | 12314088 | 1.61 | 1.3704 | 95.7 | 95.7 | 0.1532 | 0.1532 | 95.75 | |
| D 13C-2,3,4,7,8-PeCDF | 40.484 | 12469187 | 1.55 | 1.3837 | 96.0 | 96.0 | 0.1518 | 0.1518 | 96.02 | |
| D 13C-1,2,3,4,7,8-HxCDD | 45.219 | 8933187 | 1.28 | 0.8772 | 100.3 | 100.3 | 0.2134 | 0.2134 | 100 | |
| D 13C-1,2,3,6,7,8-HxCDD | 45.354 | 9193835 | 1.27 | 0.9171 | 98.7 | 98.7 | 0.2042 | 0.2042 | 98.75 | |
| D 13C-1,2,3,4,7,8-HxCDF | 44.173 | 12171006 | 0.54 | 1.1892 | 100.8 | 100.8 | 0.2095 | 0.2095 | 101 | |
| D 13C-1,2,3,6,7,8-HxCDF | 44.308 | 14571209 | 0.53 | 1.4625 | 98.1 | 98.1 | 0.1704 | 0.1704 | 98.14 | |
| D 13C-2,3,4,6,7,8-HxCDF | 45.050 | 13444179 | 0.53 | 1.3197 | 100.3 | 100.3 | 0.1888 | 0.1888 | 100 | |
| D 13C-1,2,3,7,8,9-HxCDF | 46.012 | 11850370 | 0.52 | 1.2001 | 97.3 | 97.3 | 0.2076 | 0.2076 | 97.26 | |
| D 13C-1,2,3,4,6,7,8-HpCDD | 50.167 | 8384746 | 1.04 | 0.8155 | 101.3 | 101.3 | 0.2339 | 0.2339 | 101 | |
| D 13C-1,2,3,4,6,7,8-HpCDF | 48.447 | 10586908 | 0.46 | 1.0496 | 99.4 | 99.4 | 0.1656 | 0.1656 | 99.35 | |
| D 13C-1,2,3,4,7,8,9-HpCDF | 50.791 | 9064964 | 0.45 | 0.8947 | 99.8 | 99.8 | 0.1943 | 0.1943 | 99.80 | |
| D 13C-OCDD | 54.280 | 13787078 | 0.91 | 0.7044 | 192.8 | 192.8 | 0.1251 | 0.1251 | 96.40 | |
| D 13C-OCDF | 54.418 | 20853570 | 0.91 | 1.0615 | 193.5 | 193.5 | 0.1275 | 0.1275 | 96.76 | |
| $ 37Cl4-2,3,7,8-TCDD | 31.872 | 59993 | | 1.2266 | 0.5212 | 0.5212 | 0.006980 | 0.006980 | 104 | |
| * 13C-1,2,3,4-TCDD | 31.274 | 9384699 | 0.81 | 9.1E+04 | 100.0 | 100.0 | | | | |
| * 13C-1,2,3,7,8,9-HxCDD | 45.742 | 10152105 | 1.26 | 1E+05 | 100.0 | 100.0 | | | | |

## QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

## Reagents:

61L11613OP_00001 Amount Added: 20.00 Units: uL

Report Date: 12-Jan-2017 08:09:12 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 16-May-2014 14:26:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:74cs1 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 12-Jan-2017 08:09:11 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK029

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:11:15

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | M |
| 319.8965 | 31.872 | 31.871 | 0 | 1.002 | 24519 | 2882 | 21 | 52 | 137 | | M |
| 321.8936 | 31.855 | 31.871 | -1 | 1.002 | 34315 | 3876 | 22 | 55 | 176 | 0.71(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | RQ |
| 319.8965 | 29.711 | 30.308 | -36 | | 2771 | 391 | 21 | 52 | 19 | | |
| 321.8936 | 29.728 | 30.308 | -35 | | 556 | 220 | 22 | 55 | 10 | 4.98(0.65-0.89) | |
| 319.8965 | 33.883 | 30.308 | 214 | | 504 | 146 | 21 | 52 | 7 | | |
| 321.8936 | 33.783 | 30.308 | 208 | | 465 | 154 | 22 | 55 | 7 | 1.08(0.65-0.89) | |
| 2,3,7,8-TCDF | | | | | | | | | | | M |
| 303.9016 | 29.761 | 29.793 | -2 | 1.001 | 40361 | 4525 | 30 | 75 | 151 | | |
| 305.8987 | 29.761 | 29.793 | -2 | 1.001 | 53865 | 5573 | 29 | 72 | 192 | 0.75(0.65-0.89) | M |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | RQ |
| 303.9016 | 23.163 | 28.995 | -349 | | 1692 | 366 | 30 | 75 | 12 | | |
| 305.8987 | 23.197 | 28.995 | -347 | | 1794 | 405 | 29 | 72 | 14 | 0.94(0.65-0.89) | |
| 303.9016 | 34.797 | 28.995 | 347 | | 1857 | 215 | 30 | 75 | 7 | | |
| 305.8987 | 34.814 | 28.995 | 348 | | 1463 | 313 | 29 | 72 | 11 | 1.27(0.65-0.89) | |
| 1,2,3,7,8-PeCDD | | | | | | | | | | | M |
| 355.8546 | 41.018 | 41.031 | -1 | 1.000 | 135749 | 31927 | 97 | 242 | 329 | | M |
| 357.8516 | 41.018 | 41.031 | -1 | 1.000 | 78695 | 19726 | 31 | 77 | 636 | 1.73(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | RQ |
| 355.8546 | 38.194 | 39.915 | -103 | | 1765 | 451 | 97 | 242 | 5 | | |
| 357.8516 | 38.194 | 39.915 | -103 | | 2696 | 674 | 31 | 77 | 22 | 0.65(1.32-1.78) | |
| 355.8546 | 41.672 | 39.915 | 105 | | 4067 | 957 | 97 | 242 | 10 | | |
| 357.8516 | 41.655 | 39.915 | 104 | | 2545 | 554 | 31 | 77 | 18 | 1.60(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 39.296 | 39.309 | -1 | 1.000 | 235054 | 48686 | 354 | 885 | 138 | | |
| 341.8567 | 39.296 | 39.309 | -1 | 1.000 | 150525 | 31066 | 142 | 355 | 219 | 1.56(1.32-1.78) | |
| 2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 40.502 | 40.497 | 0 | 1.000 | 219584 | 51785 | 354 | 885 | 146 | | |
| 341.8567 | 40.502 | 40.497 | 0 | 1.000 | 142684 | 34471 | 142 | 355 | 243 | 1.54(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | |
| 339.8597 | 38.623 | | | | | | 354 | 885 | | | |
| 341.8567 | 38.623 | | | | | | 142 | 355 | | | |
| 1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.253 | 45.249 | 0 | 1.001 | 149638 | 37533 | 423 | 1057 | 89 | | |
| 391.8127 | 45.236 | 45.249 | -1 | 1.000 | 123354 | 32012 | 181 | 452 | 177 | 1.21(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.371 | 45.367 | 0 | 1.000 | 153521 | 34384 | 423 | 1057 | 81 | | |
| 391.8127 | 45.371 | 45.367 | 0 | 1.000 | 121706 | 27207 | 181 | 452 | 150 | 1.26(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDD | | | | | | | | | | | M |
| 389.8158 | 45.759 | 45.755 | 0 | 1.012 | 153733 | 36630 | 423 | 1057 | 87 | | M |
| 391.8127 | 45.759 | 45.755 | 0 | 1.012 | 119784 | 29431 | 181 | 452 | 163 | 1.28(1.05-1.43) | M |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | |
| 389.8158 | 44.687 | | | | | | 423 | 1057 | | | |
| 391.8127 | 44.687 | | | | | | 181 | 452 | | | |
| 1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.190 | 44.203 | -1 | 1.000 | 242335 | 65094 | 413 | 1032 | 158 | | |
| 375.8178 | 44.190 | 44.203 | -1 | 1.000 | 191310 | 51020 | 354 | 885 | 144 | 1.27(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.325 | 44.338 | -1 | 1.000 | 276616 | 66473 | 413 | 1032 | 161 | | |
| 375.8178 | 44.325 | 44.338 | -1 | 1.000 | 235913 | 54461 | 354 | 885 | 154 | 1.17(1.05-1.43) | |
| 2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 45.067 | 45.064 | 0 | 1.000 | 255321 | 65716 | 413 | 1032 | 159 | | |
| 375.8178 | 45.067 | 45.064 | 0 | 1.000 | 203602 | 50722 | 354 | 885 | 143 | 1.25(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDF | | | | | | | | | | | M |
| 373.8208 | 46.029 | 46.042 | -1 | 1.000 | 214140 | 50304 | 413 | 1032 | 122 | | M |
| 375.8178 | 46.029 | 46.042 | -1 | 1.000 | 166768 | 39105 | 354 | 885 | 110 | 1.28(1.05-1.43) | M |
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.552 | | | | | | 413 | 1032 | | | |
| 375.8178 | 44.552 | | | | | | 354 | 885 | | | |
| 1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 423.7767 | 50.184 | 50.180 | 0 | 1.000 | 125747 | 23404 | 83 | 207 | 282 | | |
| 425.7737 | 50.167 | 50.180 | -1 | 1.000 | 120962 | 22652 | 77 | 192 | 294 | 1.04(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | |
| 423.7767 | 48.970 | 49.566 | -36 | | 6090 | 1428 | 83 | 207 | 17 | | |
| 425.7737 | 48.970 | 49.566 | -36 | | 5907 | 1470 | 77 | 192 | 19 | 1.03(0.88-1.20) | |
| 1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 407.7817 | 48.464 | 48.476 | -1 | 1.000 | 217042 | 43963 | 163 | 407 | 270 | | |
| 409.7788 | 48.464 | 48.476 | -1 | 1.000 | 207650 | 43189 | 99 | 247 | 436 | 1.05(0.88-1.20) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 407.7817 | 50.808 | 50.821 | -1 | 1.000 | 165938 | 32114 | 163 | 407 | 197 | | |
| 409.7788 | 50.808 | 50.821 | -1 | 1.000 | 156315 | 30199 | 99 | 247 | 305 | 1.06(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | |
| 407.7817 | 49.625 | | | | | | 163 | 407 | | | |
| 409.7788 | 49.625 | | | | | | 99 | 247 | | | |
| OCDD | | | | | | | | | | | M |
| 457.7377 | 54.297 | 54.308 | -1 | 1.000 | 199351 | 51267 | 126 | 315 | 407 | | M |
| 459.7348 | 54.297 | 54.308 | -1 | 1.000 | 242990 | 61264 | 95 | 237 | 645 | 0.82(0.76-1.02) | M |
| OCDF | | | | | | | | | | | |
| 441.7428 | 54.435 | 54.429 | 0 | 1.000 | 283026 | 67060 | 102 | 255 | 657 | | |
| 443.7399 | 54.435 | 54.429 | 0 | 1.000 | 316835 | 71889 | 100 | 250 | 719 | 0.89(0.76-1.02) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 31.806 | 31.804 | 0 | 1.017 | 4437123 | 467967 | 669 | 1672 | 700 | | |
| 333.9338 | 31.806 | 31.804 | 0 | 1.017 | 5439453 | 547707 | 464 | 1160 | 1180 | 0.82(0.65-0.89) | |
| 13C-2,3,7,8-TCDF | | | | | | | | | | | |
| 315.9419 | 29.728 | 29.743 | -1 | 0.951 | 7185850 | 815684 | 396 | 990 | 2060 | | |
| 317.9389 | 29.728 | 29.743 | -1 | 0.951 | 9032032 | 982215 | 344 | 860 | 2855 | 0.80(0.65-0.89) | |
| 13C-1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 367.8949 | 41.001 | 40.997 | 0 | 1.311 | 4779816 | 1137566 | 490 | 1225 | 2322 | | |
| 369.8919 | 41.001 | 40.997 | 0 | 1.311 | 2967562 | 702235 | 228 | 570 | 3080 | 1.61(1.32-1.78) | |
| 13C-1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 39.279 | 39.275 | 0 | 1.256 | 7591474 | 1554308 | 508 | 1270 | 3060 | | |
| 353.8970 | 39.279 | 39.275 | 0 | 1.256 | 4722614 | 987940 | 326 | 815 | 3030 | 1.61(1.32-1.78) | |
| 13C-2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 40.484 | 40.480 | 0 | 1.295 | 7579346 | 1742048 | 508 | 1270 | 3429 | | |
| 353.8970 | 40.484 | 40.480 | 0 | 1.295 | 4889841 | 1111024 | 326 | 815 | 3408 | 1.55(1.32-1.78) | |
| 13C-1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.219 | 45.232 | -1 | 0.989 | 5015628 | 1237419 | 1042 | 2605 | 1188 | | |
| 403.8529 | 45.219 | 45.232 | -1 | 0.989 | 3917559 | 984923 | 688 | 1720 | 1432 | 1.28(1.05-1.43) | |
| 13C-1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.354 | 45.350 | 0 | 0.992 | 5145363 | 1157530 | 1042 | 2605 | 1111 | | |
| 403.8529 | 45.354 | 45.350 | 0 | 0.992 | 4048472 | 899419 | 688 | 1720 | 1307 | 1.27(1.05-1.43) | |
| 13C-1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44.173 | 44.187 | -1 | 0.966 | 4246020 | 1077139 | 873 | 2182 | 1234 | | |
| 385.8610 | 44.173 | 44.187 | -1 | 0.966 | 7924986 | 2065178 | 1429 | 3572 | 1445 | 0.54(0.43-0.59) | |
| 13C-1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44.308 | 44.322 | -1 | 0.969 | 5039793 | 1226005 | 873 | 2182 | 1404 | | |
| 385.8610 | 44.308 | 44.322 | -1 | 0.969 | 9531416 | 2307784 | 1429 | 3572 | 1615 | 0.53(0.43-0.59) | |
| 13C-2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 45.050 | 45.047 | 0 | 0.985 | 4651413 | 1154874 | 873 | 2182 | 1323 | | |
| 385.8610 | 45.050 | 45.047 | 0 | 0.985 | 8792766 | 2185623 | 1429 | 3572 | 1529 | 0.53(0.43-0.59) | |
| 13C-1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 383.8639 | 46.012 | 46.025 | -1 | 1.006 | 4046541 | 920385 | 873 | 2182 | 1054 | | |
| 385.8610 | 46.012 | 46.025 | -1 | 1.006 | 7803829 | 1705753 | 1429 | 3572 | 1194 | 0.52(0.43-0.59) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 435.8169 | 50.167 | 50.163 | 0 | 1.097 | 4279476 | 793115 | 734 | 1835 | 1081 | | |
| 437.8140 | 50.150 | 50.163 | -1 | 1.096 | 4105270 | 754273 | 1029 | 2572 | 733 | 1.04(0.88-1.20) | |
| 13C-1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 417.8250 | 48.447 | 48.443 | 0 | 1.059 | 3349222 | 701857 | 545 | 1362 | 1288 | | |
| 419.8220 | 48.447 | 48.443 | 0 | 1.059 | 7237686 | 1522777 | 1061 | 2652 | 1435 | 0.46(0.51-0.37) | |
| 13C-1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 417.8250 | 50.791 | 50.804 | -1 | 1.110 | 2793241 | 540408 | 545 | 1362 | 992 | | |
| 419.8220 | 50.791 | 50.804 | -1 | 1.110 | 6271723 | 1218464 | 1061 | 2652 | 1148 | 0.45(0.37-0.51) | |
| 13C-OCDD | | | | | | | | | | | |
| 469.7780 | 54.280 | 54.291 | -1 | 1.187 | 6563250 | 1489277 | 461 | 1152 | 3231 | | |
| 471.7750 | 54.280 | 54.291 | -1 | 1.187 | 7223828 | 1670709 | 353 | 882 | 4733 | 0.91(0.76-1.02) | |
| 13C-OCDF | | | | | | | | | | | |
| 453.7830 | 54.418 | 54.429 | -1 | 1.190 | 9942521 | 2332902 | 412 | 1030 | 5662 | | |
| 455.7801 | 54.418 | 54.429 | -1 | 1.190 | 10911049 | 2581911 | 839 | 2097 | 3077 | 0.91(0.76-1.02) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31.872 | 31.871 | 0 | 1.019 | 59993 | 6803 | 34 | 85 | 200 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 31.274 | 31.289 | -1 | | 4187037 | 433867 | 669 | 1672 | 649 | | |
| 333.9338 | 31.290 | 31.289 | 0 | | 5197662 | 558966 | 464 | 1160 | 1205 | 0.81(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.742 | 45.738 | 0 | | 5654695 | 1276930 | 1042 | 2605 | 1225 | | |
| 403.8529 | 45.742 | 45.738 | 0 | | 4497410 | 1033032 | 688 | 1720 | 1502 | 1.26(1.05-1.43) | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Review Flags

M - Manually Integrated

## Reagents:

61L11613OP_00001 Amount Added: 20.00 Units: uL

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d
Lims ID: IC L1
Client ID:
Inject. Date: 16-May-2014 14:26:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 1
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 2
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDD, RT: 30.308

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 319.8965 Area | 319.8965 Height | 321.8936 Area | 321.8936 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 29.711 | 2771 | 391 | 556 | 220 | | 4.98 | R |
| 33.883 | 504 | 146 | 465 | 154 | | 1.08 | Rn |
| Signal Totals: | | | | | | | |
| | 3275 | 537 | 1021 | 374 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 4296 | 911 | | | | 3.21 | RQ |
| | 1807 | 661 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4296 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (1807 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d
Lims ID: IC L1
Client ID:
Inject. Date: 16-May-2014 14:26:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 1
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 2
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDF, RT: 28.995

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 303.9016 Area | 303.9016 Height | 305.8987 Area | 305.8987 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 23.163 | 1692 | 366 | 1794 | 405 | | 0.94 | R |
| 34.797 | 1857 | 215 | 1463 | 313 | | 1.27 | Rn |
| Signal Totals: | | | | | | | |
| | 3549 | 581 | 3257 | 718 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 6806 | 1299 | | | | 1.09 | RQ |
| | 5764 | 1270 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (6806 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (5764 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d
Lims ID: IC L1
Client ID:
Inject. Date: 16-May-2014 14:26:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 1
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 2
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-PeCDD, RT: 39.915

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 355.8546 Area | 355.8546 Height | 357.8516 Area | 357.8516 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 38.194 | 1765 | 451 | 2696 | 674 | | 0.65 | Rn |
| 41.672 | 4067 | 957 | 2545 | 554 | | 1.60 | n |
| Signal Totals: | | | | | | | |
| | 5832 | 1408 | 5241 | 1228 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 11073 | 2636 | | | | 1.11 | RQ |
| | 9515 | 2252 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (11073 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (9515 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d
Lims ID: IC L1
Client ID:
Inject. Date: 16-May-2014 14:26:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 1
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 2
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-HxCDF, RT: 44.552

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 373.8208 Area | 373.8208 Height | 375.8178 Area | 375.8178 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| Signal Totals: | 0 | 0 | 0 | 0 | | | |

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d
Lims ID: IC L1
Client ID:
Inject. Date: 16-May-2014 14:26:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 1
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 2
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-HpCDD, RT: 49.566

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 423.7767 Area | 423.7767 Height | 425.7737 Area | 425.7737 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 48.970 | 6090 | 1428 | 5907 | 1470 | | 1.03 | |
| Signal Totals: | | | | | | | |
| | 6090 | 1428 | 5907 | 1470 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 11997 | 2898 | | | | 1.03 | |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (11997 * 0.0) / (0 * 0.000)

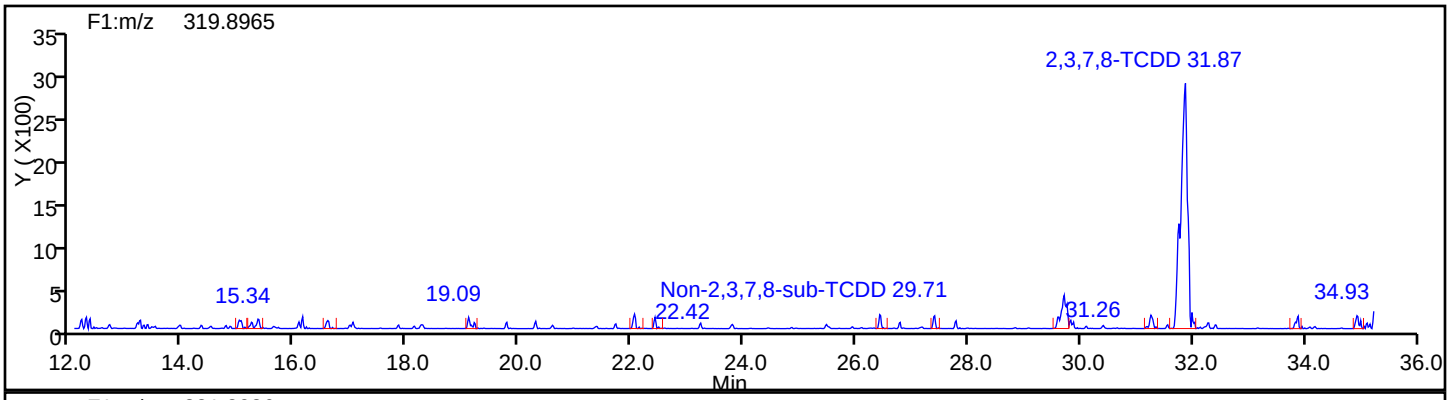
Report Date: 12-Jan-2017 08:09:12 Chrom Revision: 2.2 10-Jan-2017 11:26:10

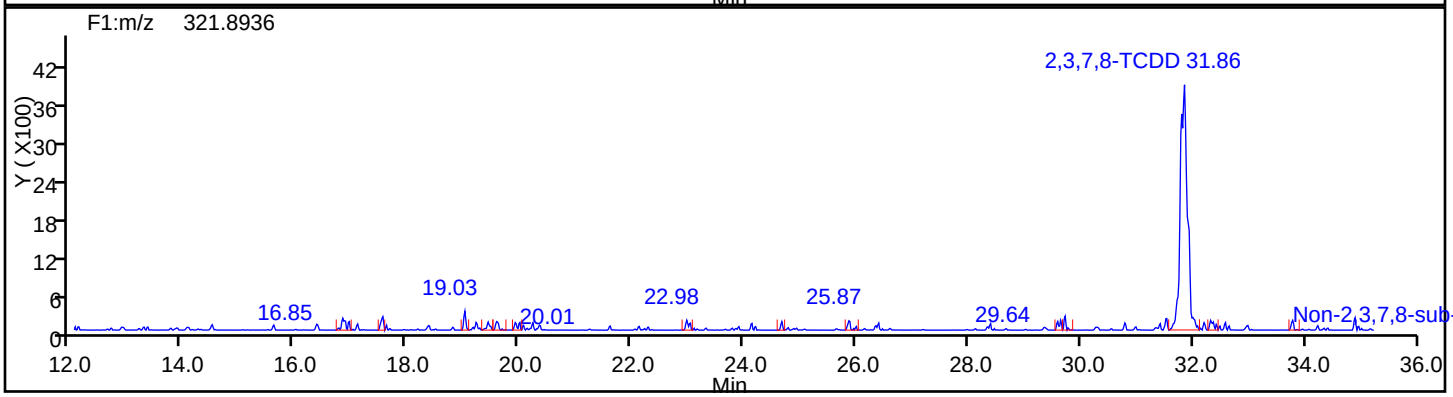
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

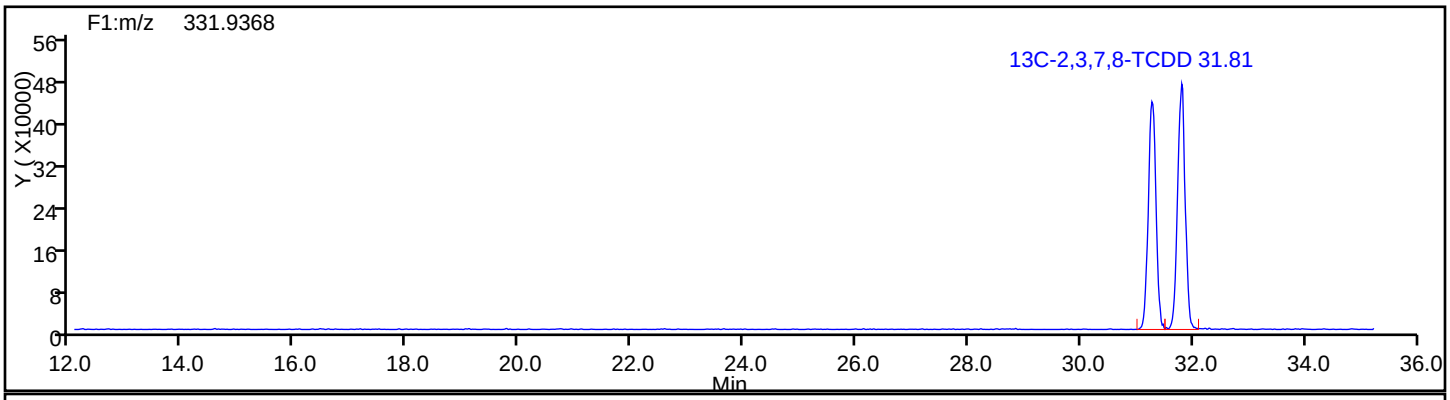
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

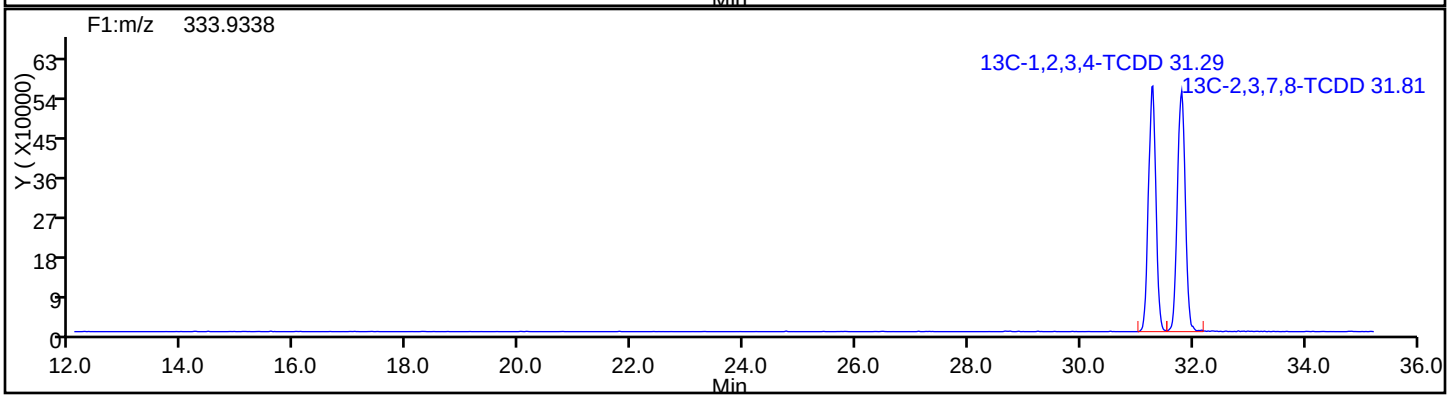
TCDD




TCDD Standards



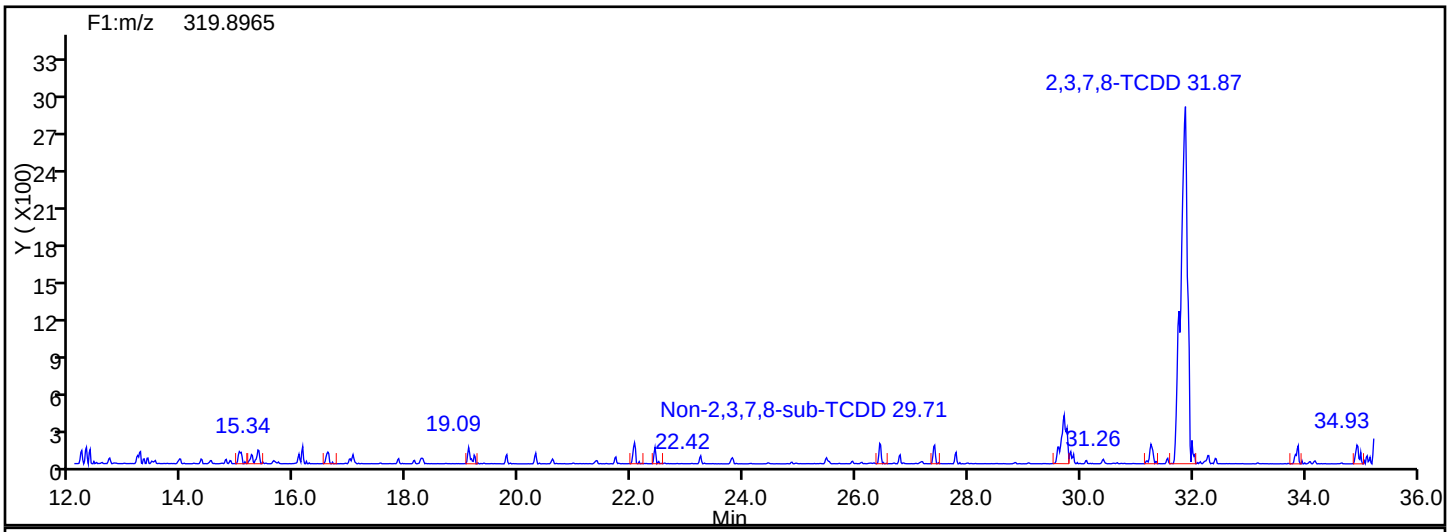
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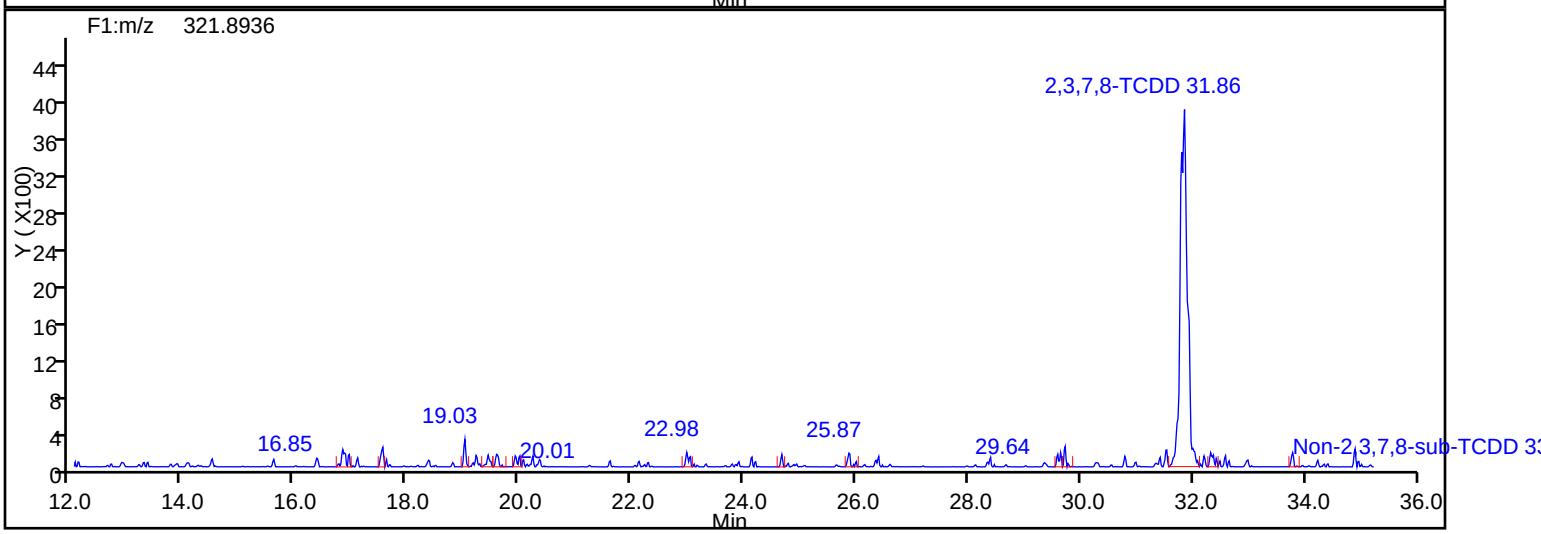
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

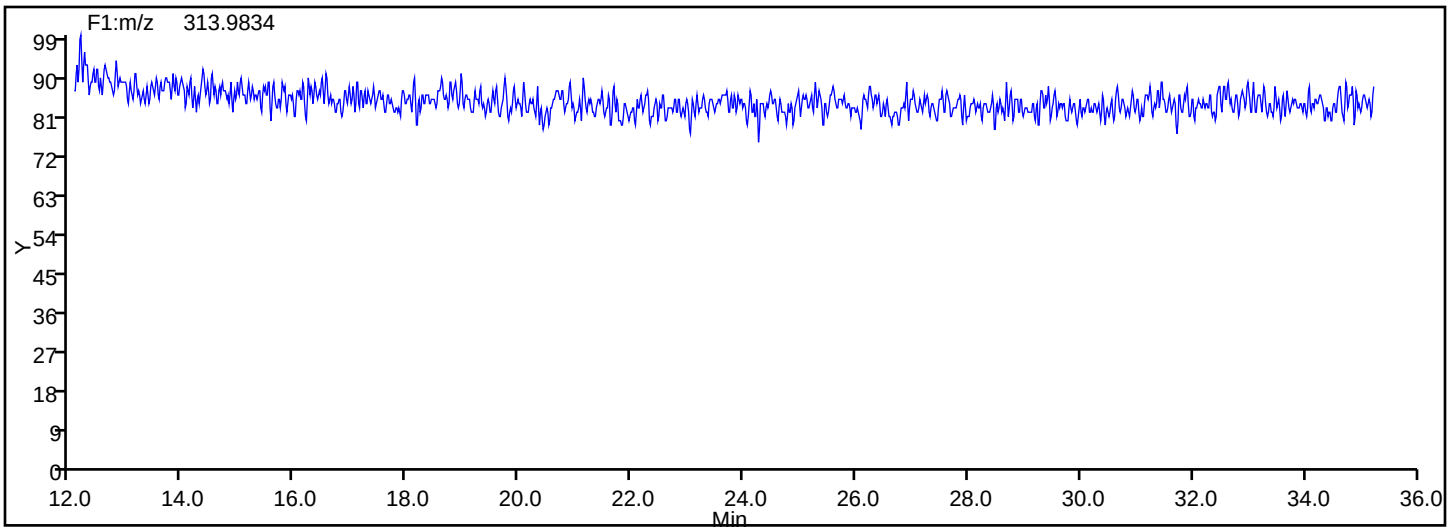
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|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

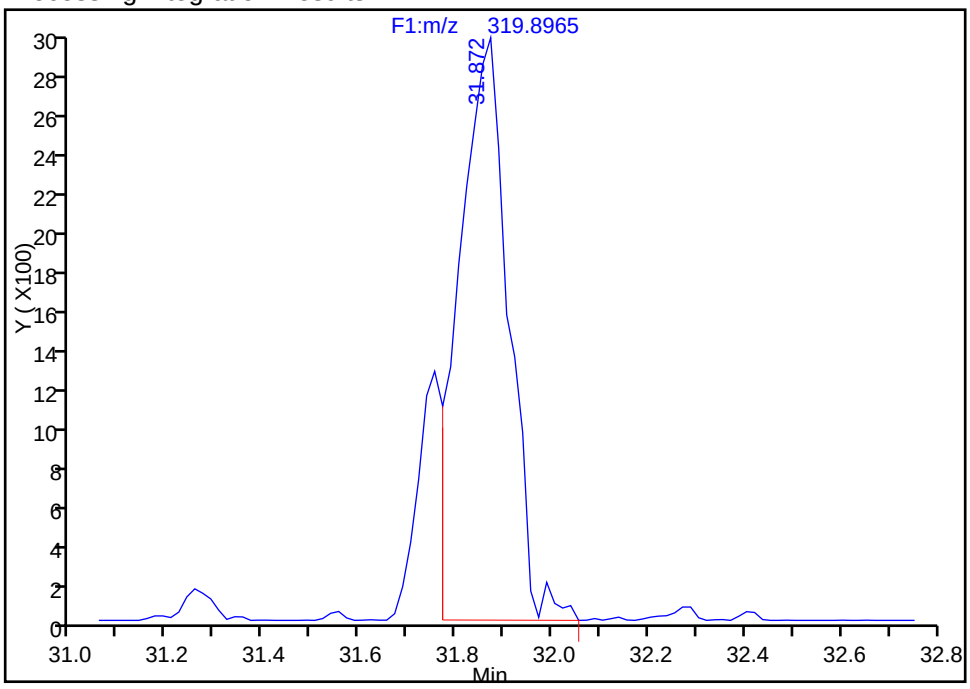
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Injection Date: 16-May-2014 14:26:00 Instrument ID: D2A
Lims ID: IC L1
Client ID:
Operator ID: DavidsonM ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL
Column: Detector F1(12.07 :34.29 )

## 2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

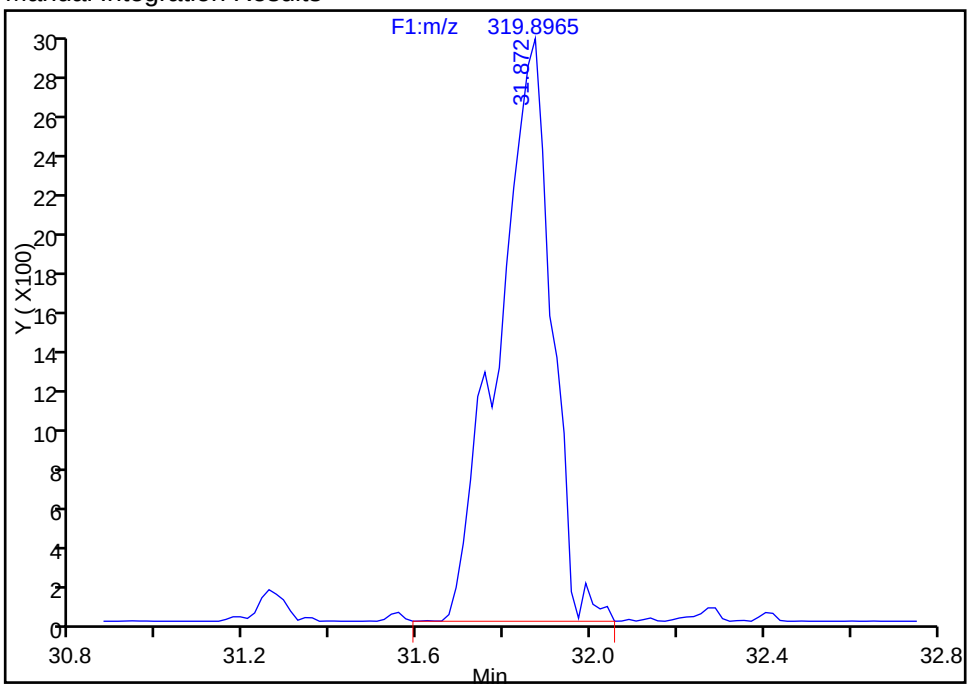
Processing Integration Results

RT: 31.87
Area: 20351
Amount: 0.478631
Amount Units: pg/ul




Manual Integration Results

RT: 31.87
Area: 24519
Amount: 0.507713
Amount Units: pg/ul




Reviewer: davidsonm, 11-Jan-2017 16:11:15
Audit Action: Manually Integrated Audit Reason: Baseline

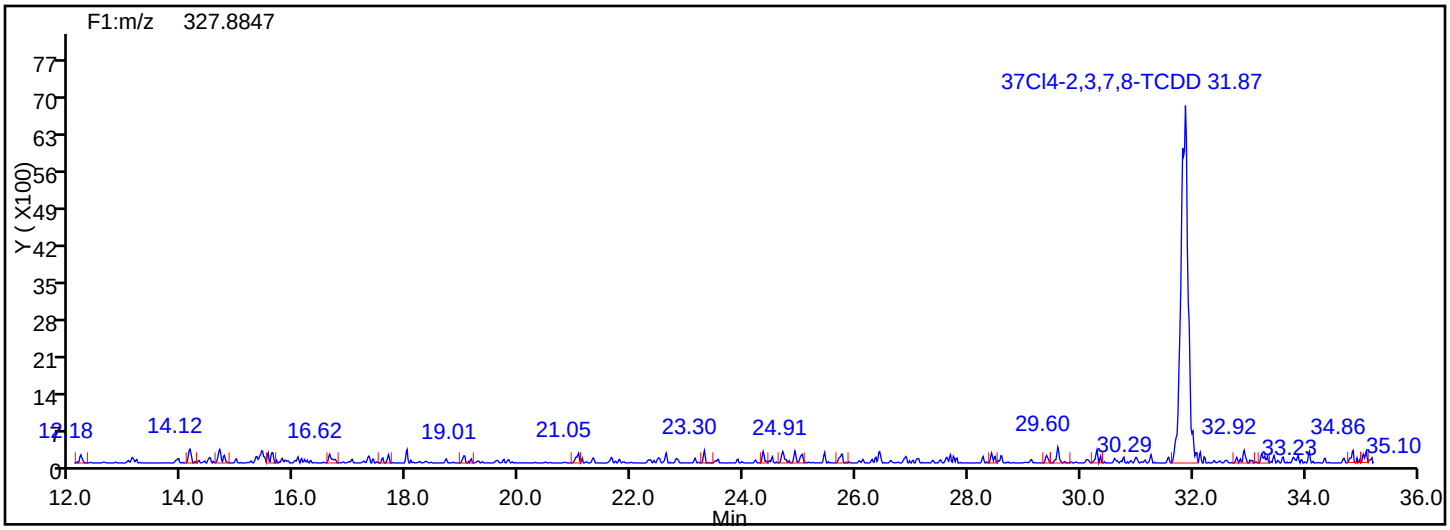
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TestAmerica Knoxville

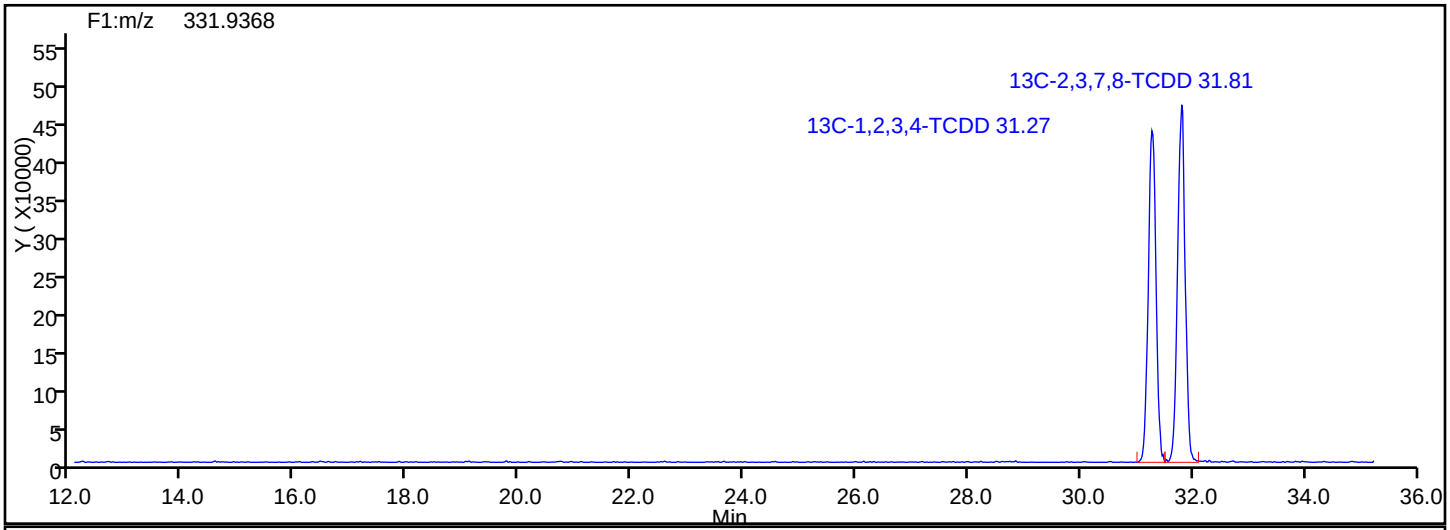
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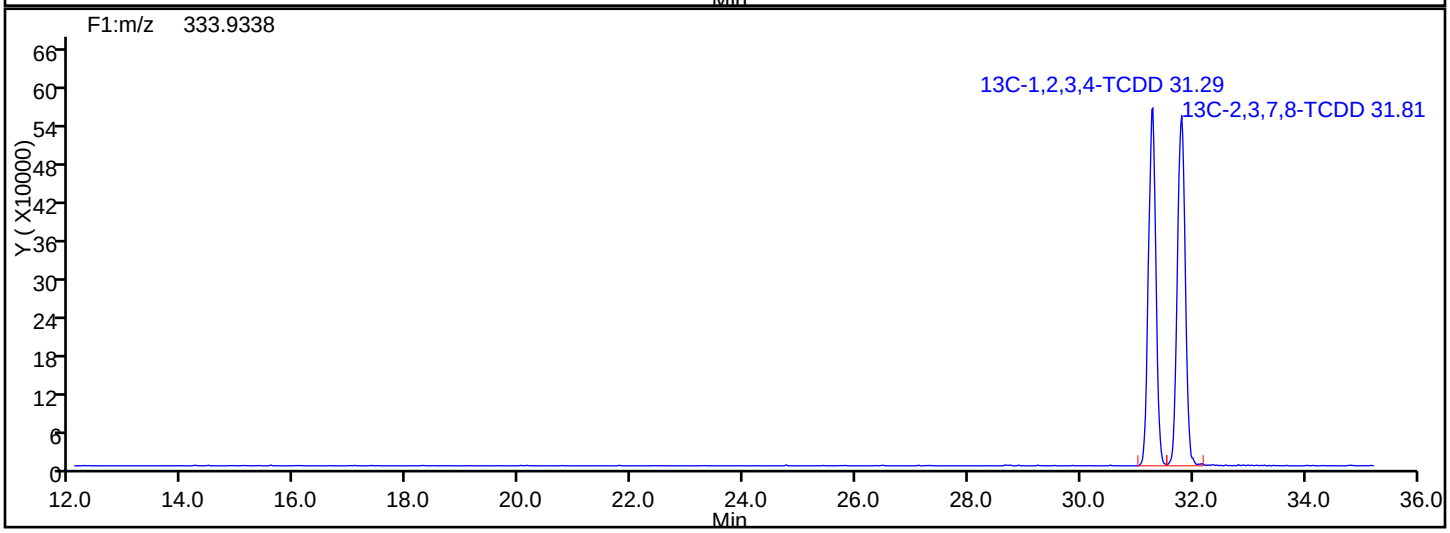
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



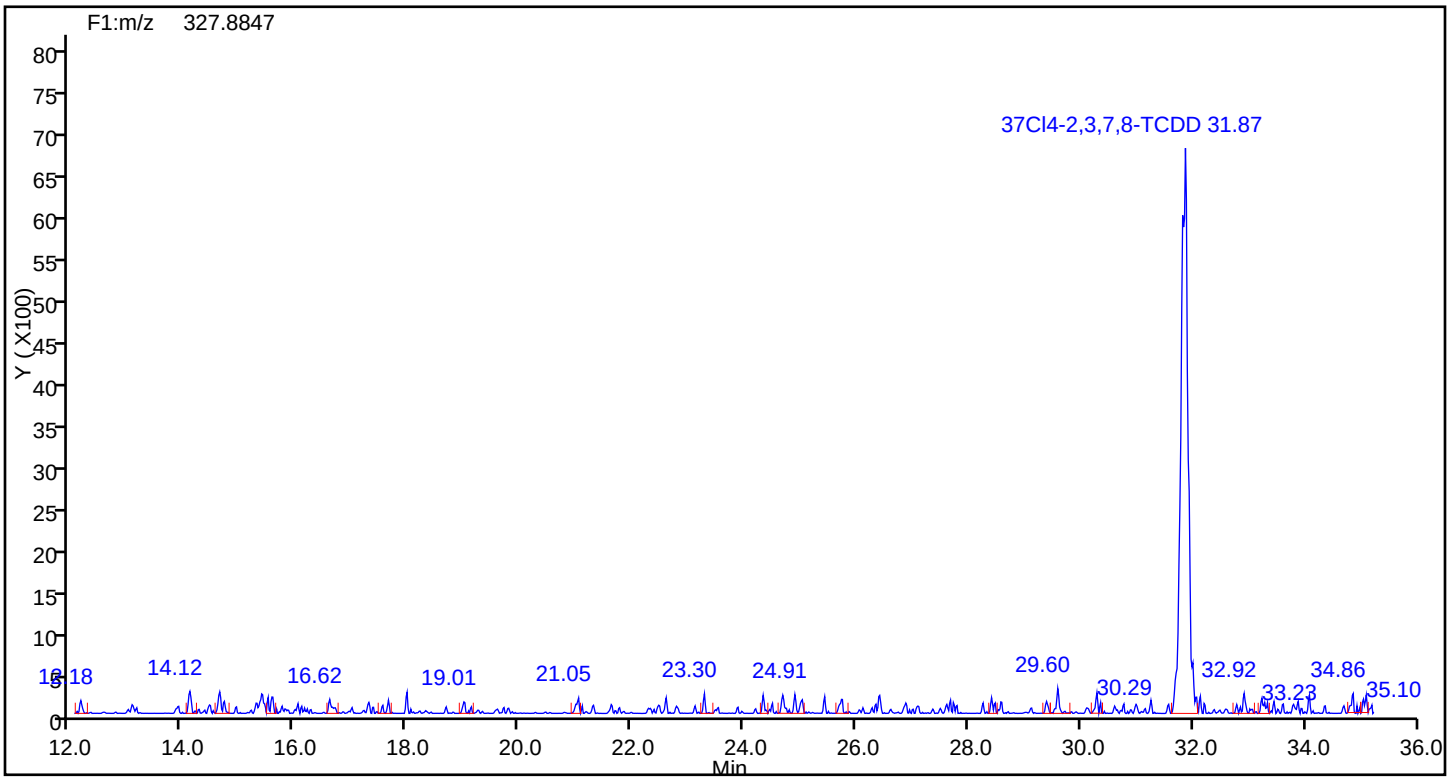



Report Date: 12-Jan-2017 08:09:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

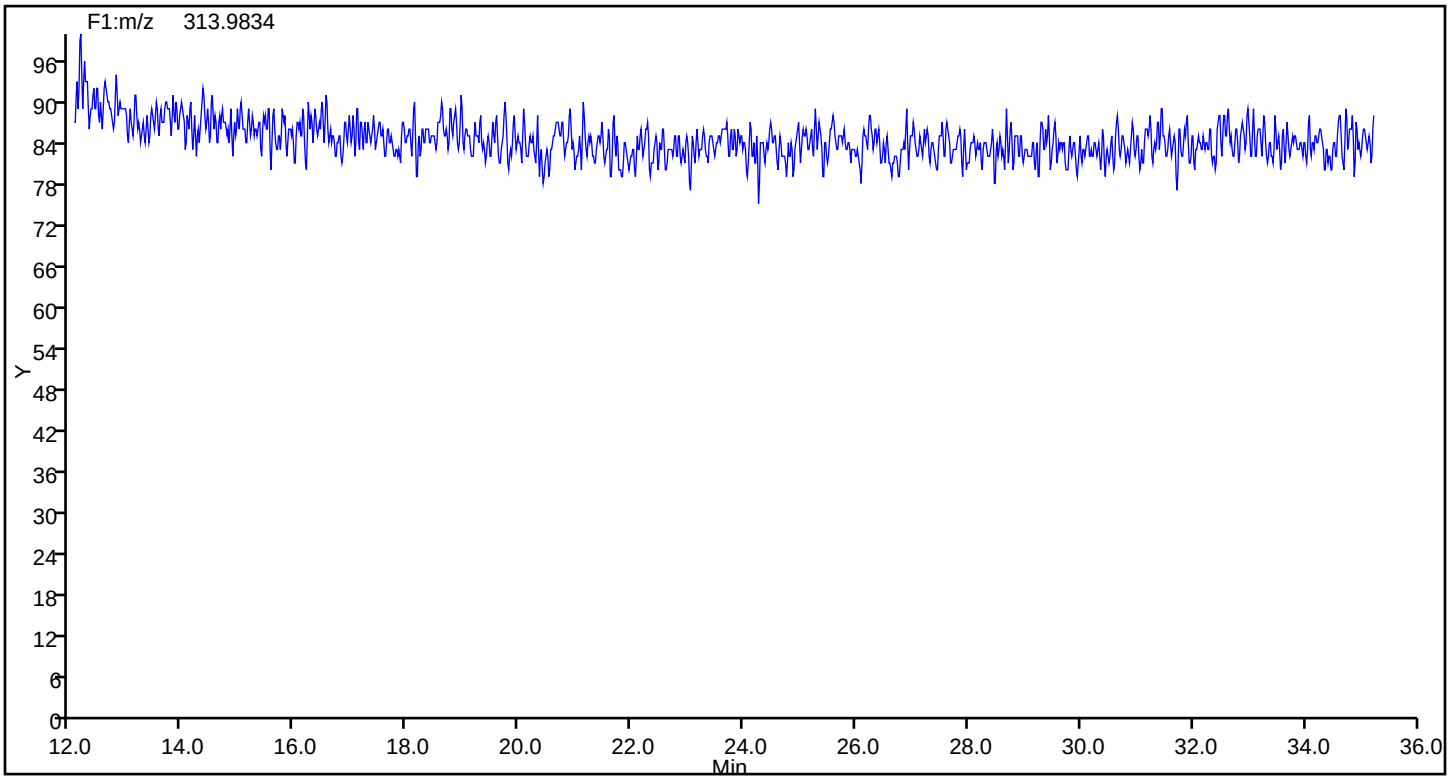
TestAmerica Knoxville

| | | | |
|---|---|---|---|
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| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Lock Mass



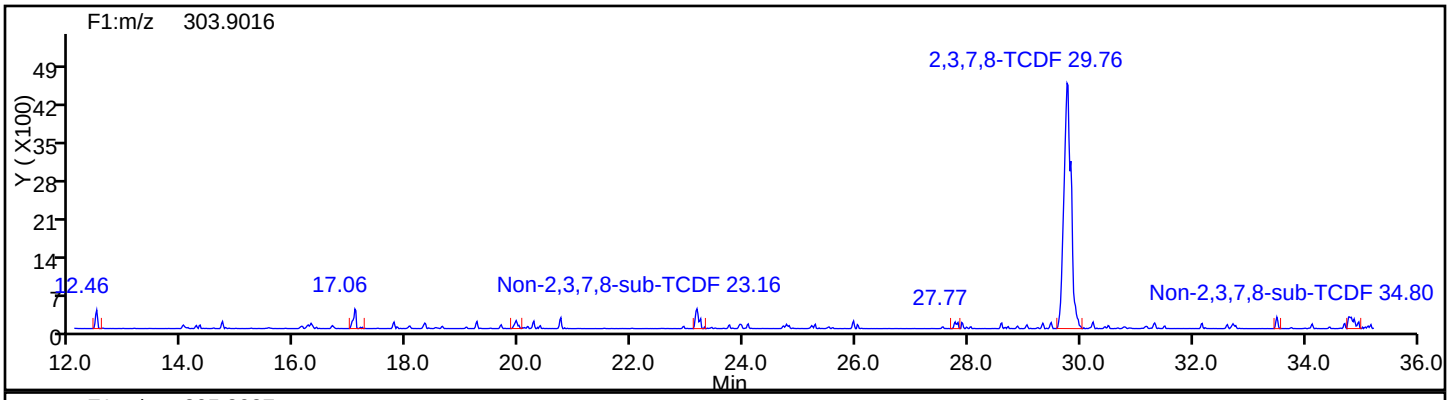
Report Date: 12-Jan-2017 08:09:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

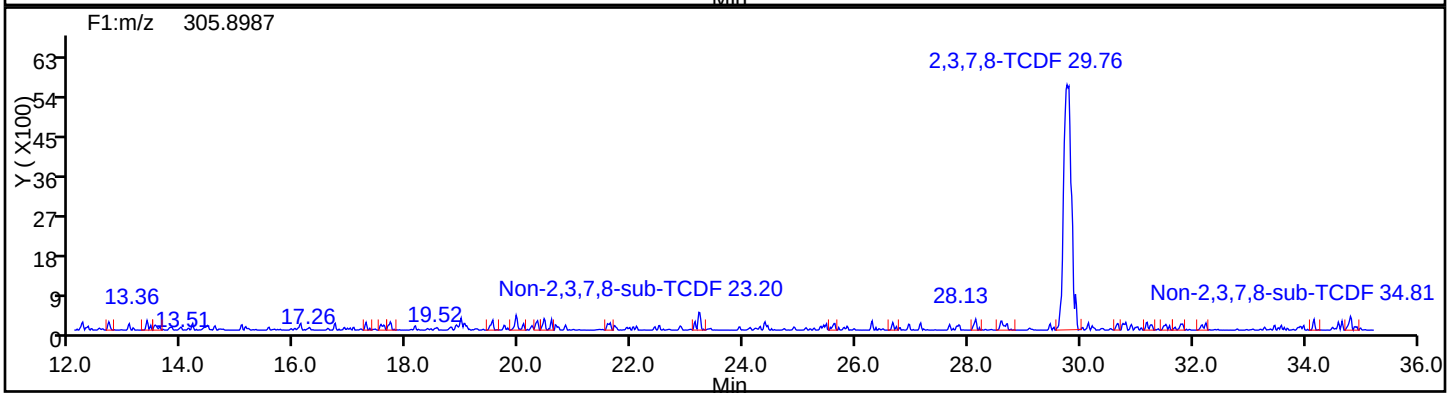
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

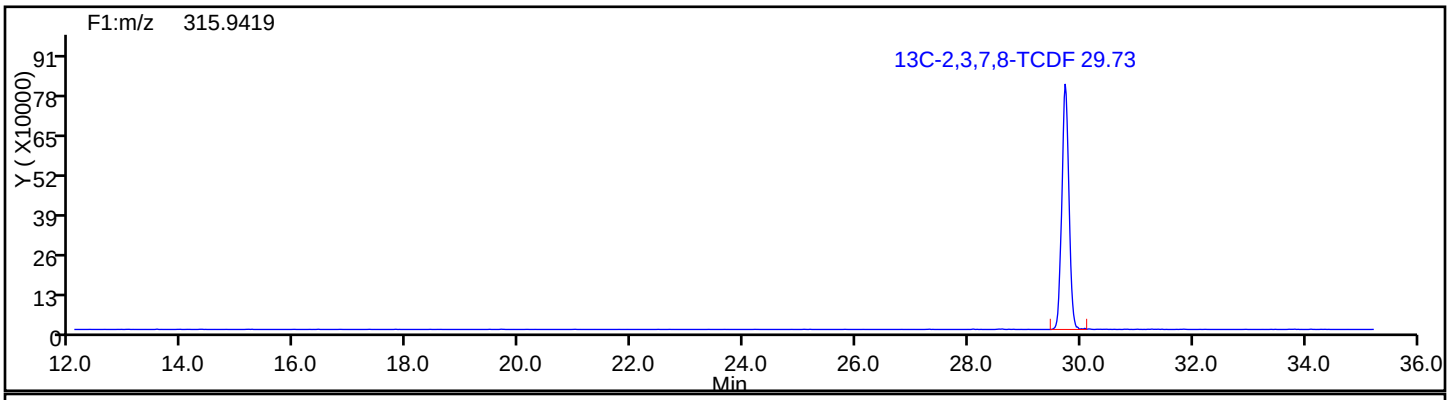
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

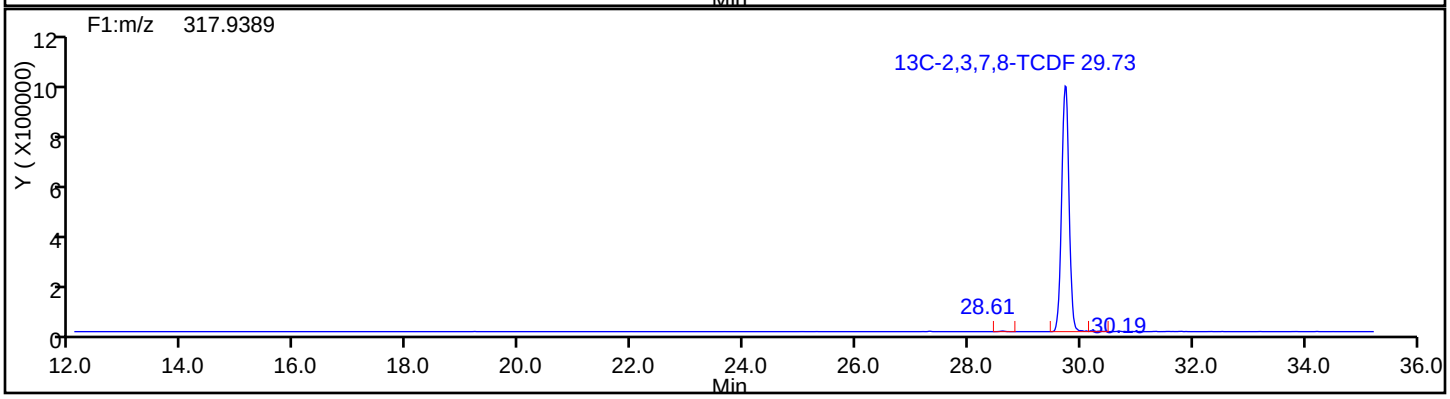
TCDF




TCDF Standards



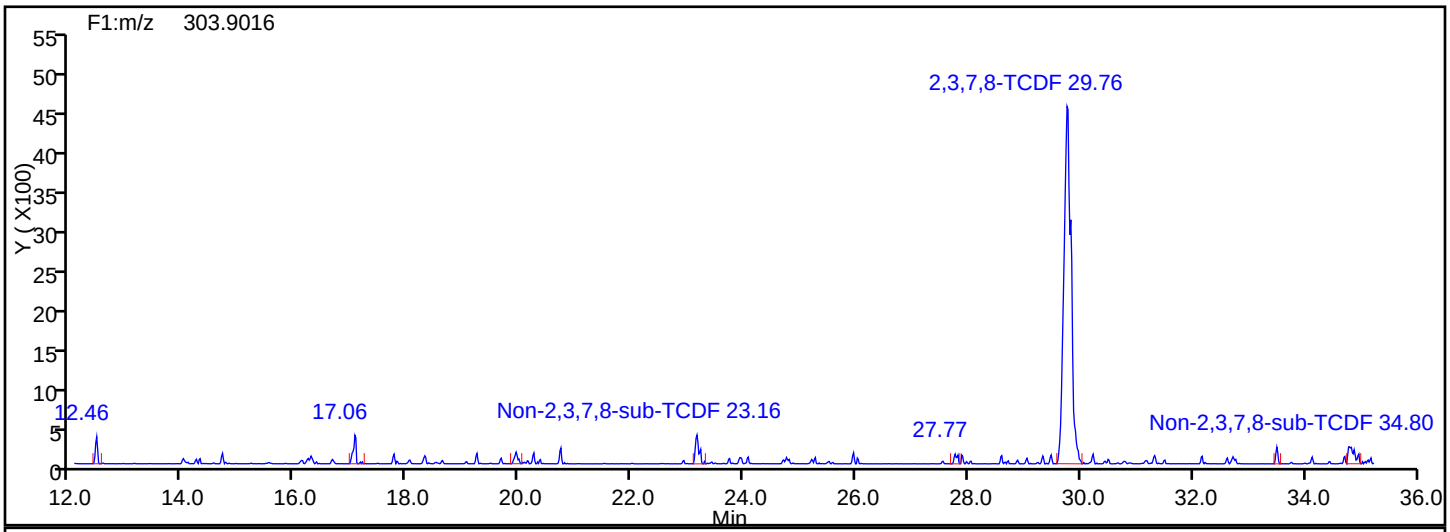
Report Date: 12-Jan-2017 08:09:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

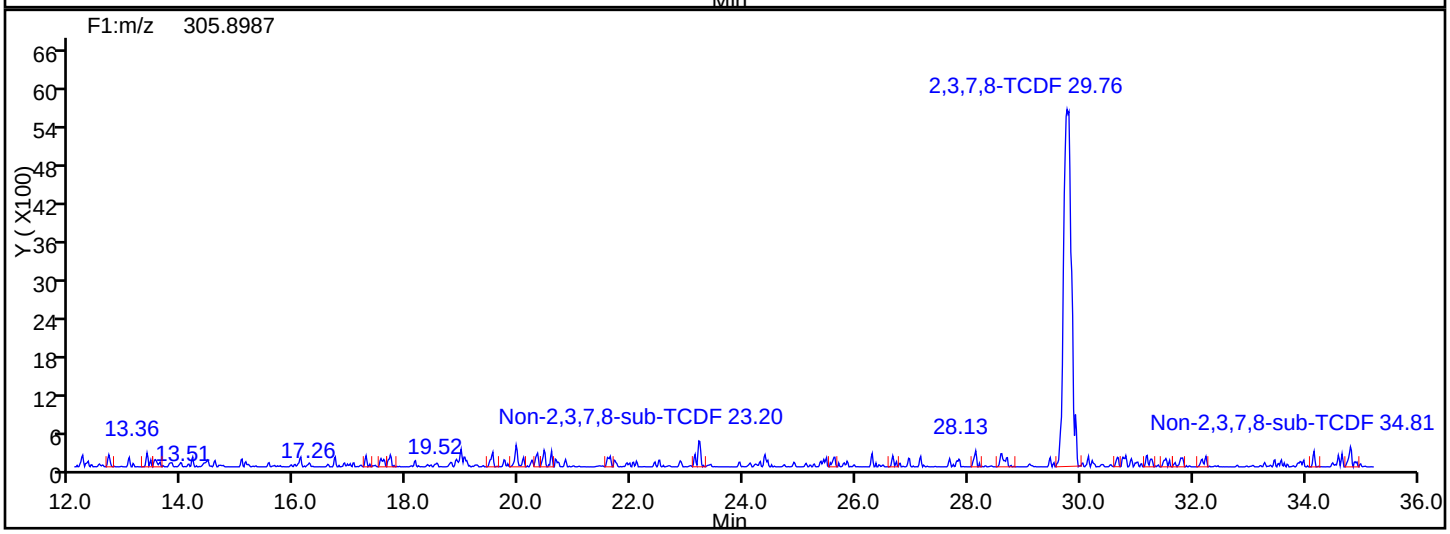
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

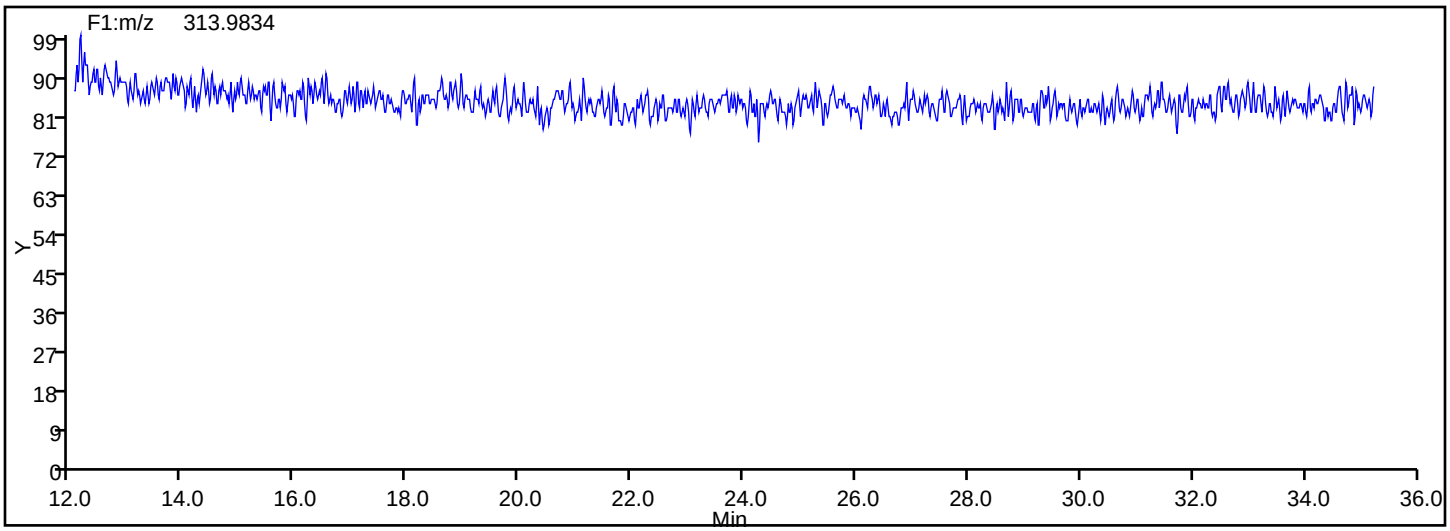
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

TCDF




TCDF Lock Mass



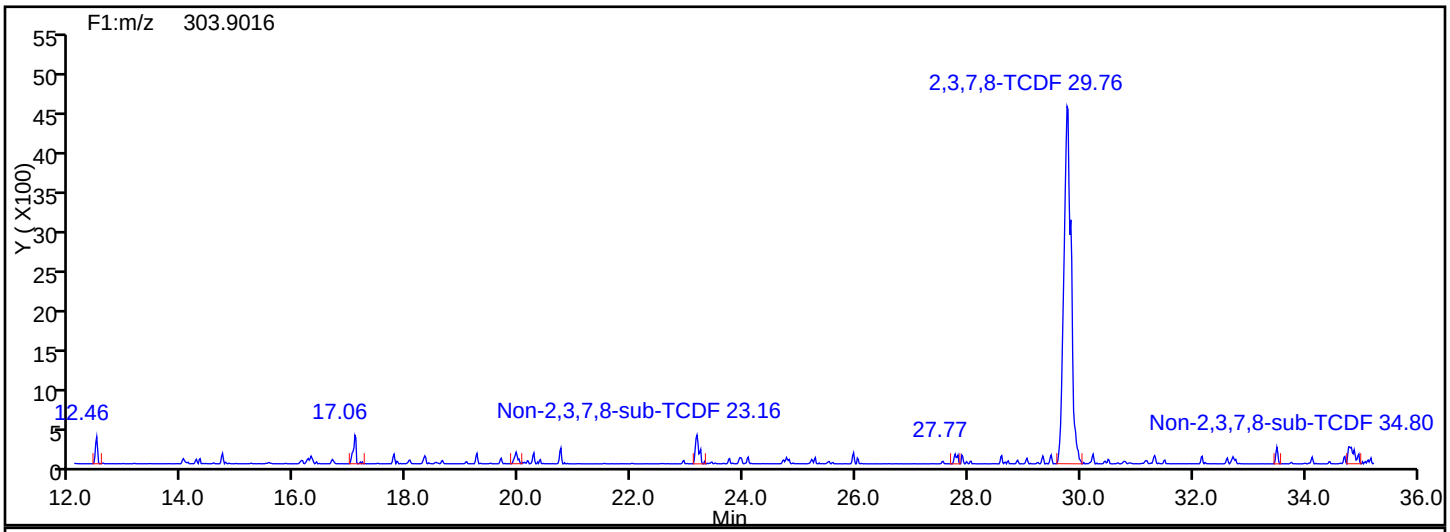
Report Date: 12-Jan-2017 08:09:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

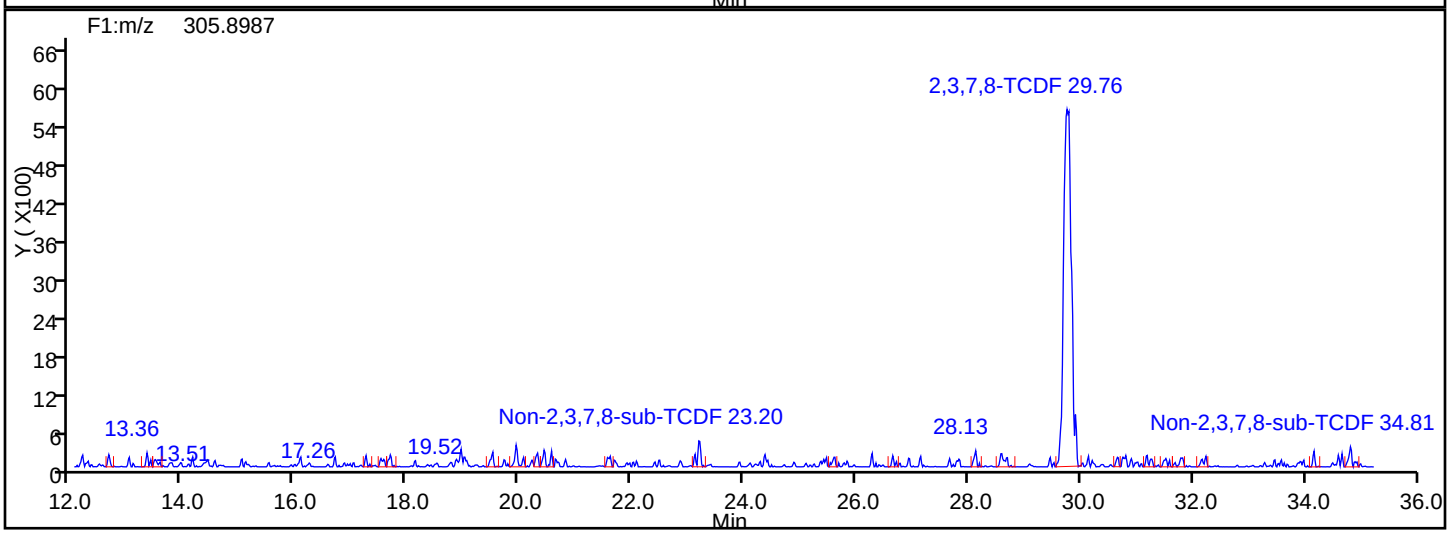
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

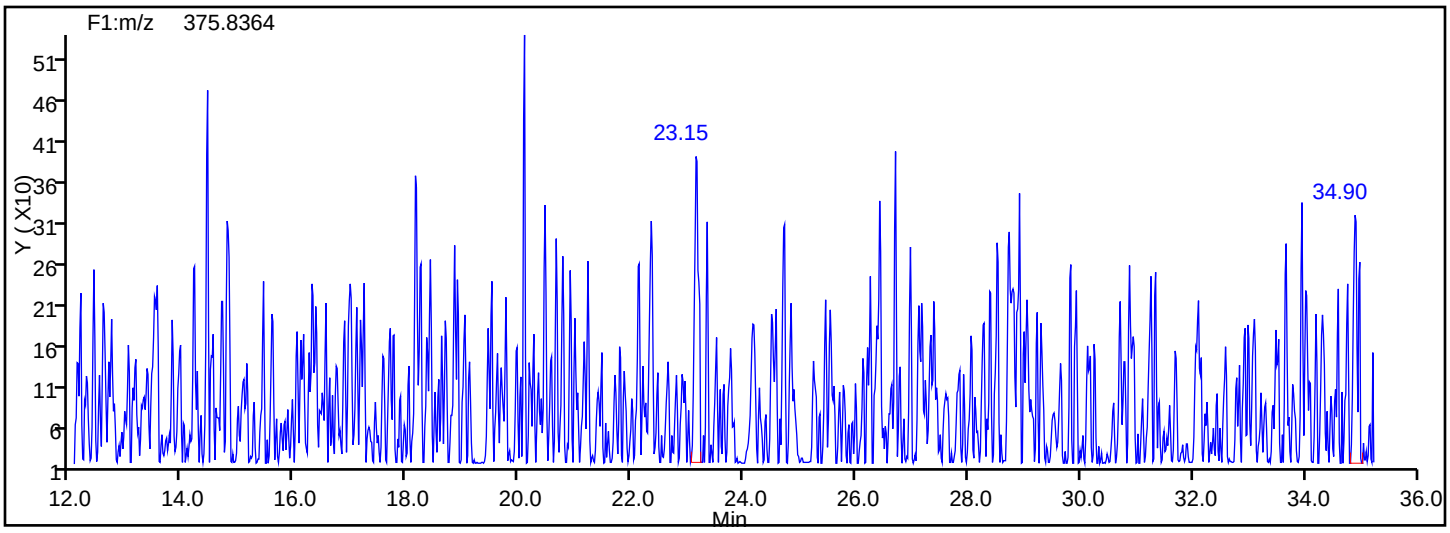
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

TCDF




TCDF Interference Mass



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

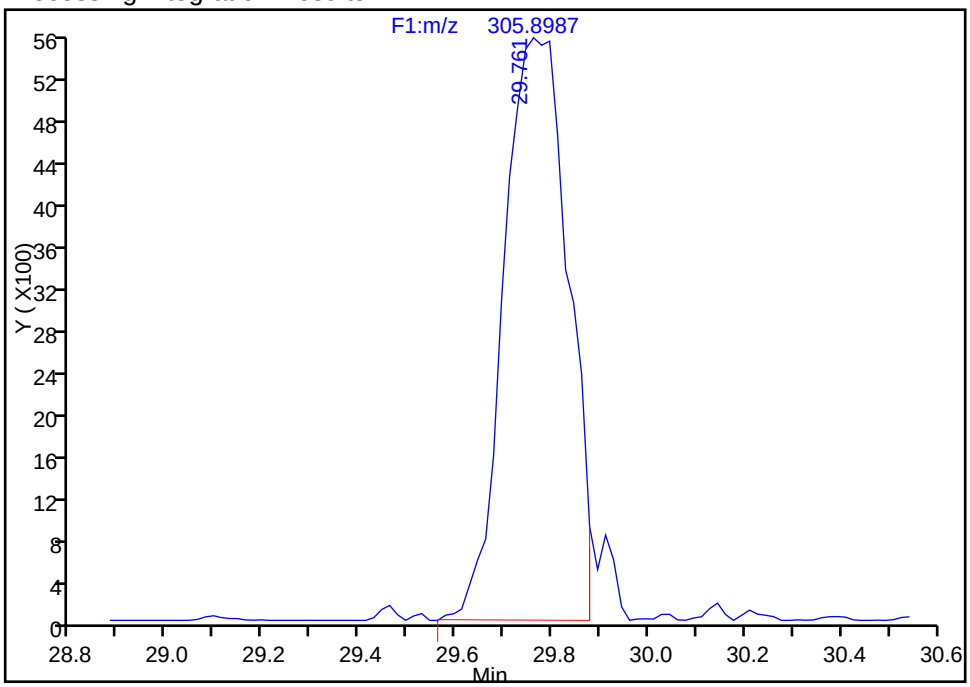
Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d
Injection Date: 16-May-2014 14:26:00 Instrument ID: D2A
Lims ID: IC L1
Client ID:
Operator ID: DavidsonM ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL
Column: Detector F1(12.07 :34.29 )

## 2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

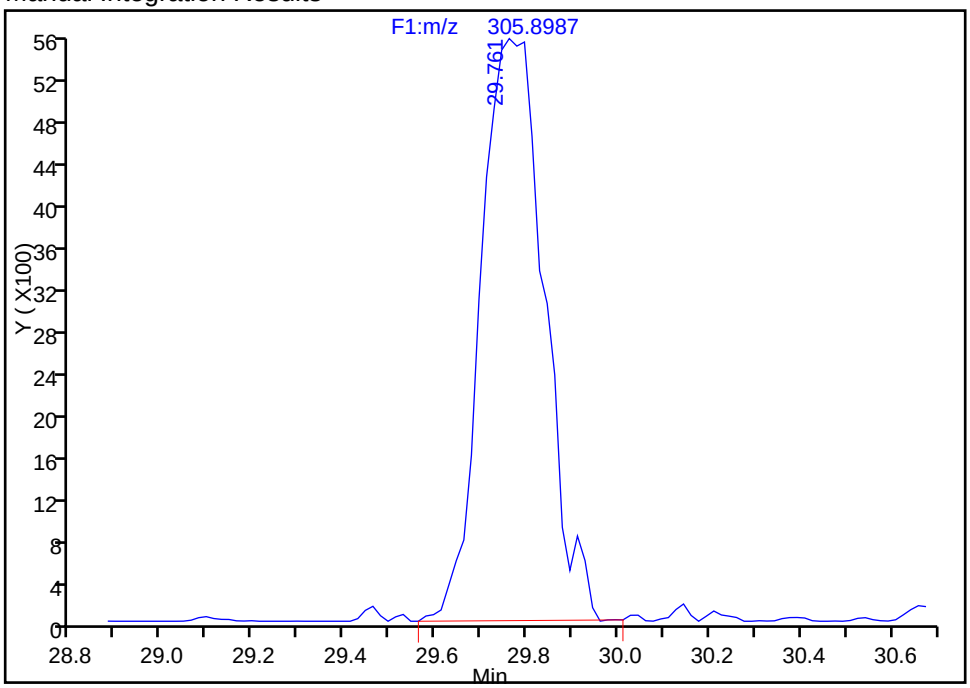
Processing Integration Results

RT: 29.76
Area: 51483
Amount: 0.523263
Amount Units: pg/ul




Manual Integration Results

RT: 29.76
Area: 53865
Amount: 0.533936
Amount Units: pg/ul




Reviewer: davidsonm, 11-Jan-2017 16:11:15
Audit Action: Manually Integrated Audit Reason: Baseline

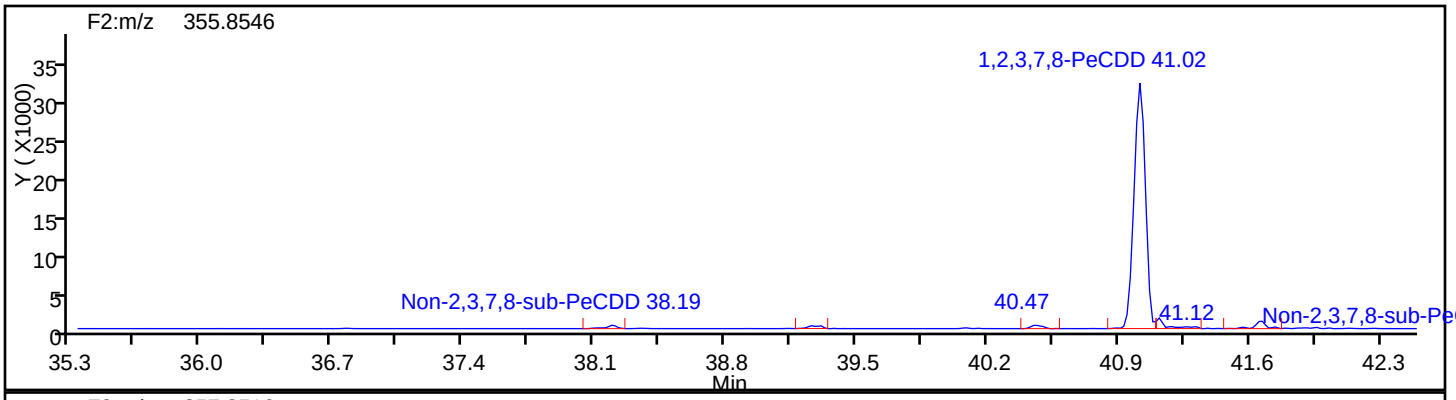
Report Date: 12-Jan-2017 08:09:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

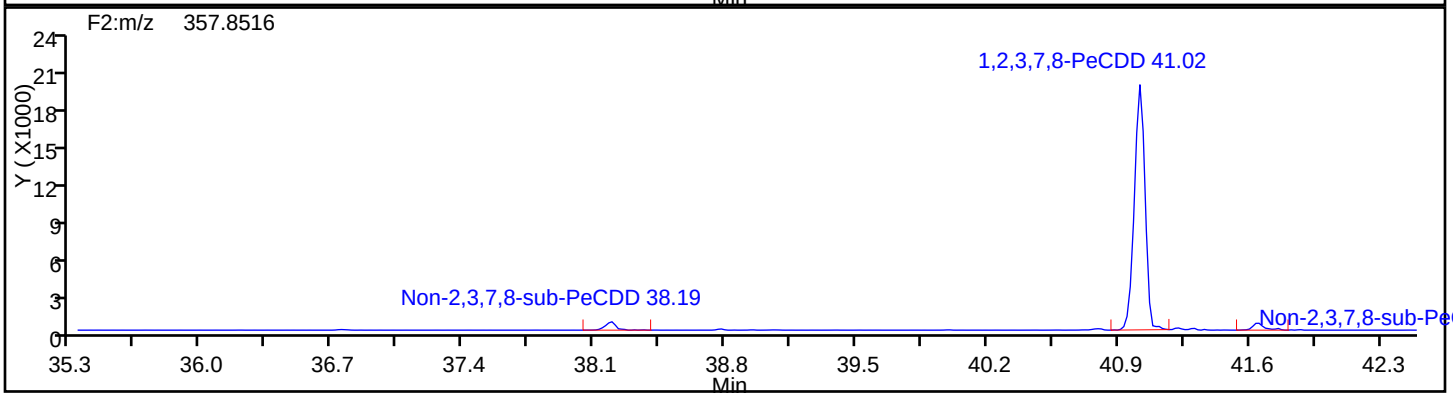
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

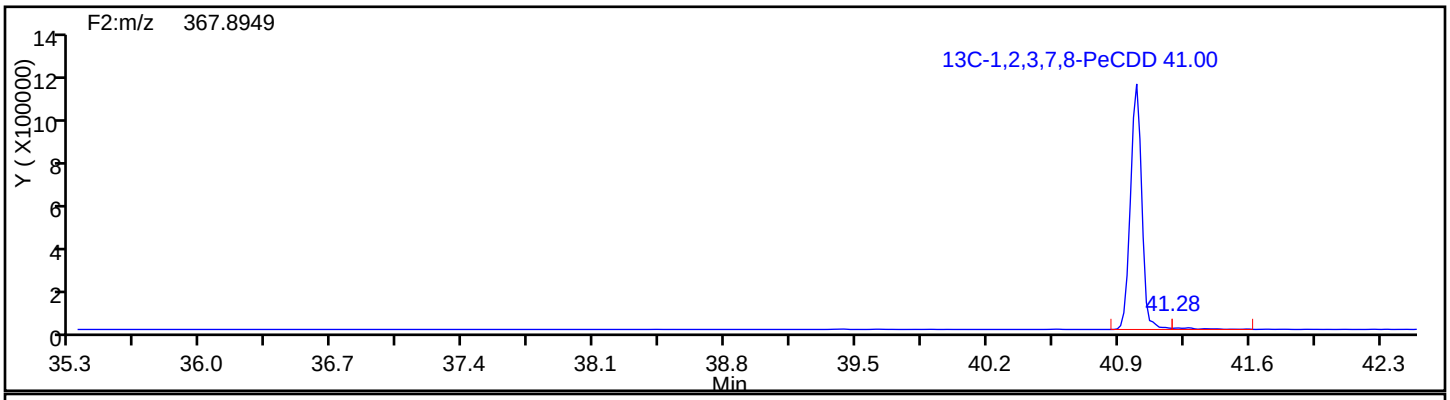
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

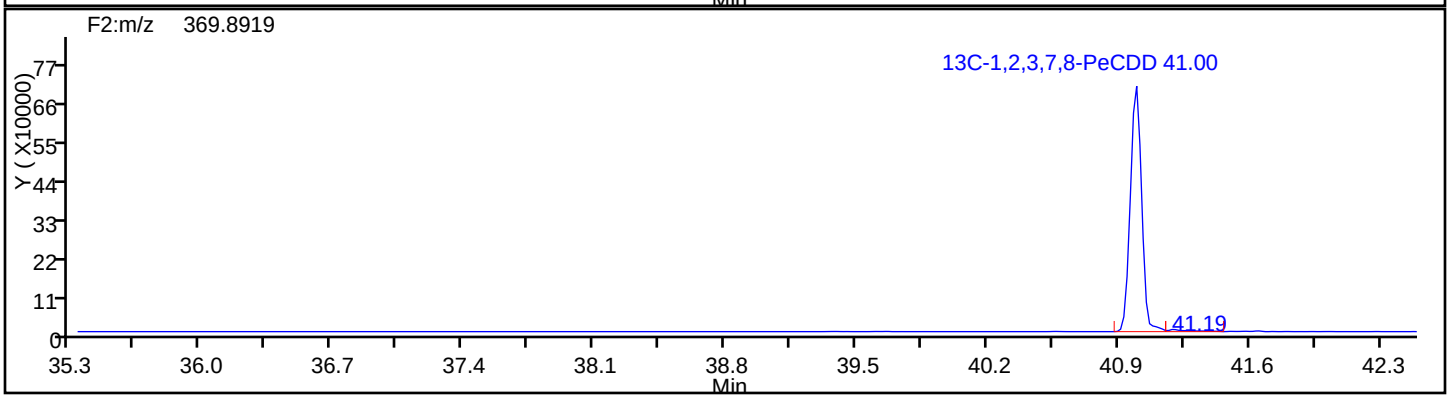
PeCDD




PeCDD Standards



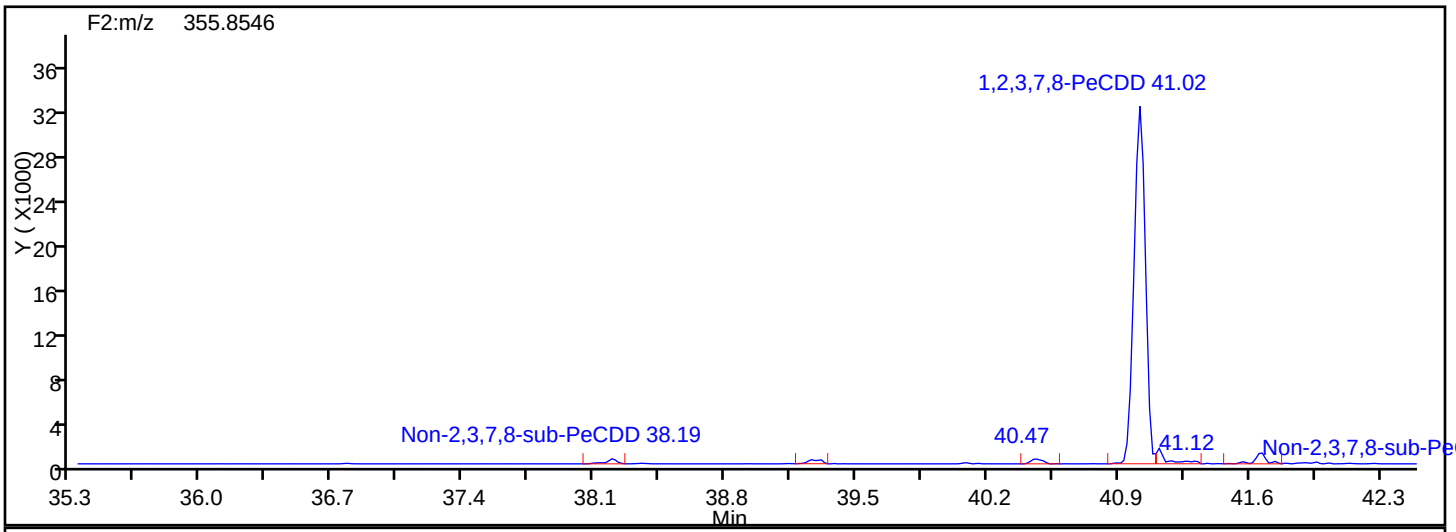
Report Date: 12-Jan-2017 08:09:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

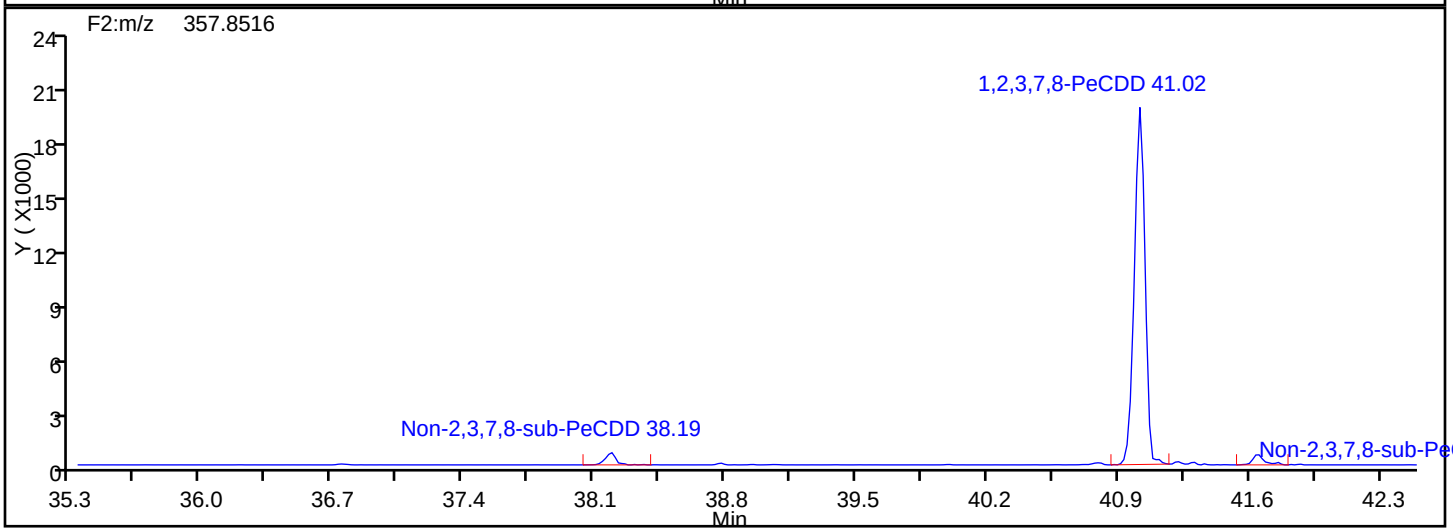
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

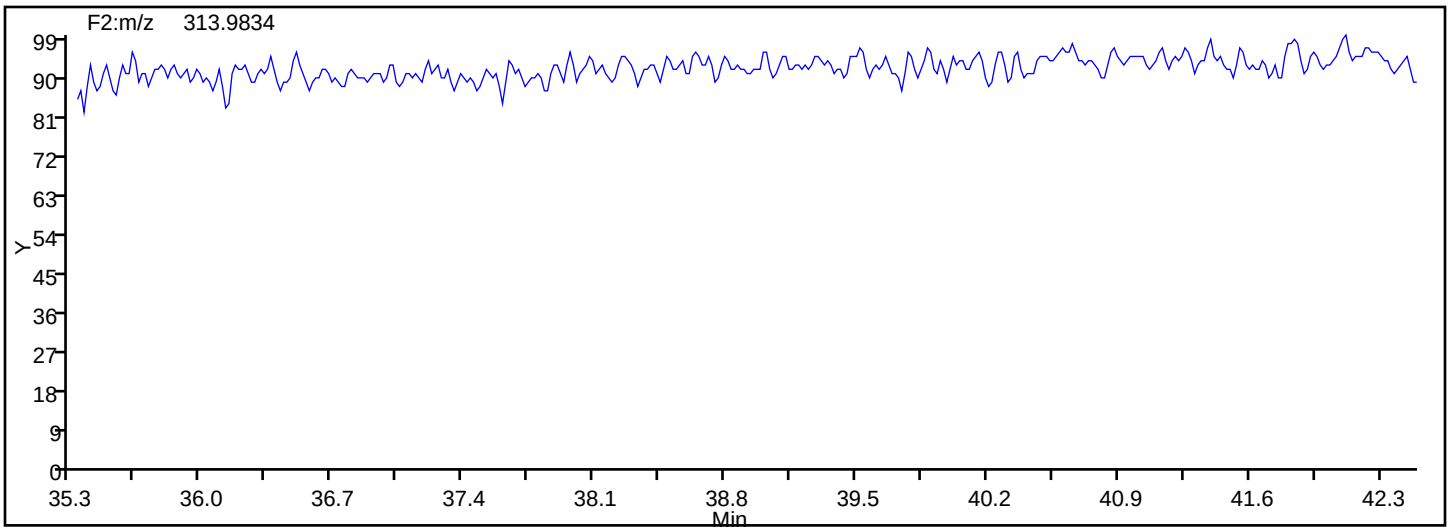
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

PeCDD




PeCDD Lock Mass



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

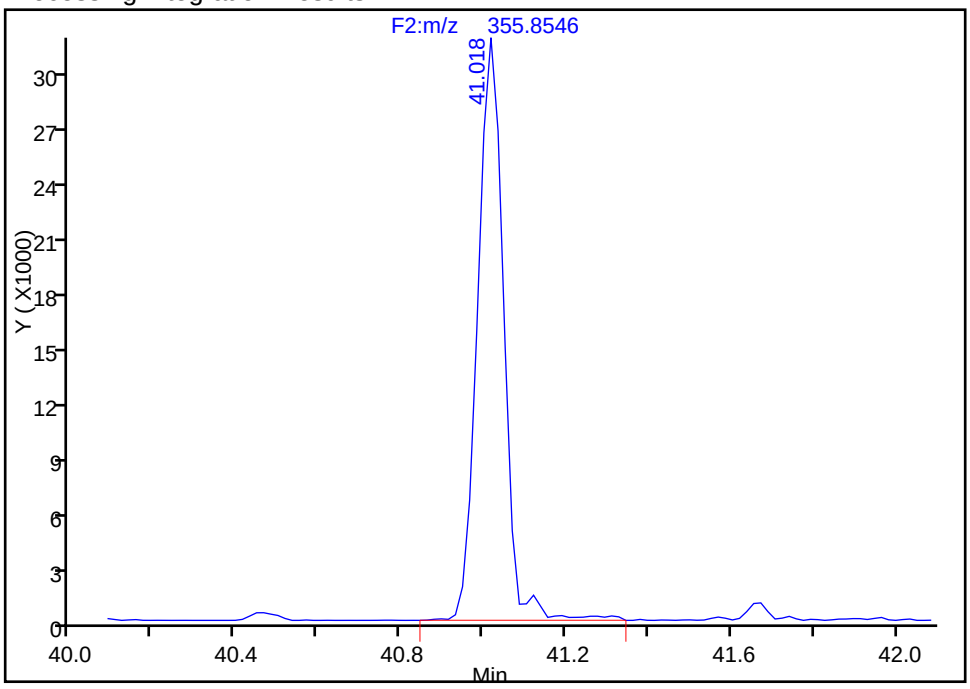
Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d
Injection Date: 16-May-2014 14:26:00 Instrument ID: D2A
Lims ID: IC L1
Client ID:
Operator ID: DavidsonM ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL
Column: Detector F2(34.39 :42.21 )

## 1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

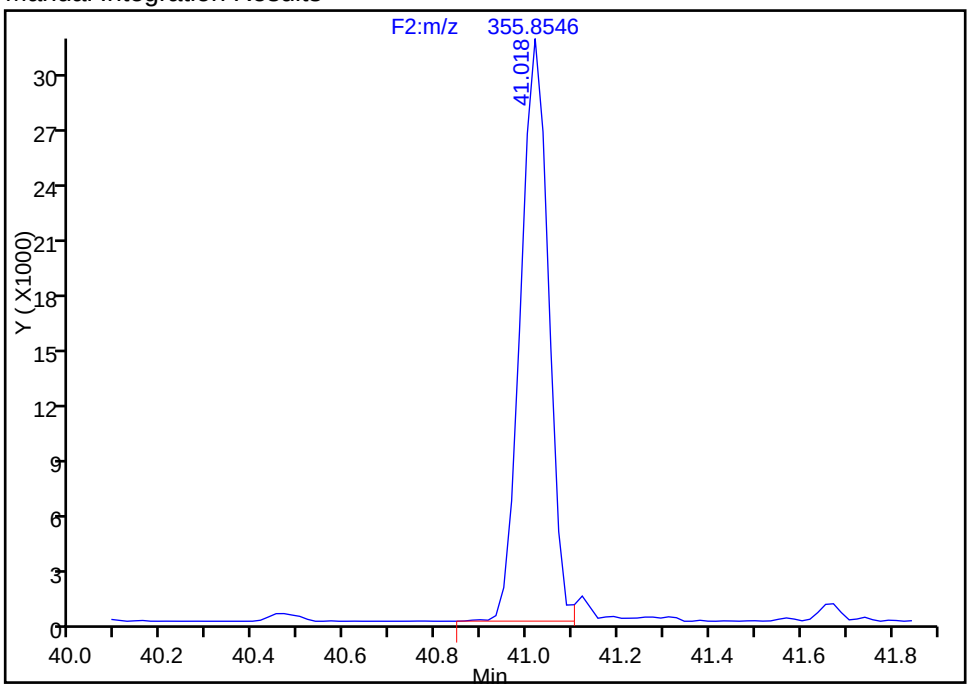
Processing Integration Results

RT: 41.02
Area: 140642
Amount: 2.700260
Amount Units: pg/ul




Manual Integration Results

RT: 41.02
Area: 135749
Amount: 2.652806
Amount Units: pg/ul




Reviewer: davidsonm, 11-Jan-2017 16:11:15
Audit Action: Split an Integrated Peak Audit Reason: Shouldering

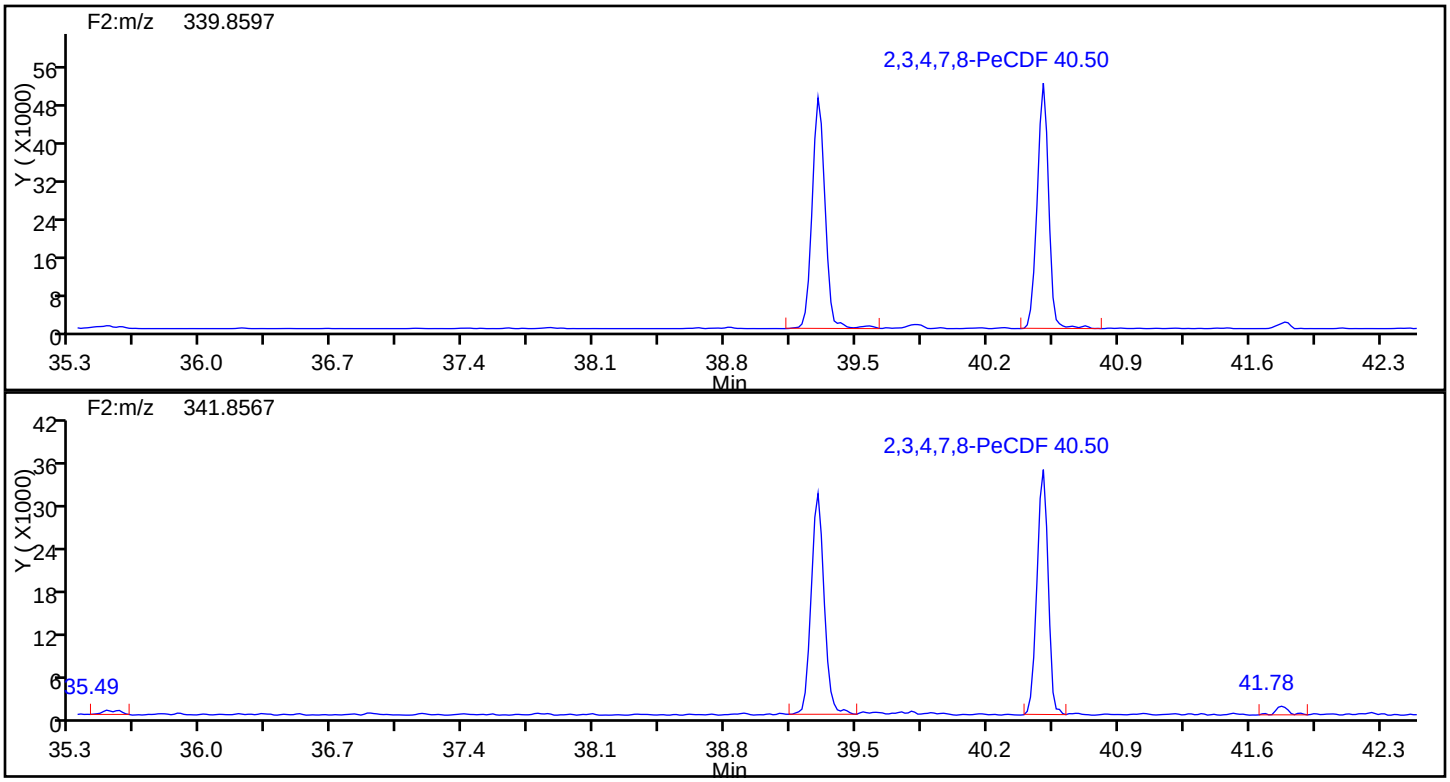
Report Date: 12-Jan-2017 08:09:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

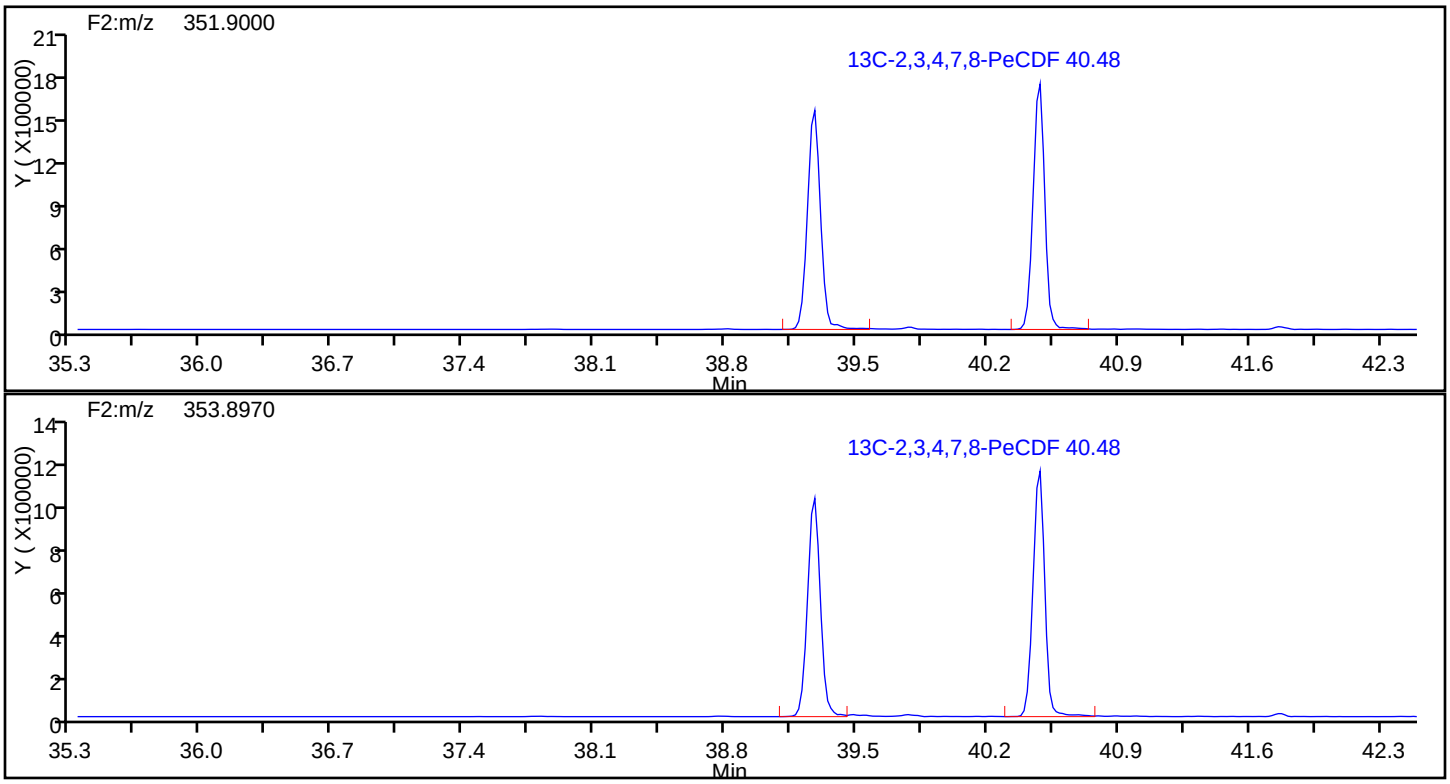
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| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

PeCDF




PeCDF Standards



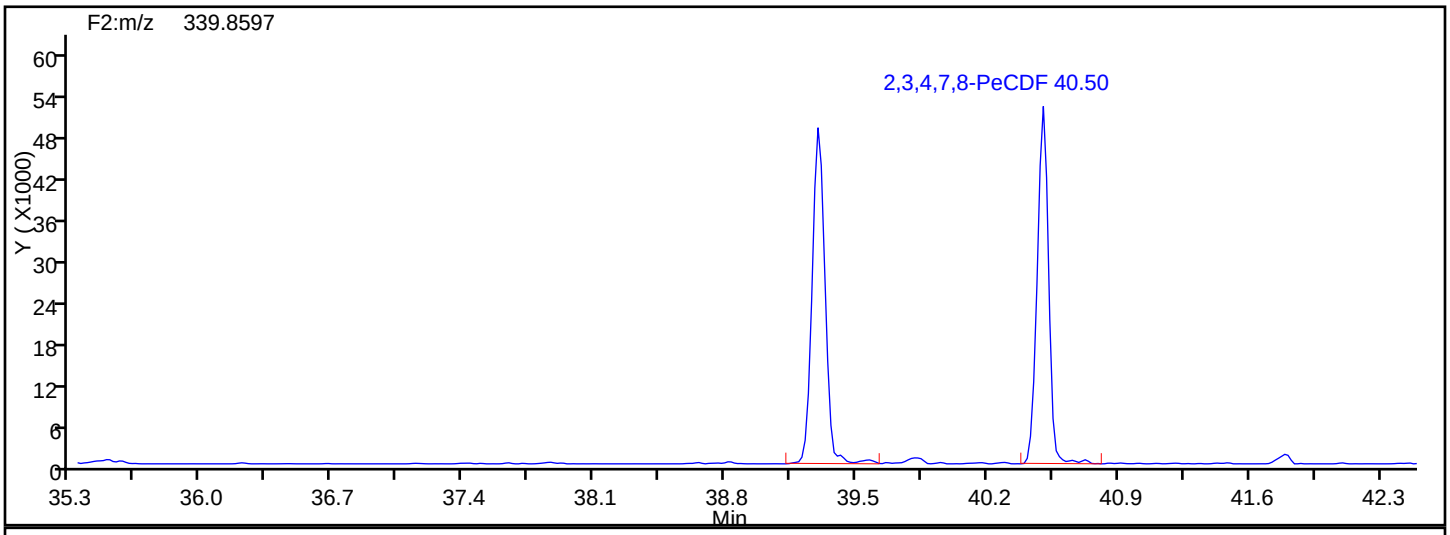
Report Date: 12-Jan-2017 08:09:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

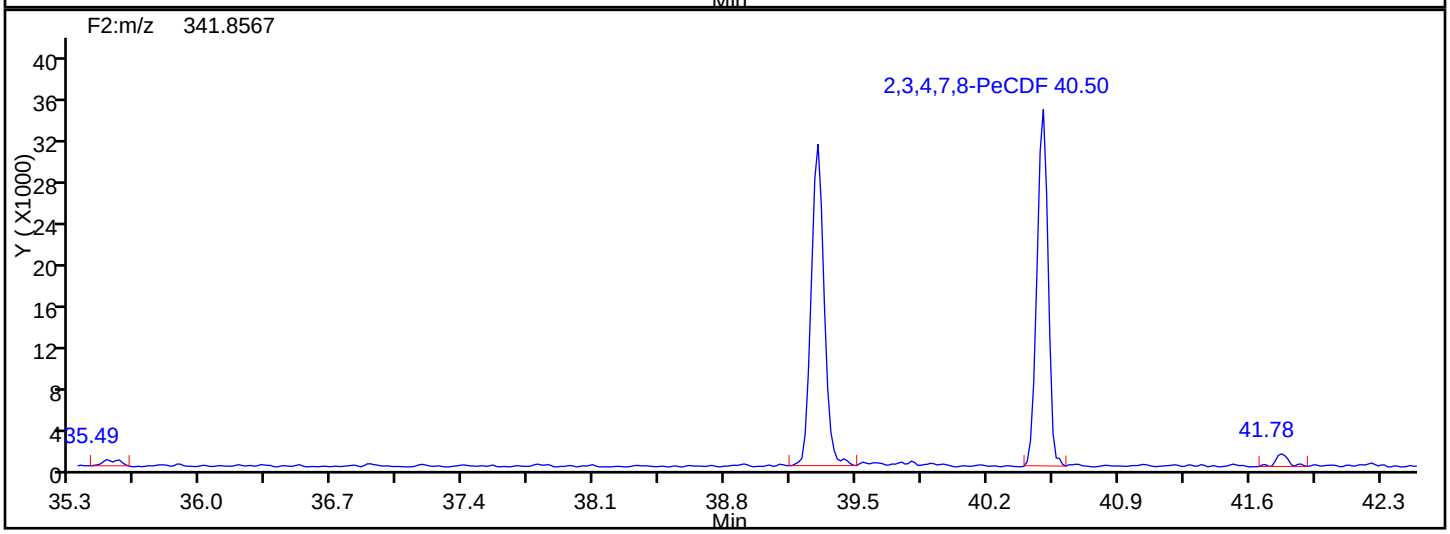
TestAmerica Knoxville

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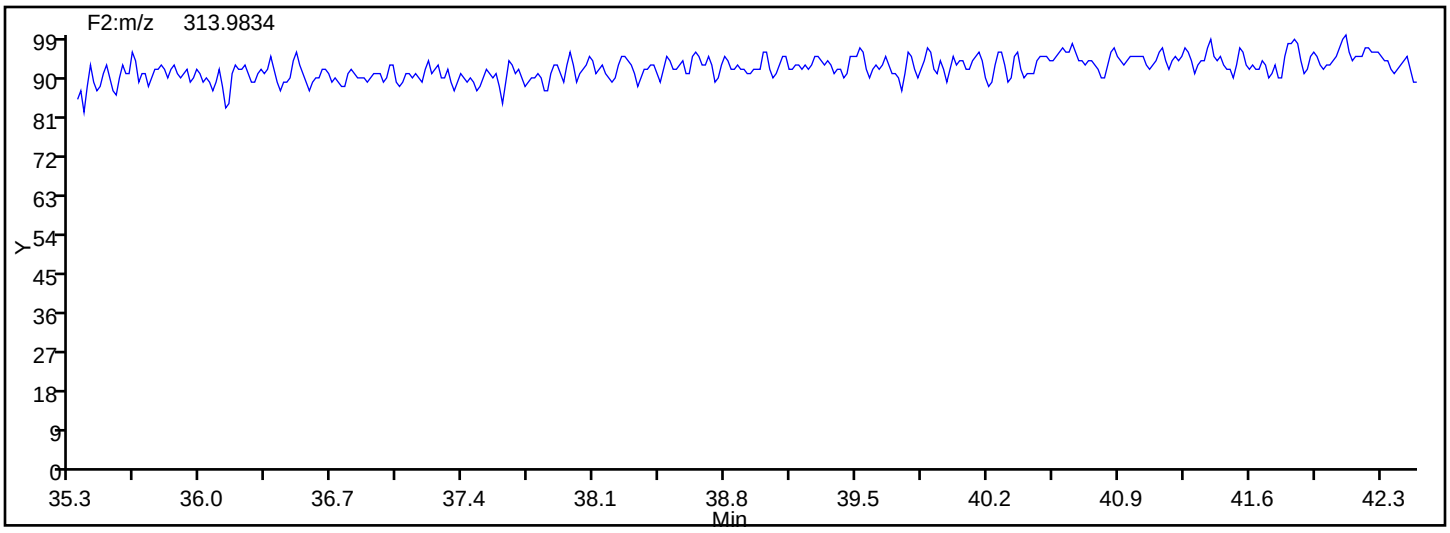
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| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

PeCDF




PeCDF Lock Mass



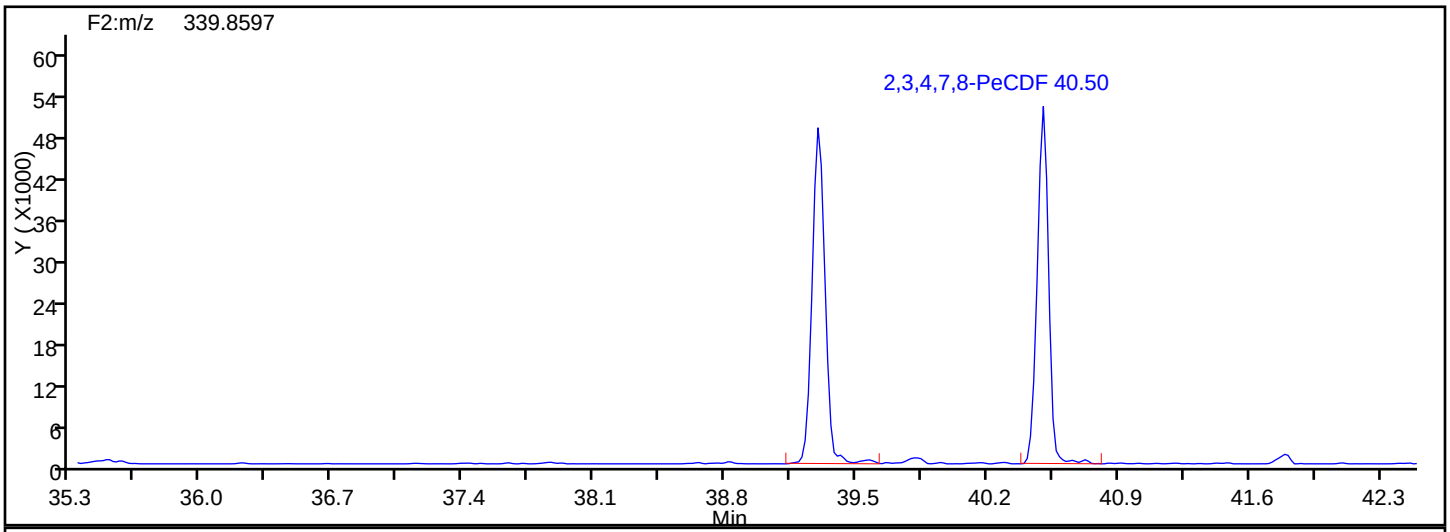
Report Date: 12-Jan-2017 08:09:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

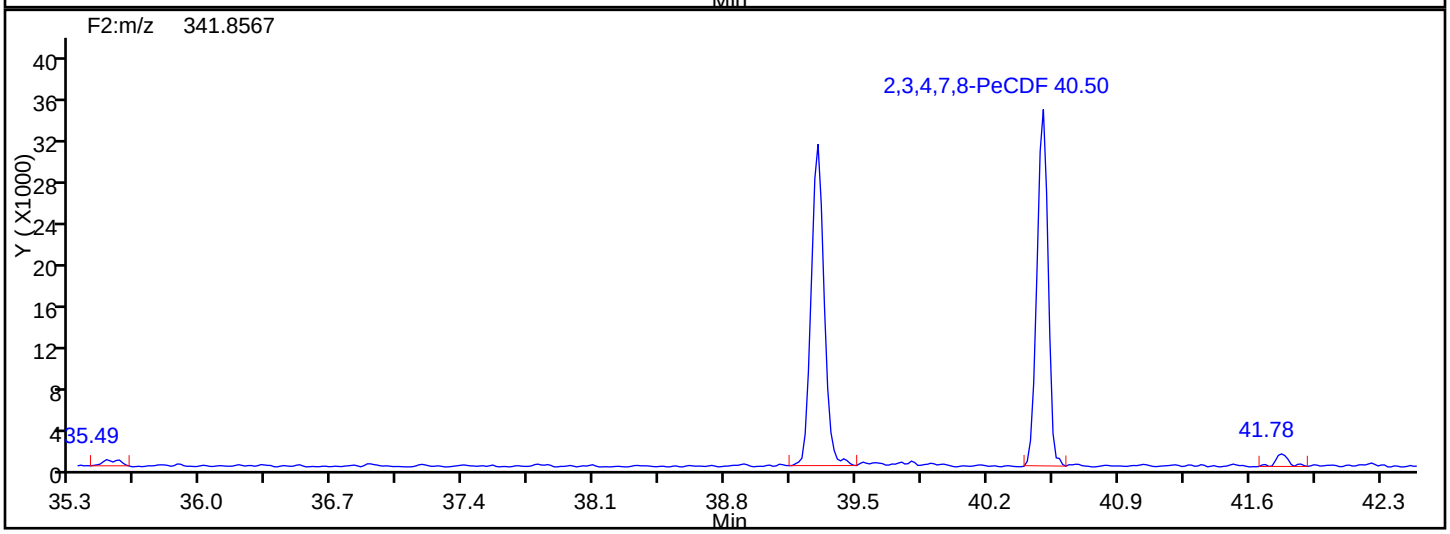
TestAmerica Knoxville

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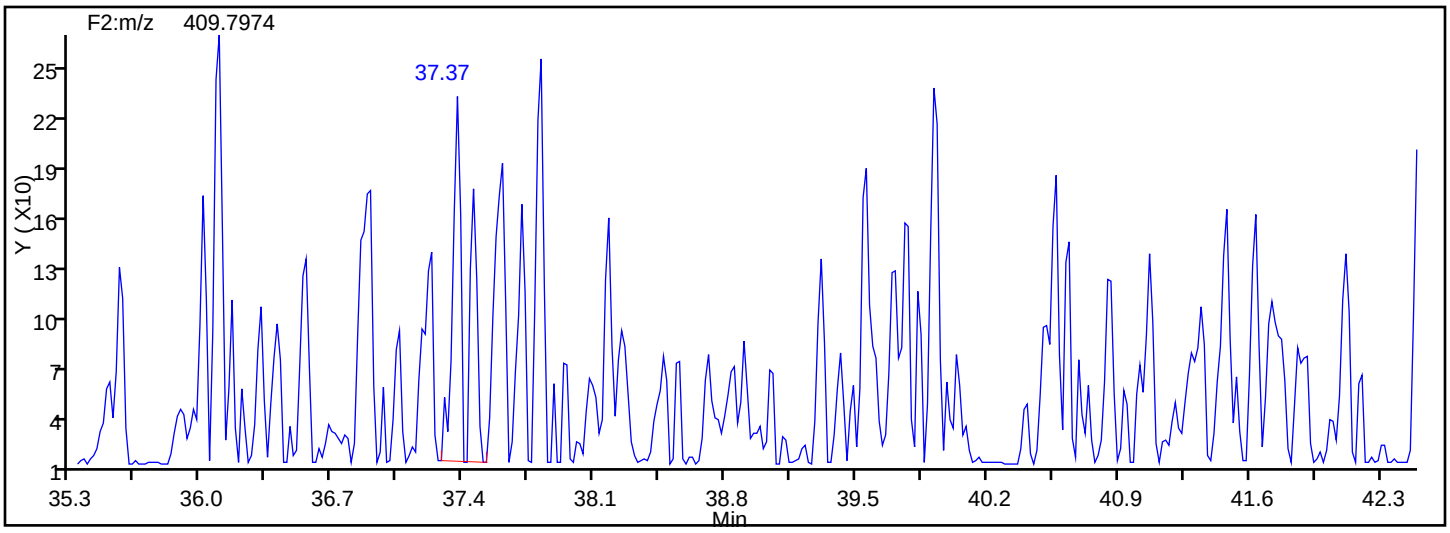
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|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

PeCDF




PeCDF Interference Mass



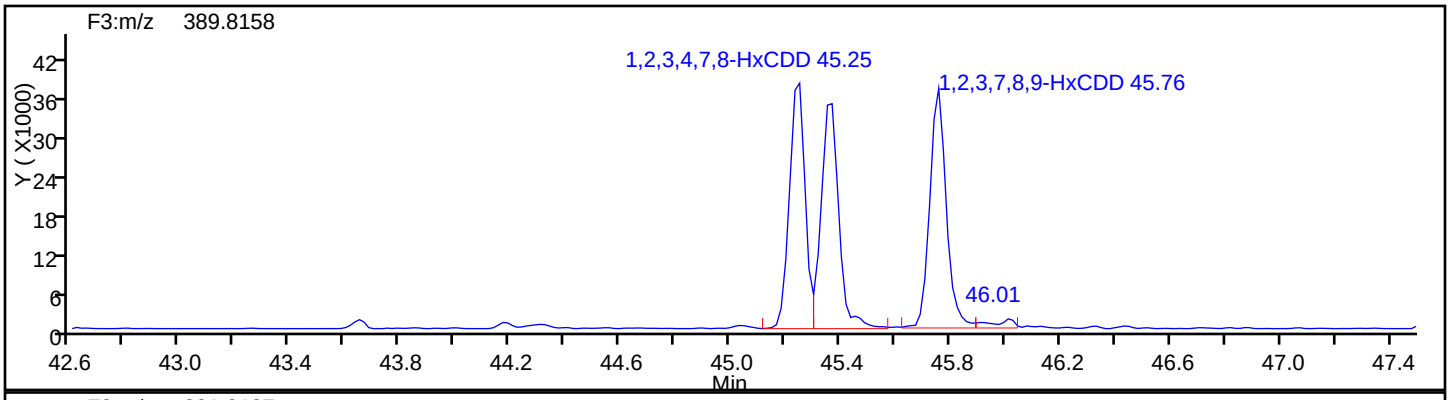
Report Date: 12-Jan-2017 08:09:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

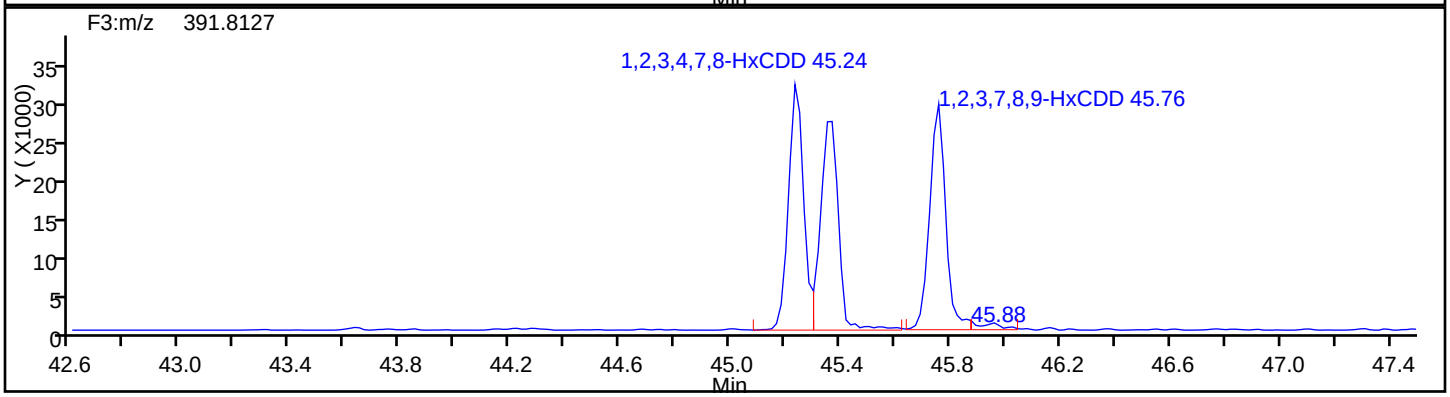
TestAmerica Knoxville

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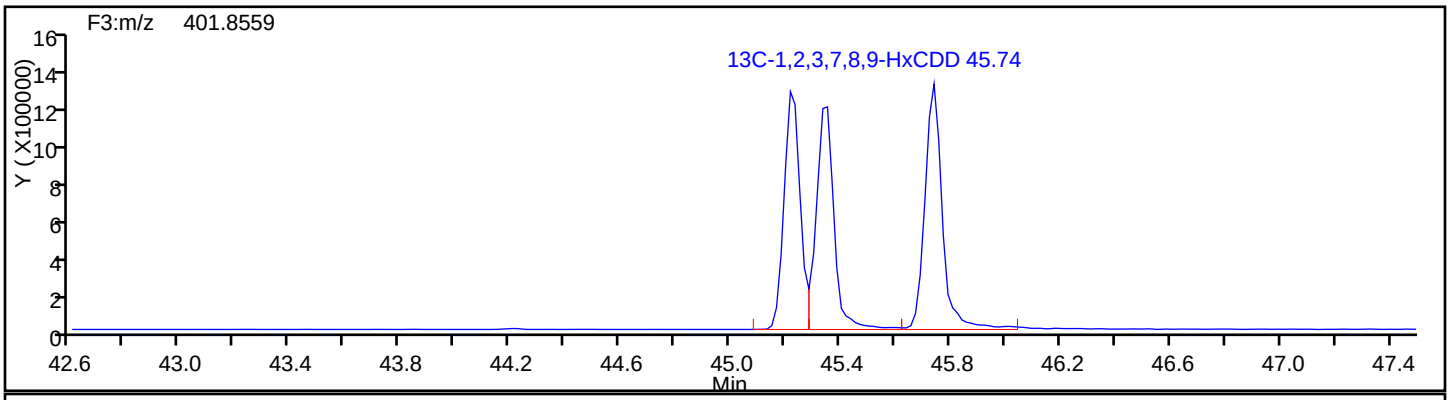
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| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

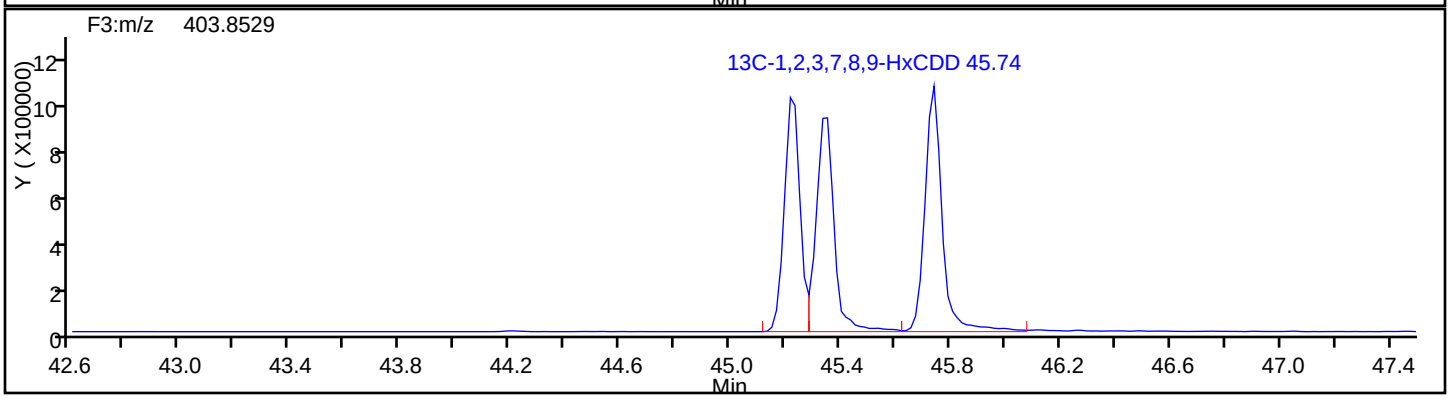
HxCDD




HxCDD Standards



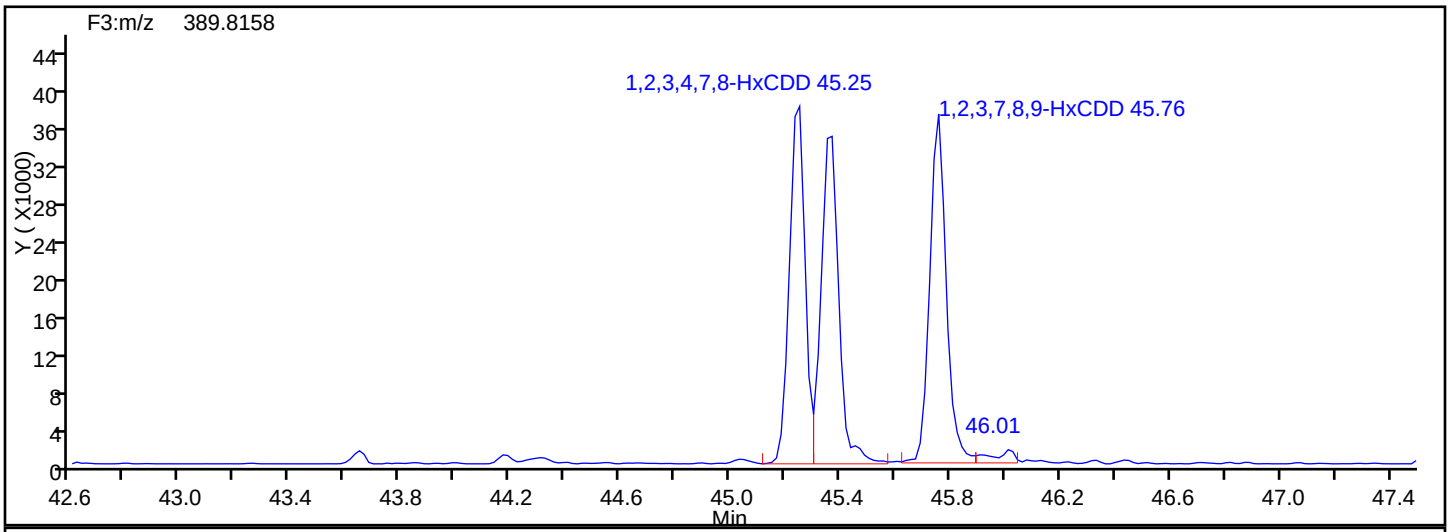
Report Date: 12-Jan-2017 08:09:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

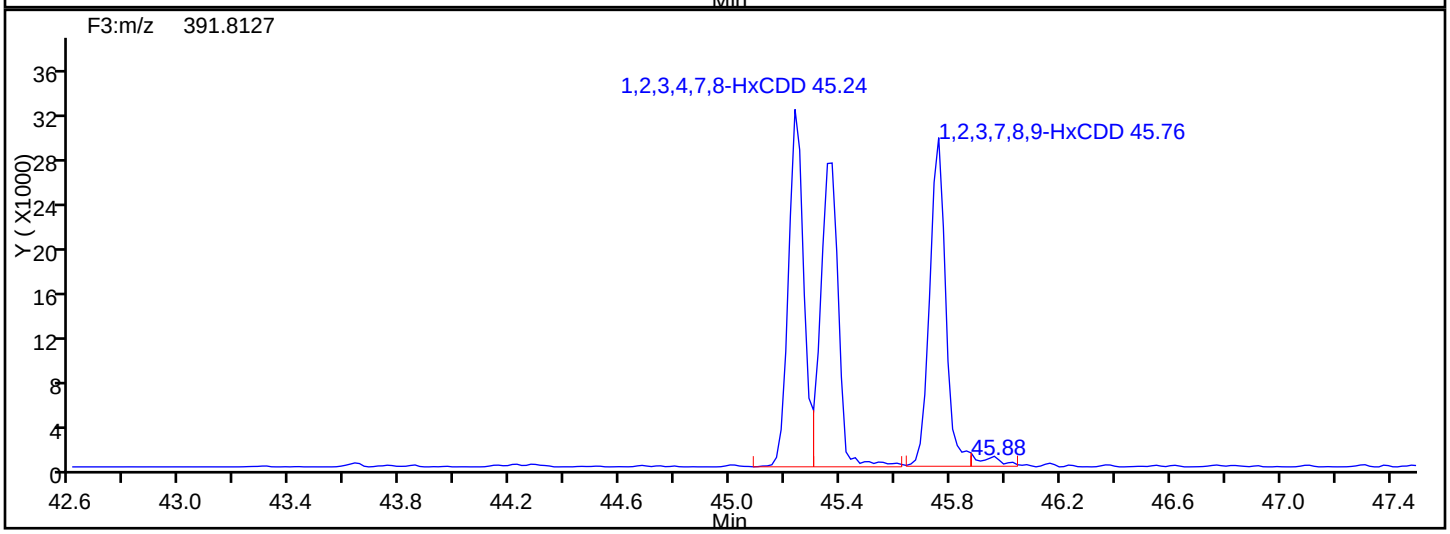
TestAmerica Knoxville

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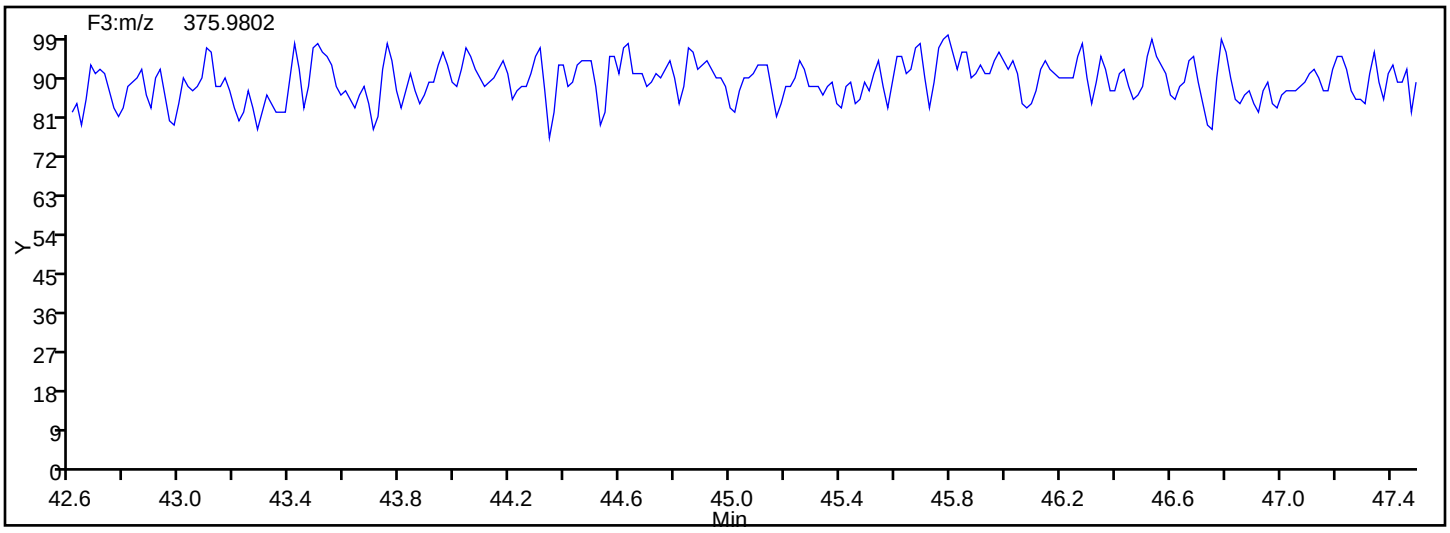
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|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

HxCDD




HxCDD Lock Mass



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

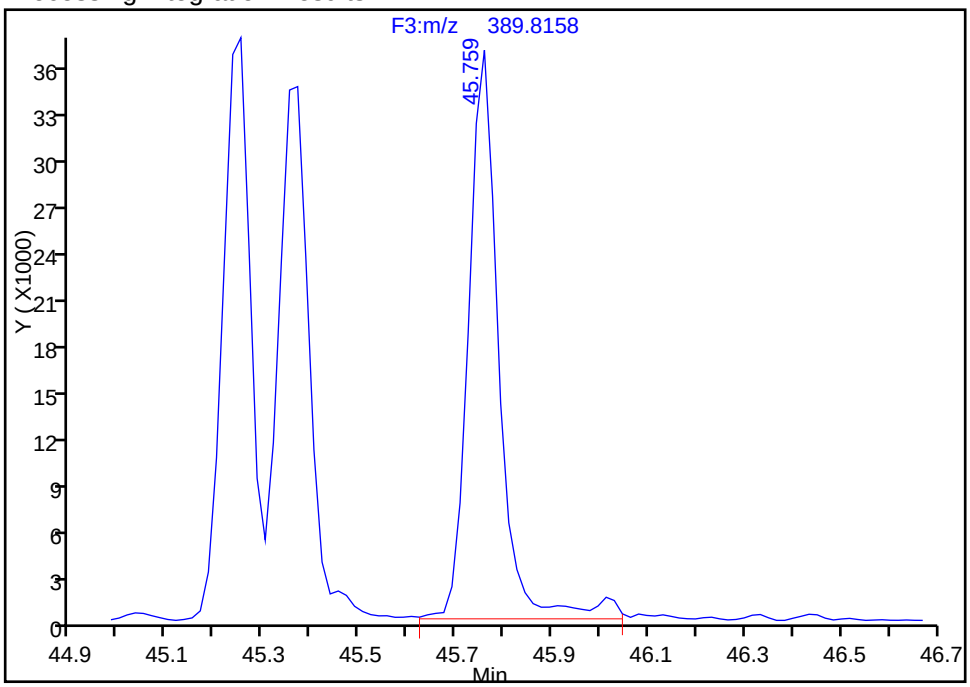
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Injection Date: 16-May-2014 14:26:00 Instrument ID: D2A
Lims ID: IC L1
Client ID:
Operator ID: DavidsonM ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL
Column: Detector F3(42.31 :47.08 )

## 1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

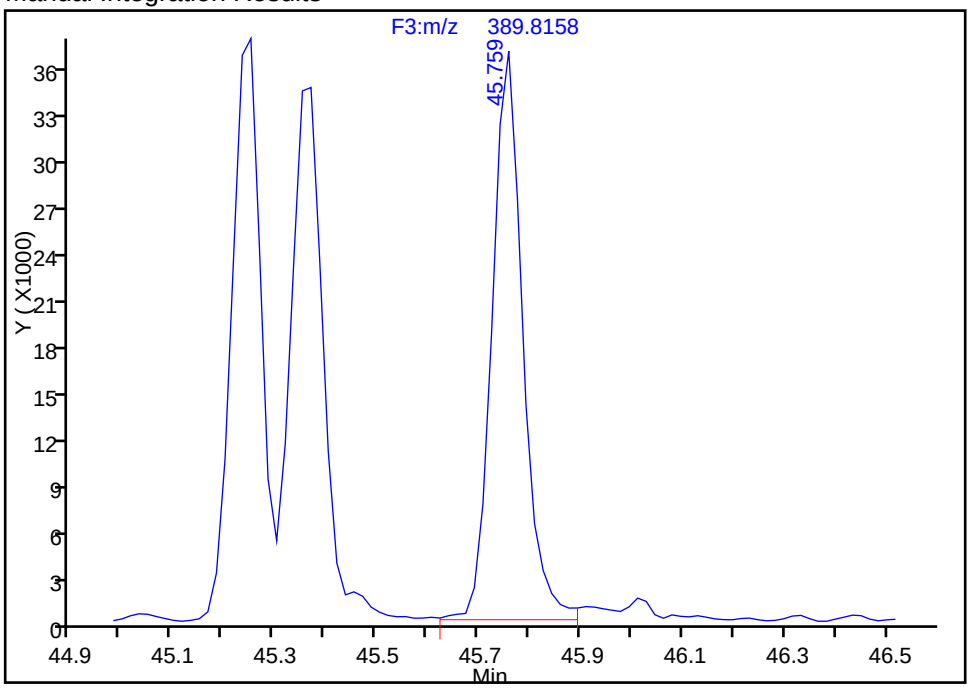
Processing Integration Results

RT: 45.76
Area: 161258
Amount: 2.563620
Amount Units: pg/ul




Manual Integration Results

RT: 45.76
Area: 153733
Amount: 2.471216
Amount Units: pg/ul




Reviewer: davidsonm, 11-Jan-2017 16:11:15
Audit Action: Split an Integrated Peak Audit Reason: Shouldering

Manual Integration/User Assign Peak Report

TestAmerica Knoxville

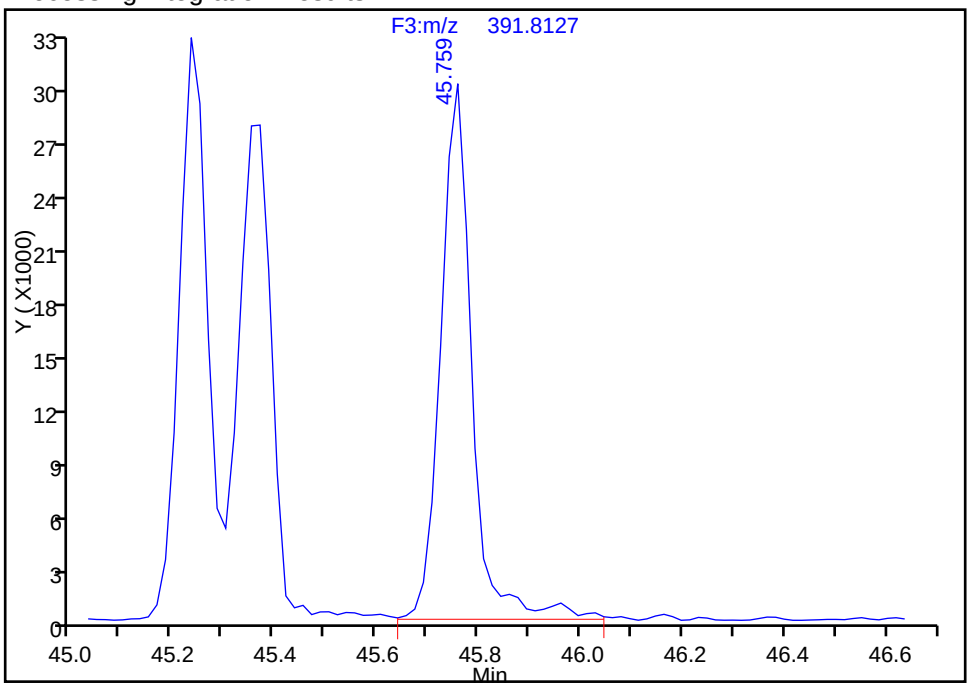
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Injection Date: 16-May-2014 14:26:00 Instrument ID: D2A
Lims ID: IC L1
Client ID:
Operator ID: DavidsonM ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL
Column: Detector F3(42.31 :47.08 )

## 1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

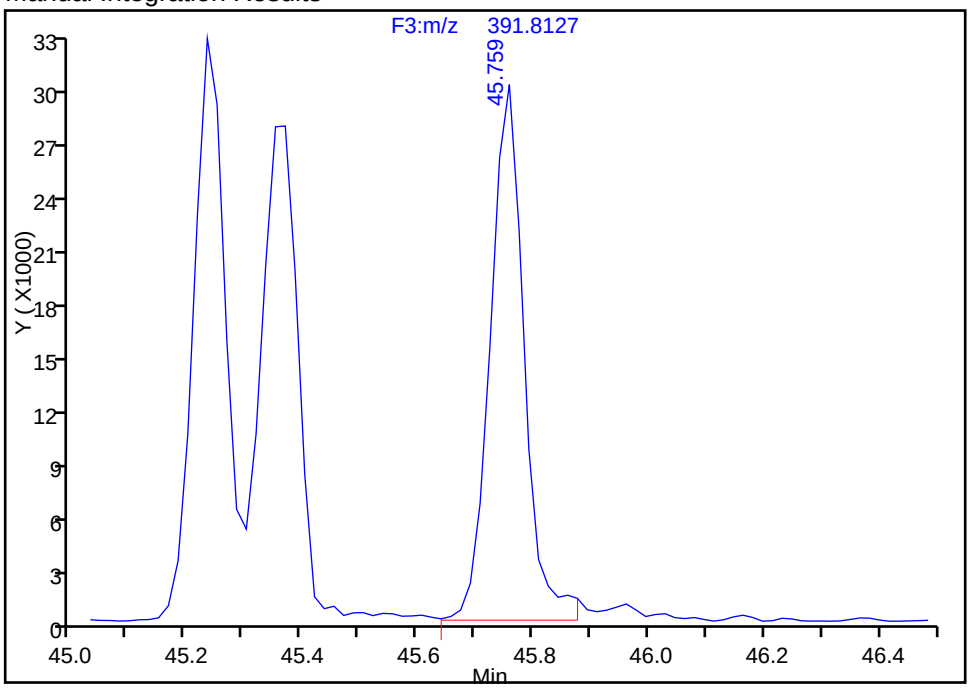
Processing Integration Results

RT: 45.76
Area: 125125
Amount: 2.563620
Amount Units: pg/ul




Manual Integration Results

RT: 45.76
Area: 119784
Amount: 2.471216
Amount Units: pg/ul




Reviewer: davidsonm, 11-Jan-2017 16:11:15
Audit Action: Split an Integrated Peak Audit Reason: Shouldering

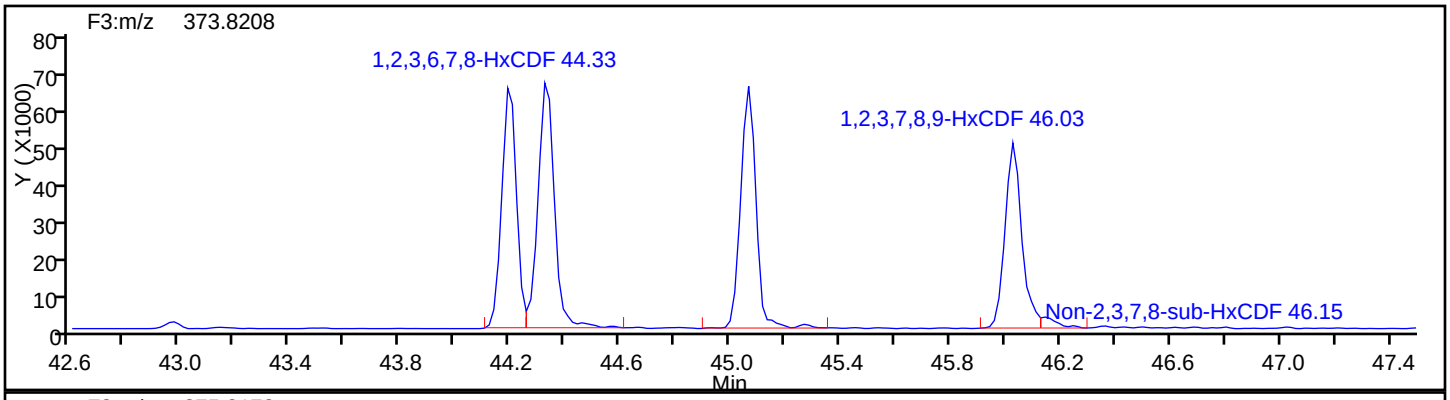
Report Date: 12-Jan-2017 08:09:14 Chrom Revision: 2.2 10-Jan-2017 11:26:10

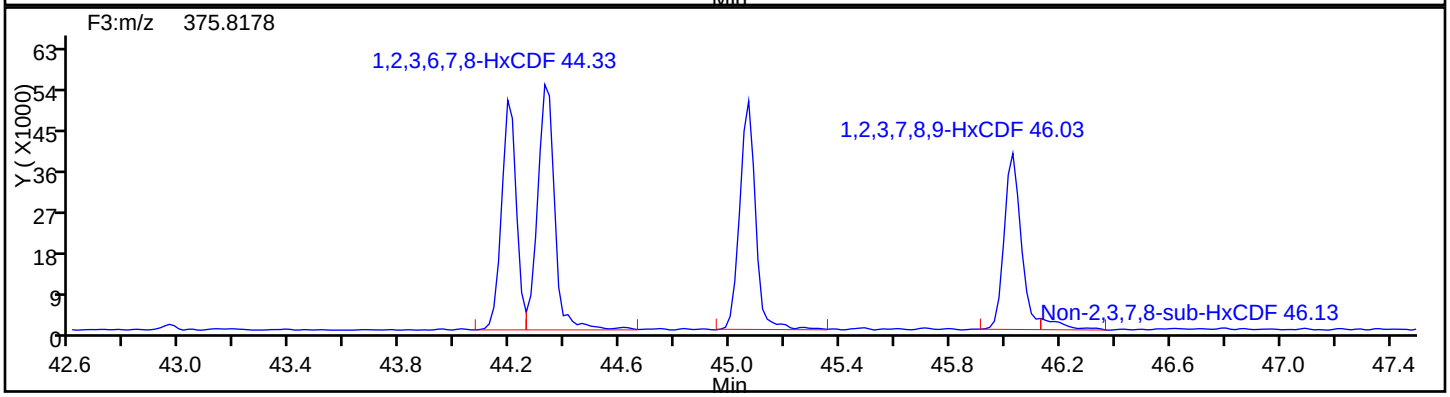
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

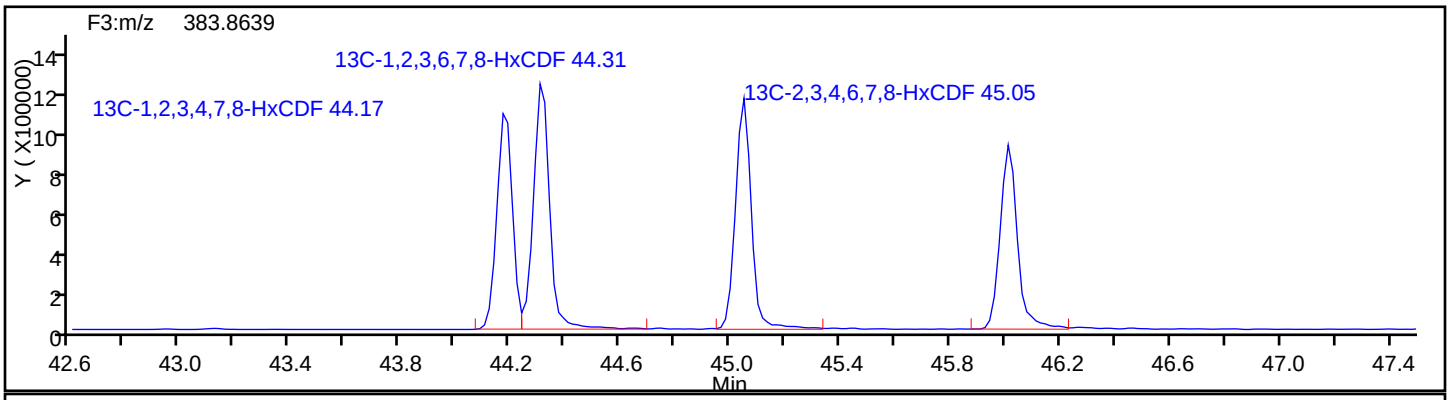
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

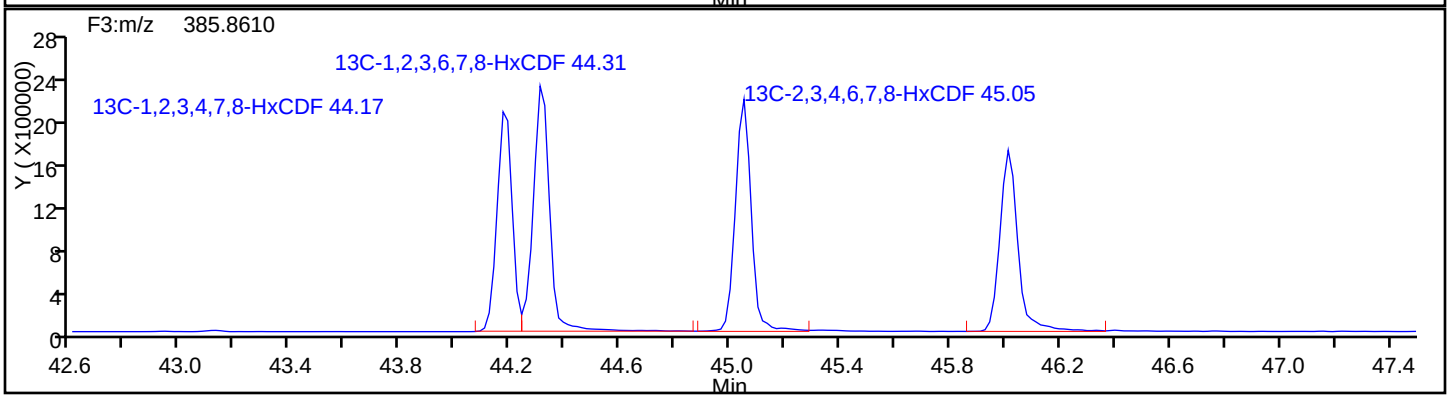
HxCDF




HxCDF Standards



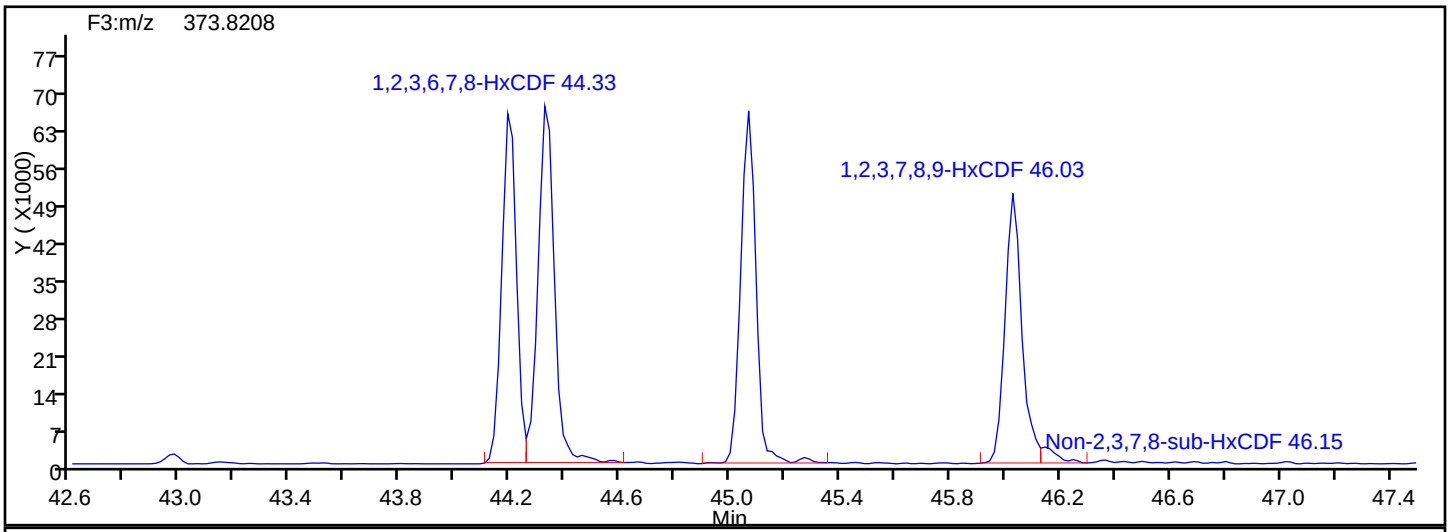
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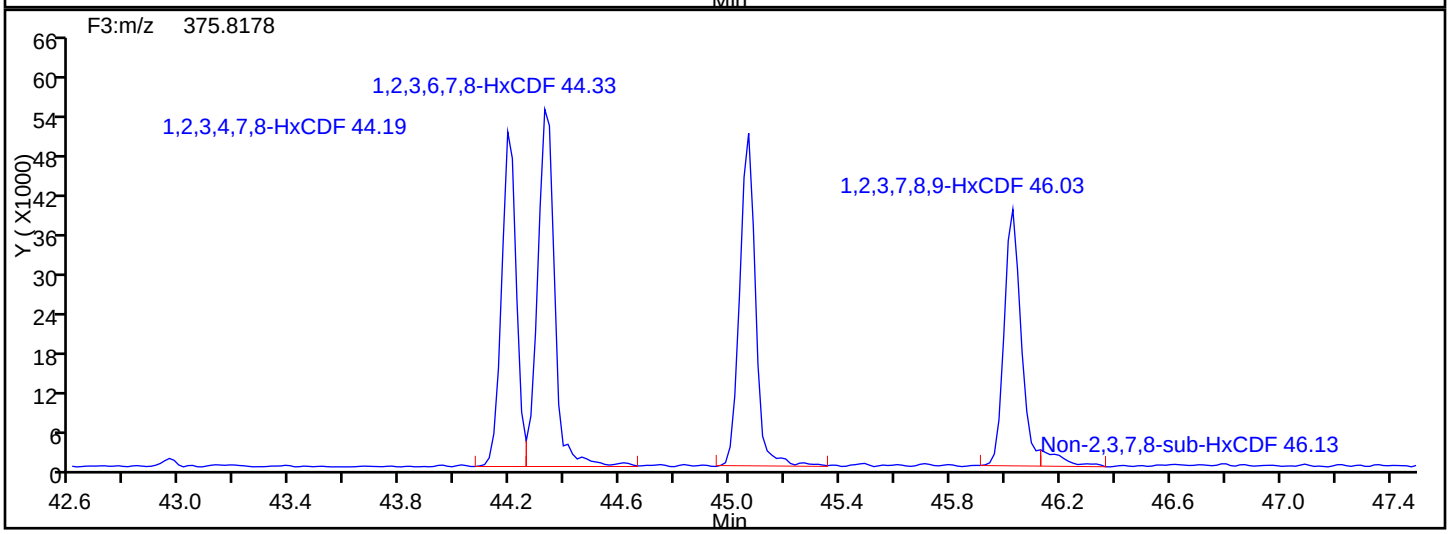
TestAmerica Knoxville

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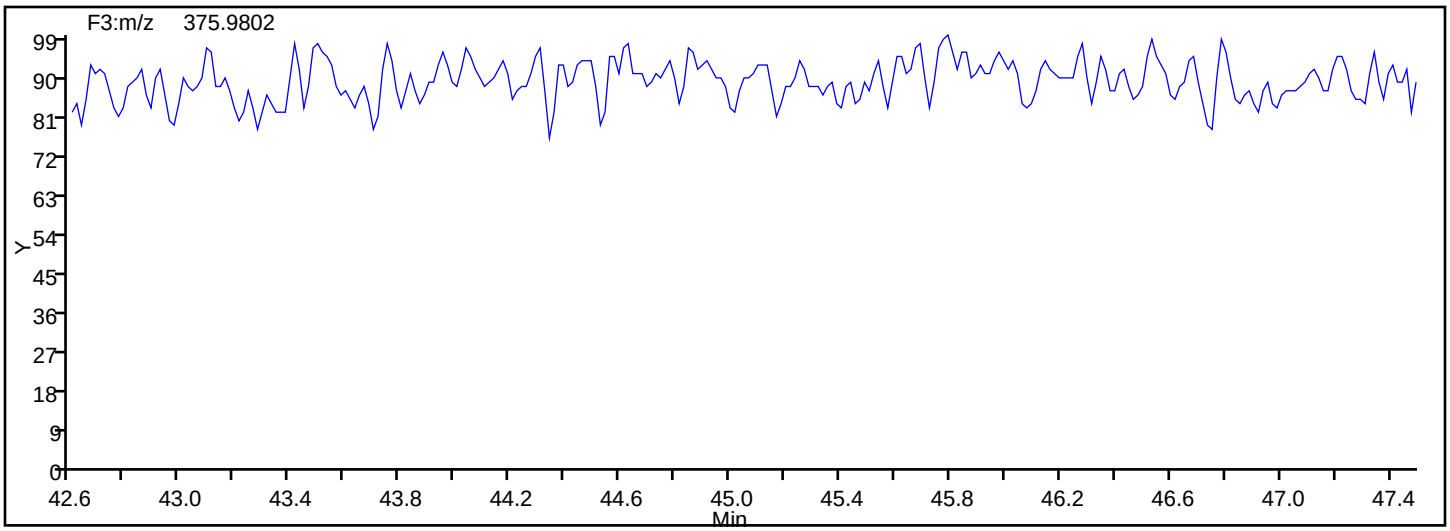
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| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

HxCDF




HxCDF Lock Mass



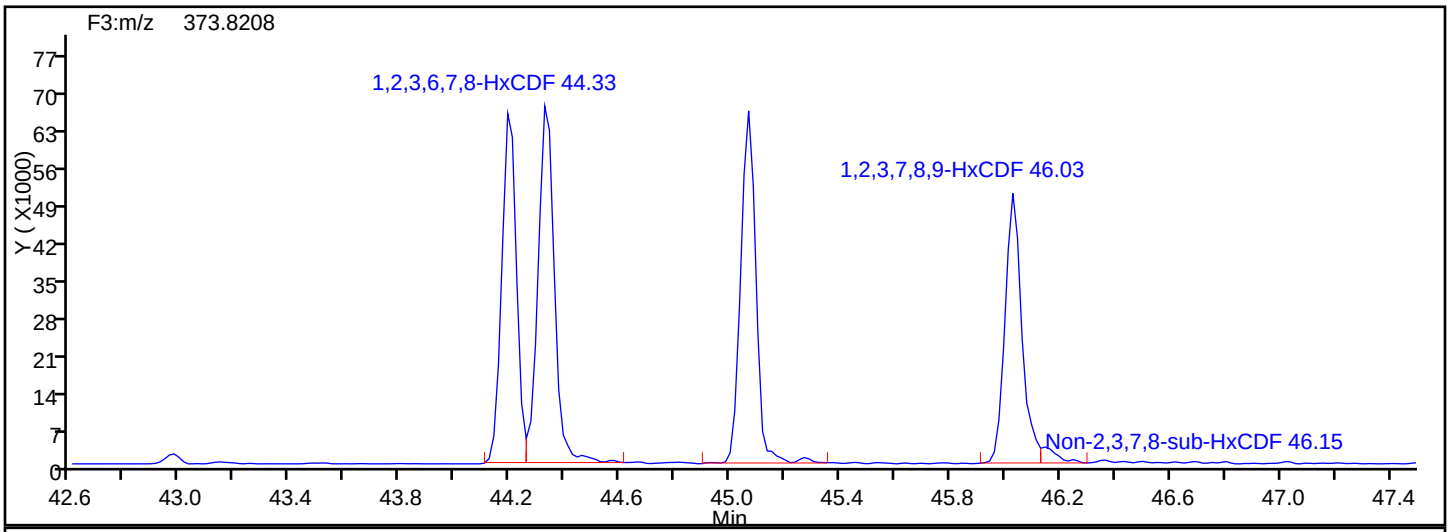
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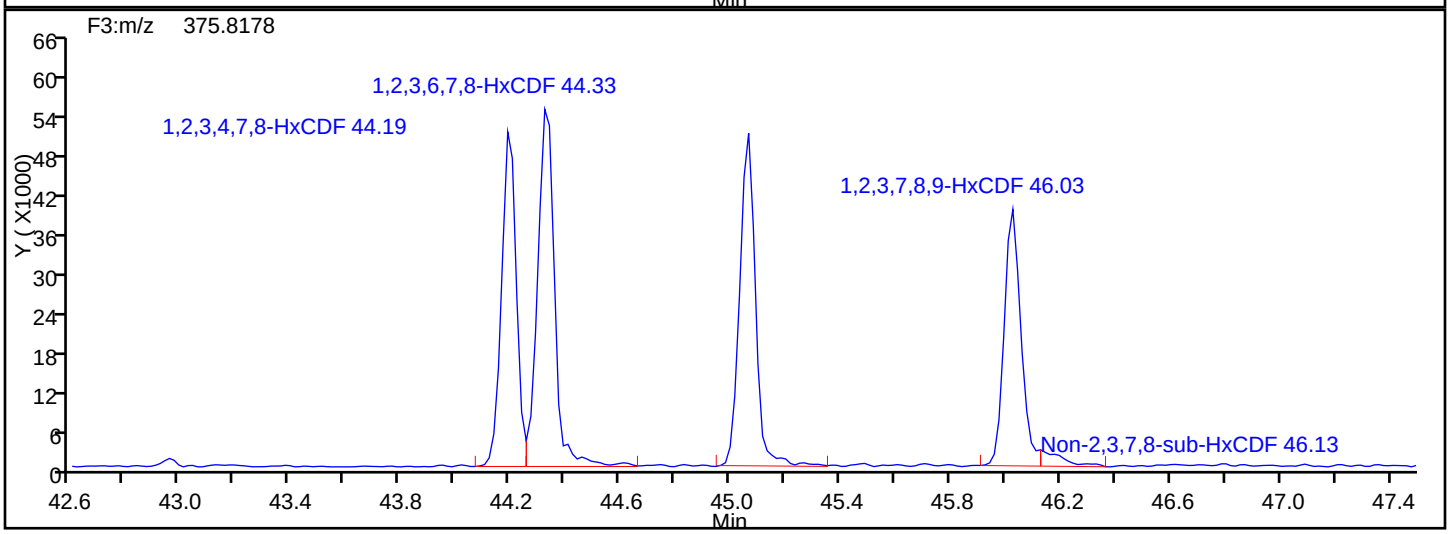
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

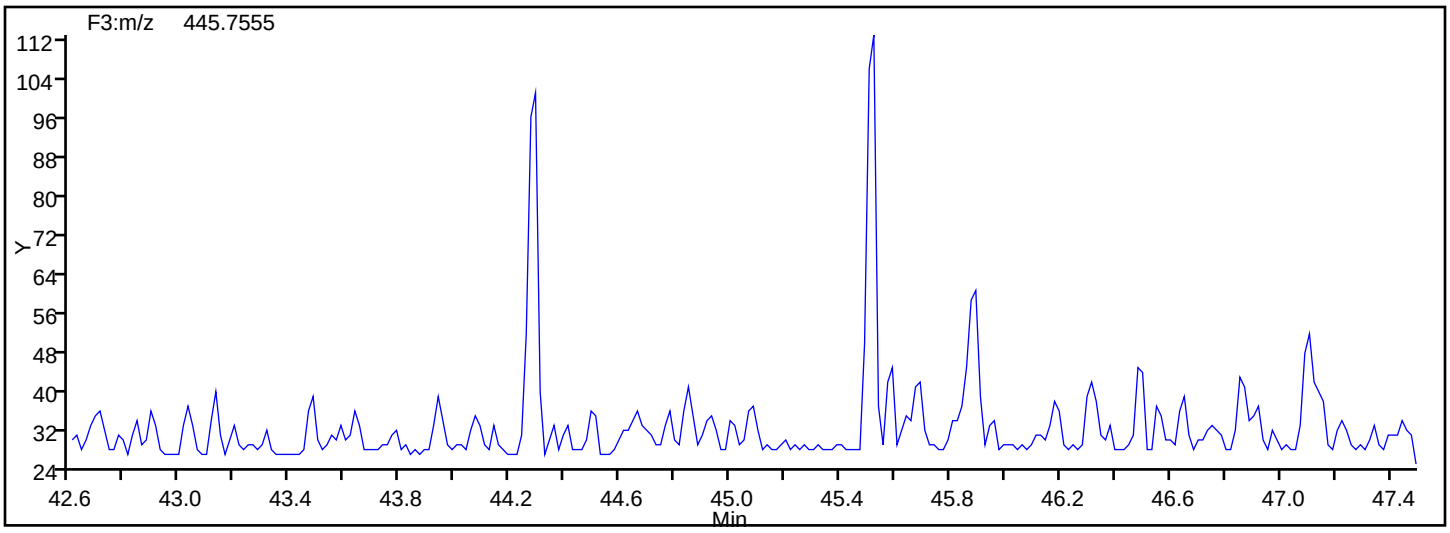
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|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

HxCDF




HxCDF Interference Mass



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

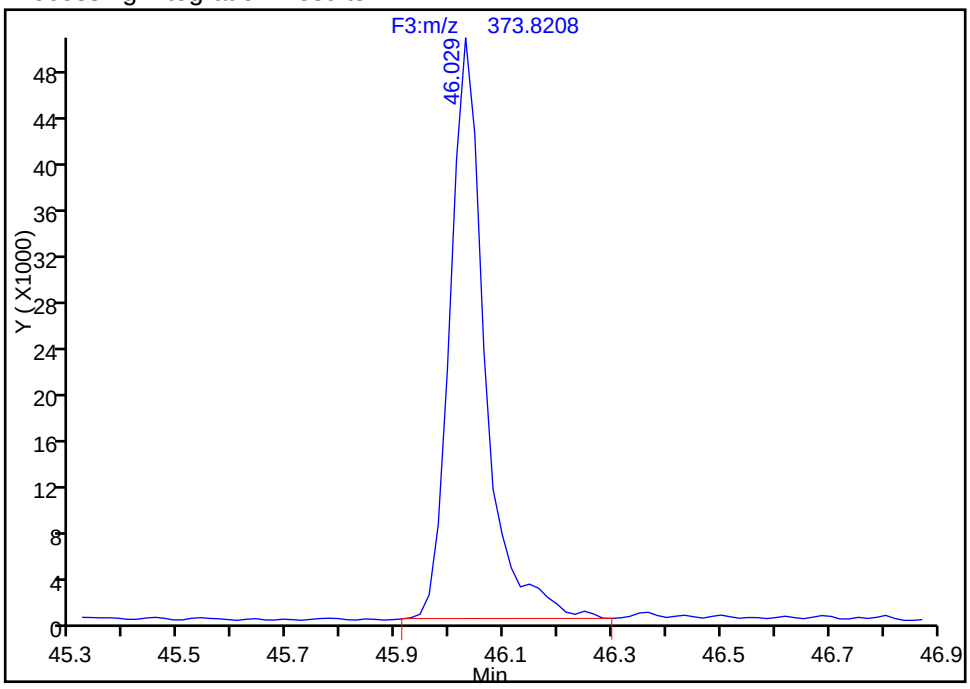
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Injection Date: 16-May-2014 14:26:00 Instrument ID: D2A
Lims ID: IC L1
Client ID:
Operator ID: DavidsonM ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL
Column: Detector F3(42.31 :47.08 )

## 1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

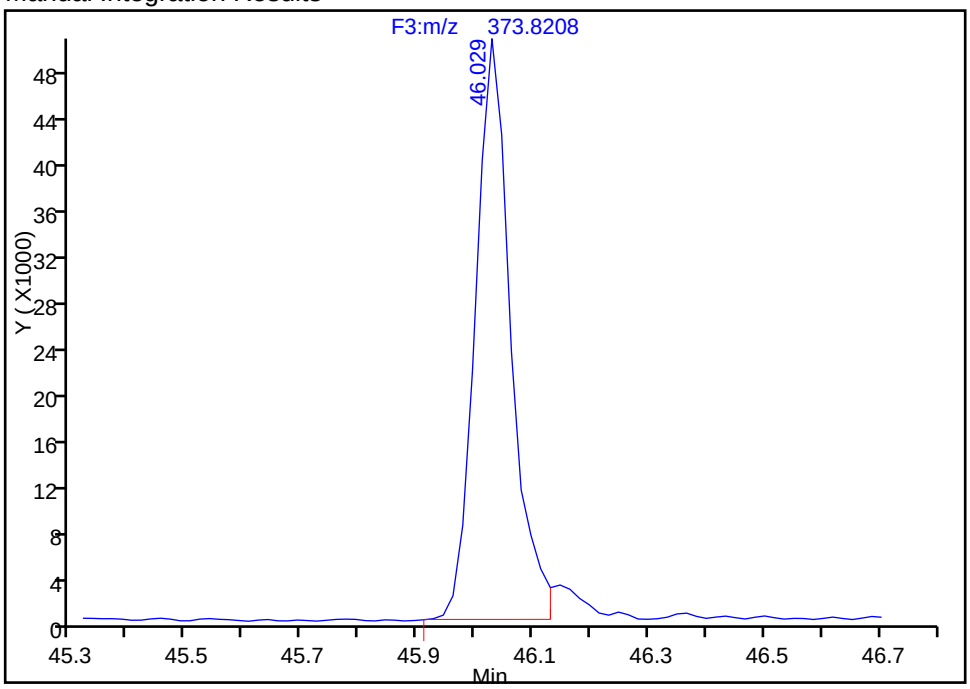
Processing Integration Results

RT: 46.03
Area: 226236
Amount: 2.690381
Amount Units: pg/ul




Manual Integration Results

RT: 46.03
Area: 214140
Amount: 2.556453
Amount Units: pg/ul




Reviewer: davidsonm, 11-Jan-2017 16:11:15
Audit Action: Split an Integrated Peak Audit Reason: Shouldering

Manual Integration/User Assign Peak Report

TestAmerica Knoxville

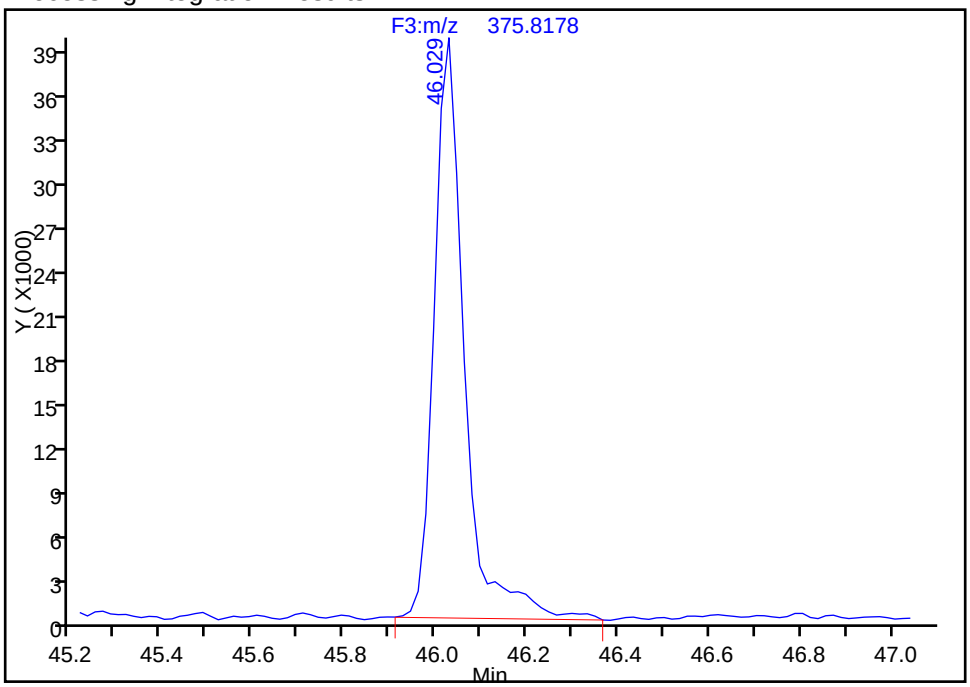
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|---|---|---|---|---|---|
| Data File: | \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d | | | | |
| Injection Date: | 16-May-2014 14:26:00 | Instrument ID: | D2A | | |
| Lims ID: | IC L1 | | | | |
| Client ID: | | | | | |
| Operator ID: | DavidsonM | ALS Bottle#: | 0 | Worklist Smp#: | 2 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL | | |
| Column: | | Detector | F3(42.31 :47.08 ) | | |

## 1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

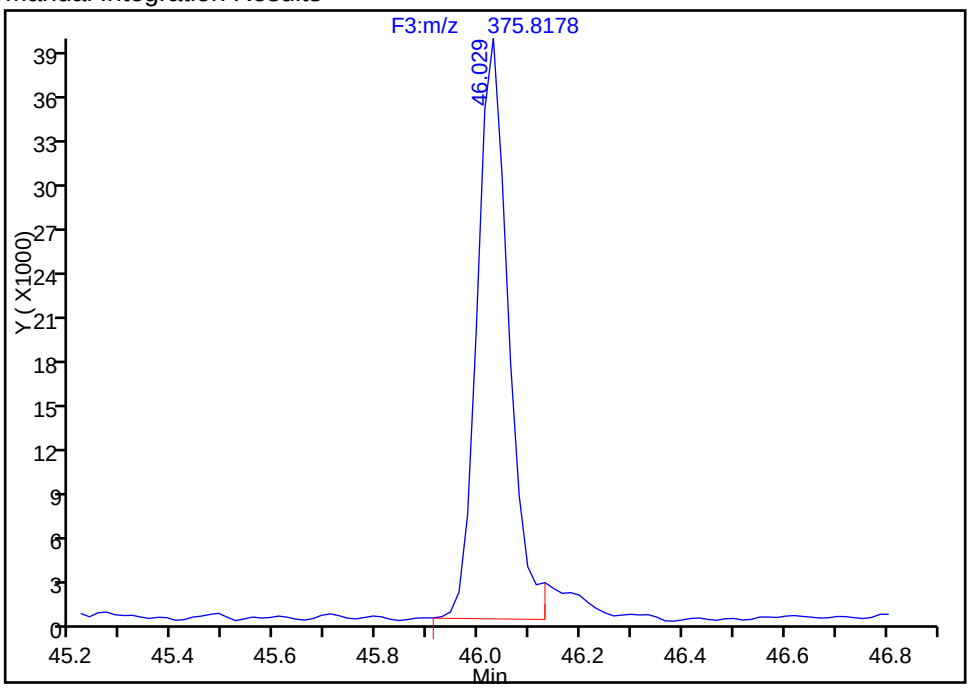
Processing Integration Results

RT: 46.03
Area: 180100
Amount: 2.690381
Amount Units: pg/ul




Manual Integration Results

RT: 46.03
Area: 166768
Amount: 2.556453
Amount Units: pg/ul




Reviewer: davidsonm, 11-Jan-2017 16:11:15

Audit Action: Split an Integrated Peak Audit Reason: Shouldering

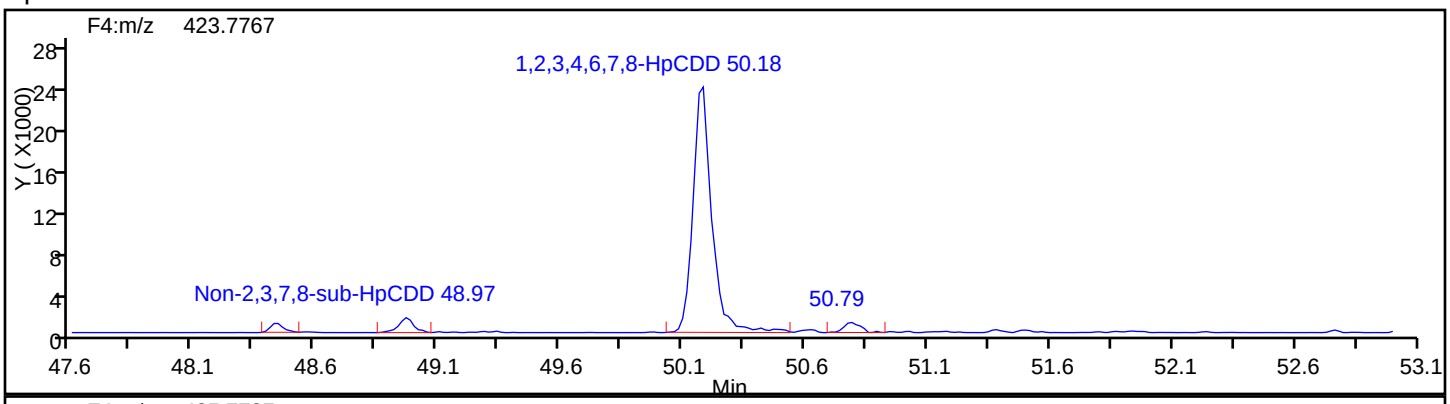
Report Date: 12-Jan-2017 08:09:14 Chrom Revision: 2.2 10-Jan-2017 11:26:10

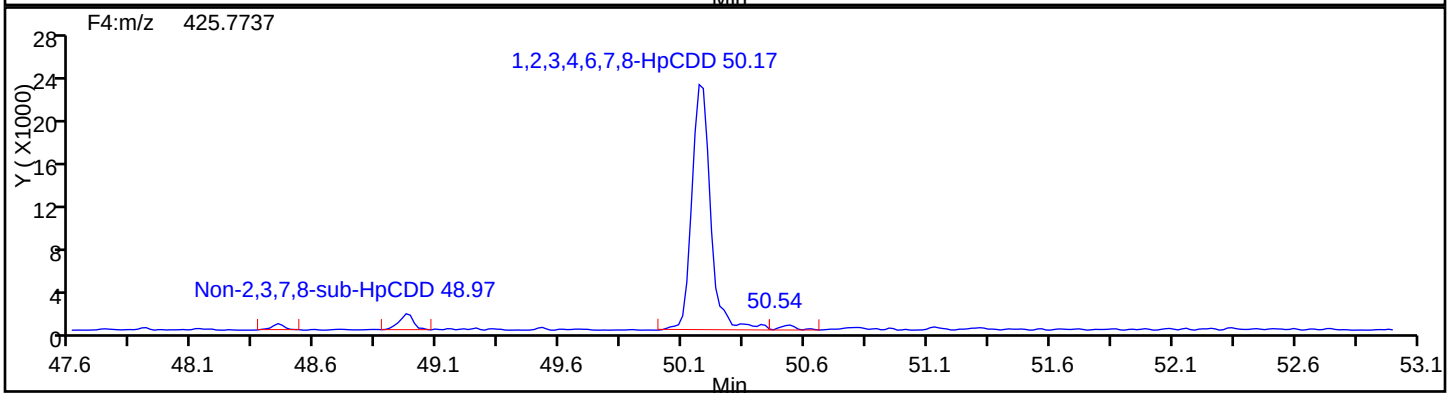
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

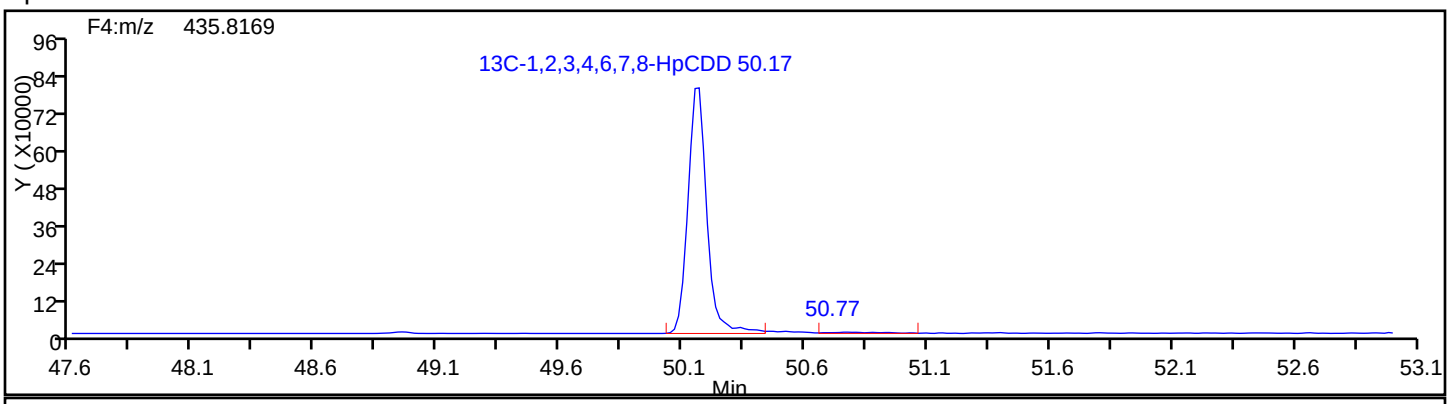
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

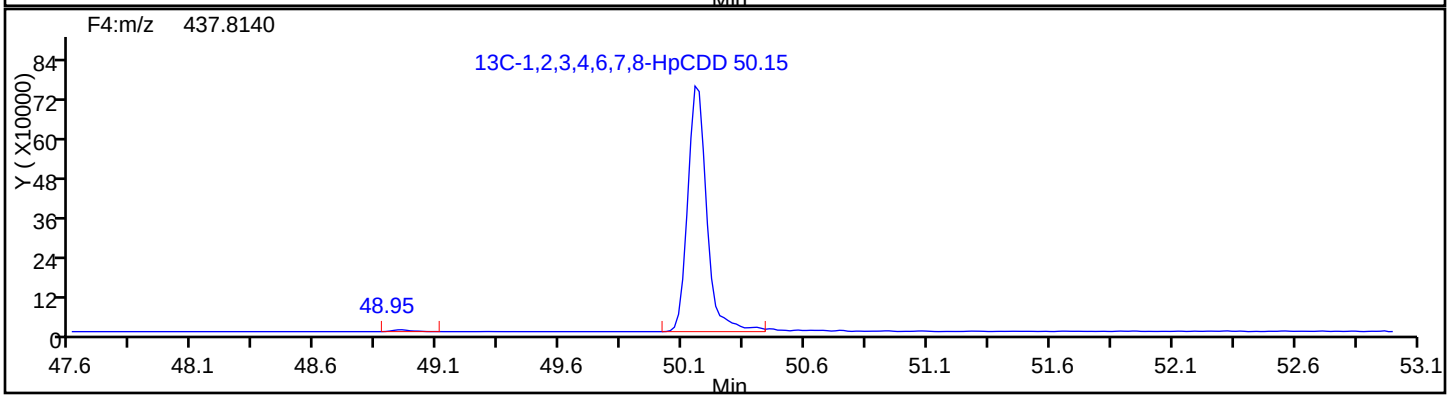
HpCDD




HpCDD Standards



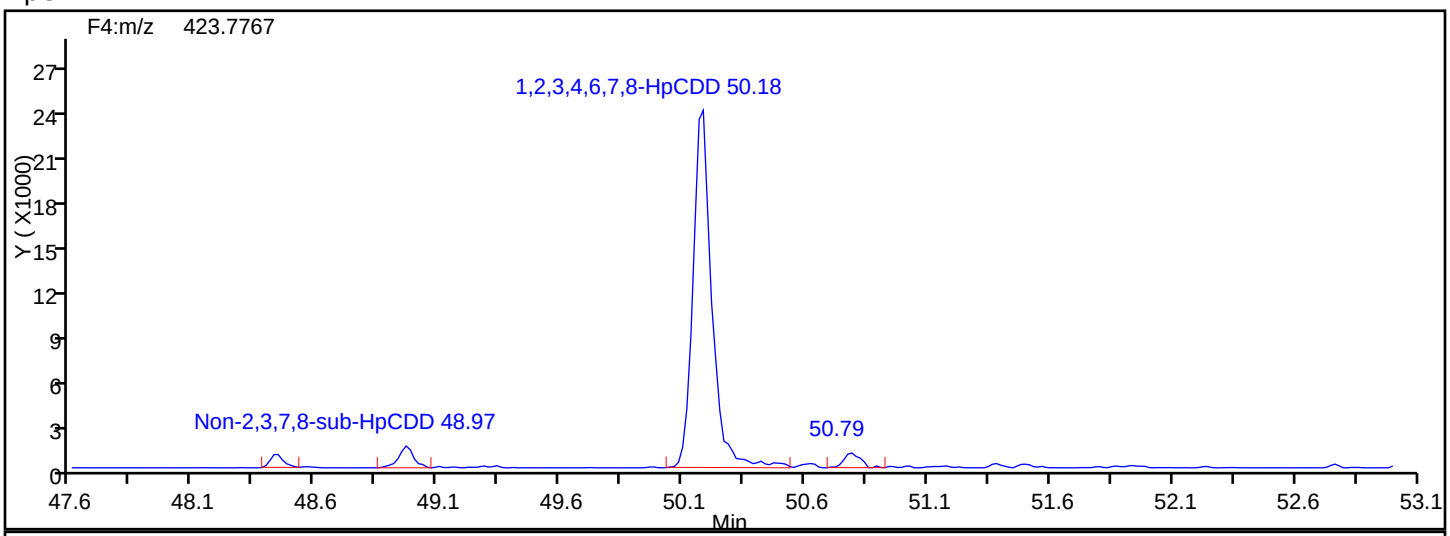
Report Date: 12-Jan-2017 08:09:14 Chrom Revision: 2.2 10-Jan-2017 11:26:10

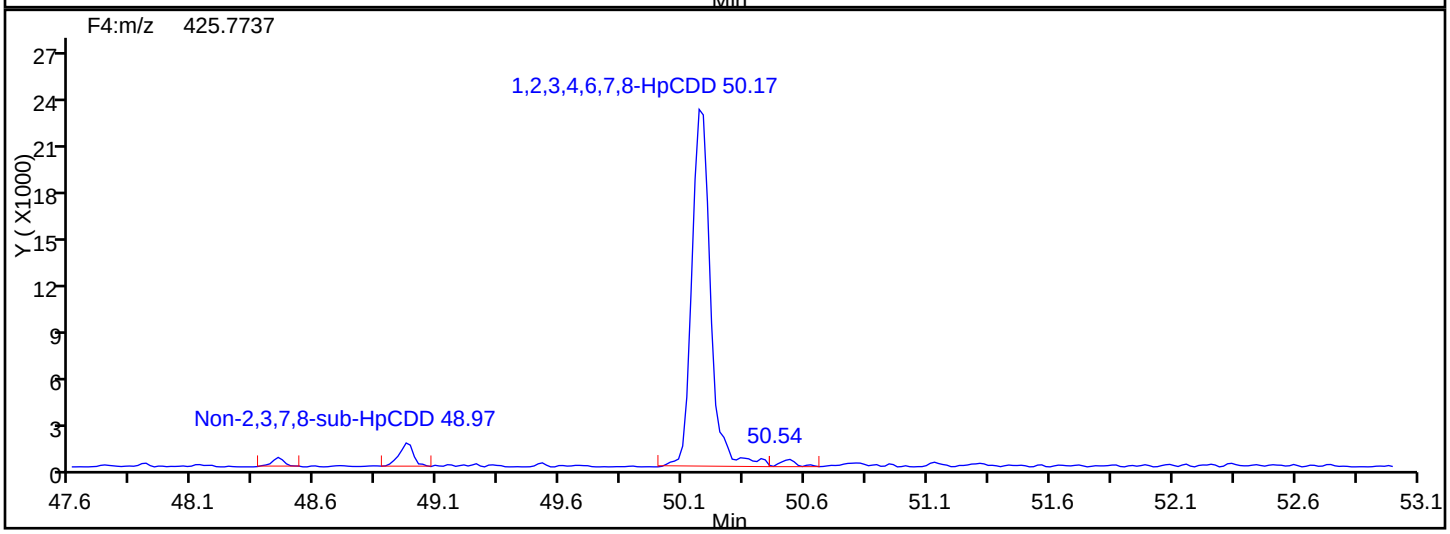
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

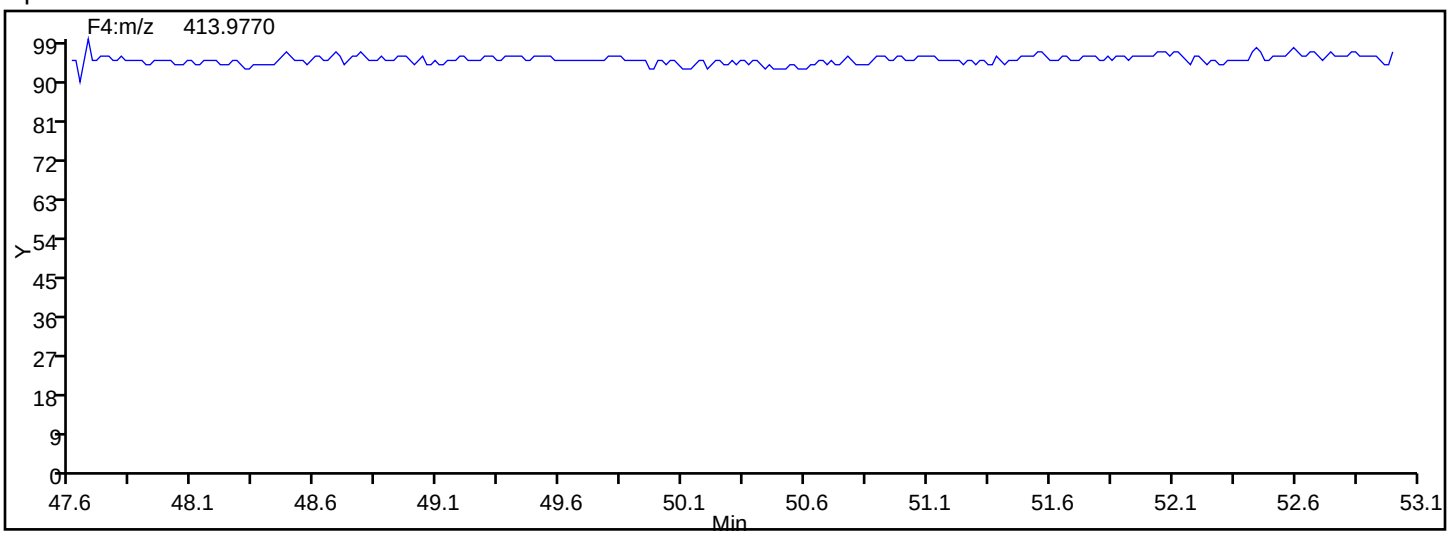
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

HpCDD




HpCDD Lock Mass



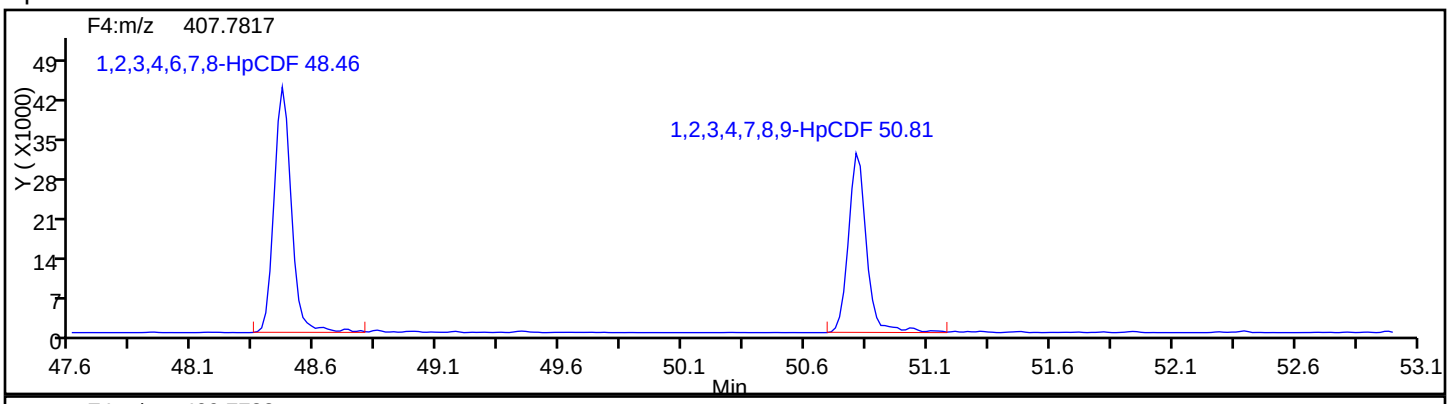
Report Date: 12-Jan-2017 08:09:14 Chrom Revision: 2.2 10-Jan-2017 11:26:10

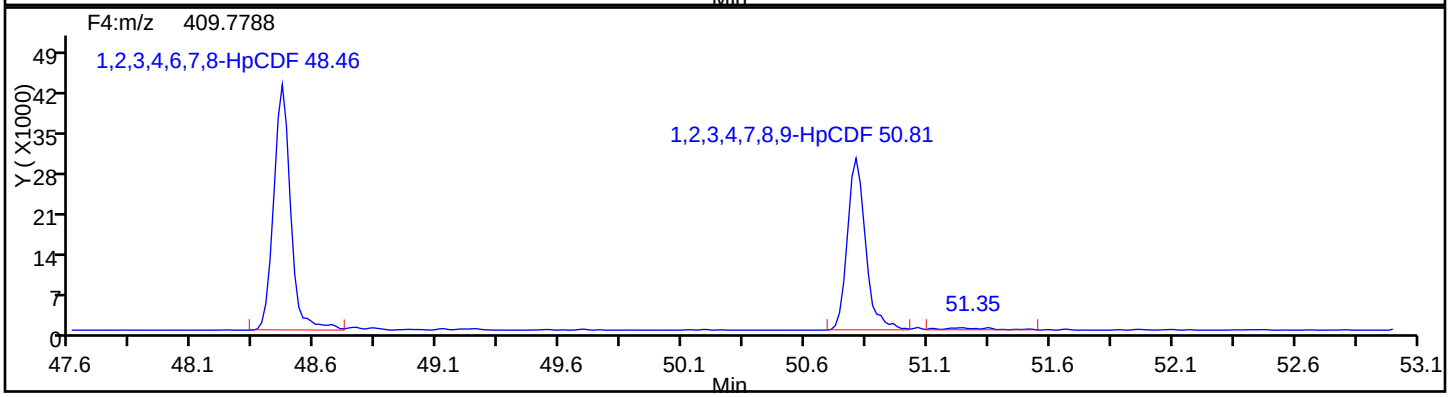
TestAmerica Knoxville

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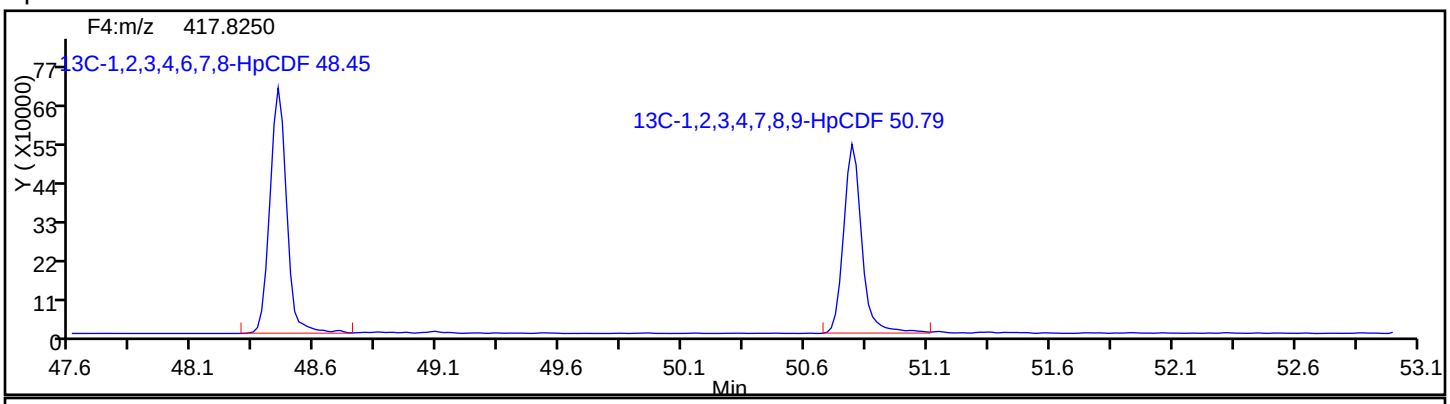
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| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

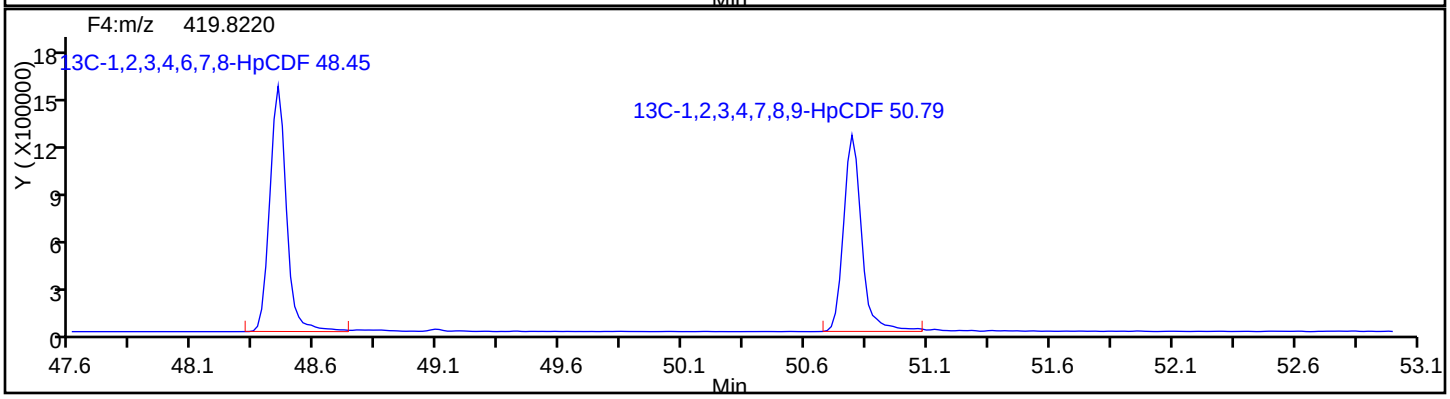
HpCDF




HpCDF Standards



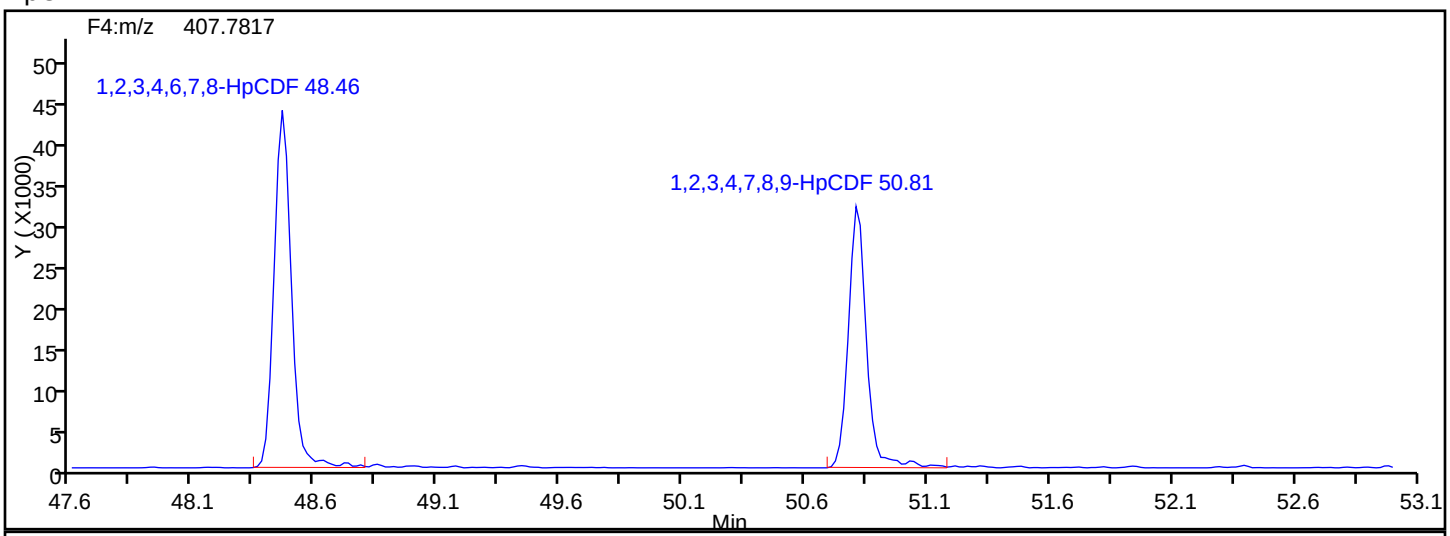
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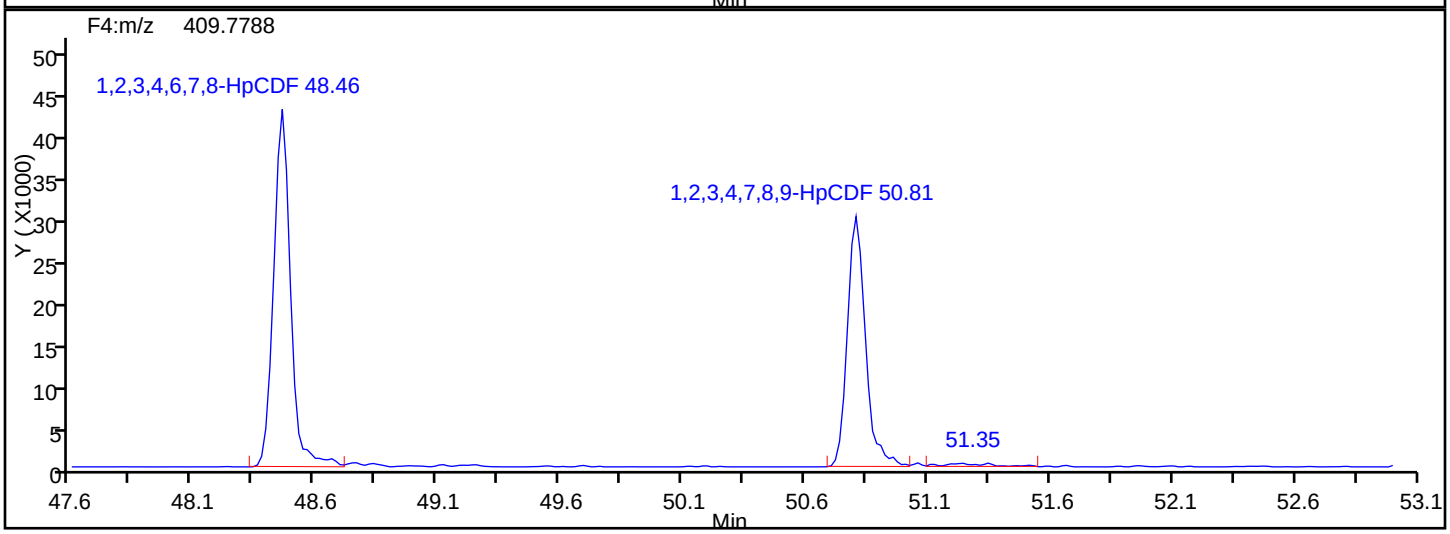
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

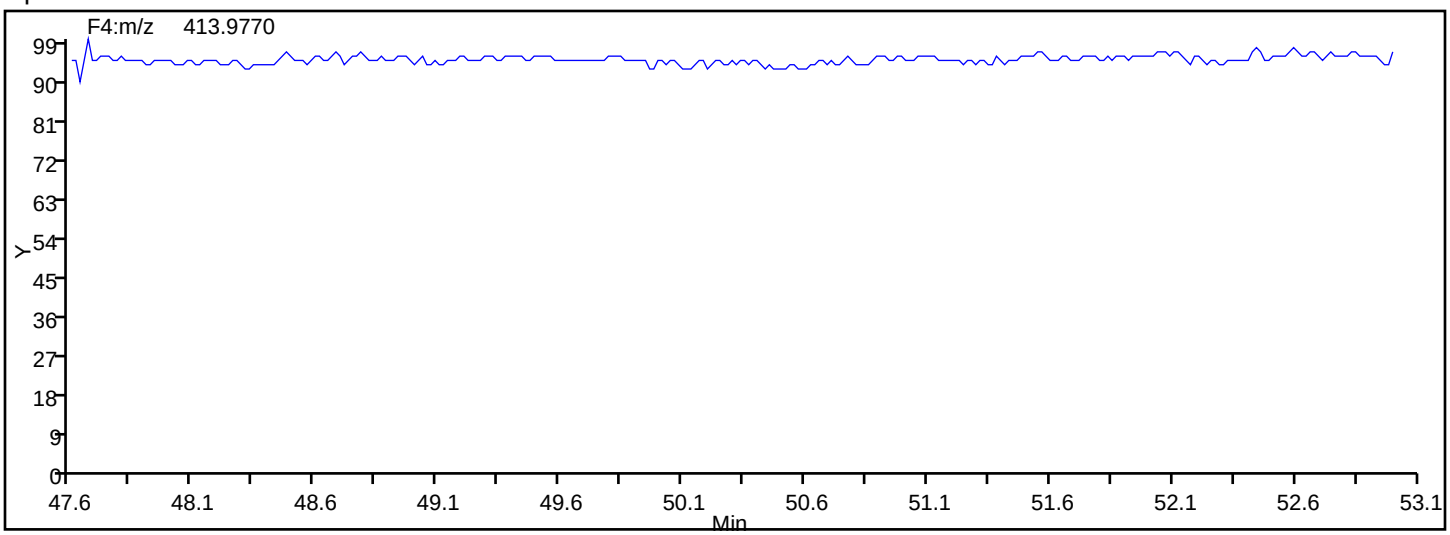
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| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

HpCDF




HpCDF Lock Mass



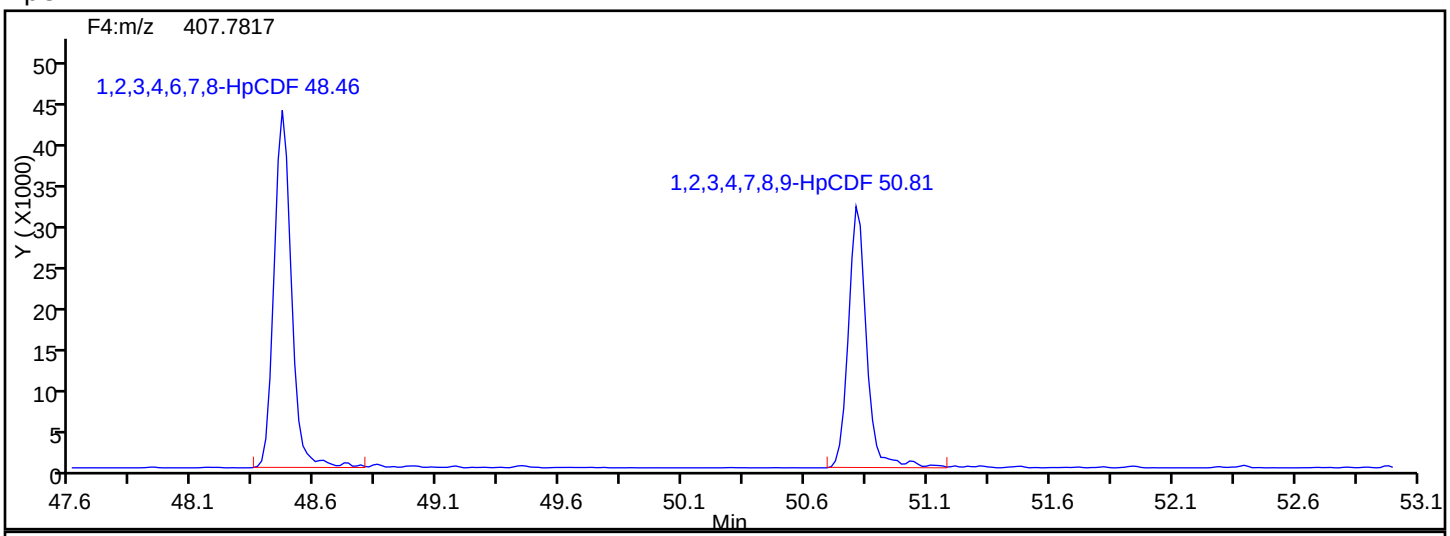
Report Date: 12-Jan-2017 08:09:14 Chrom Revision: 2.2 10-Jan-2017 11:26:10

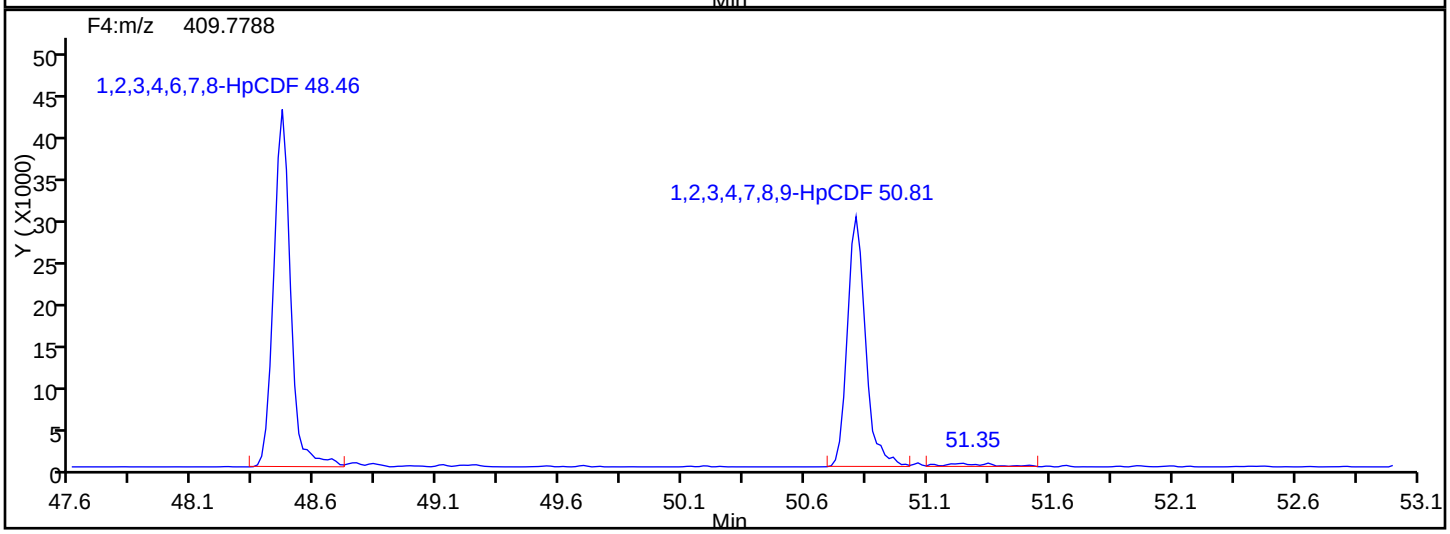
TestAmerica Knoxville

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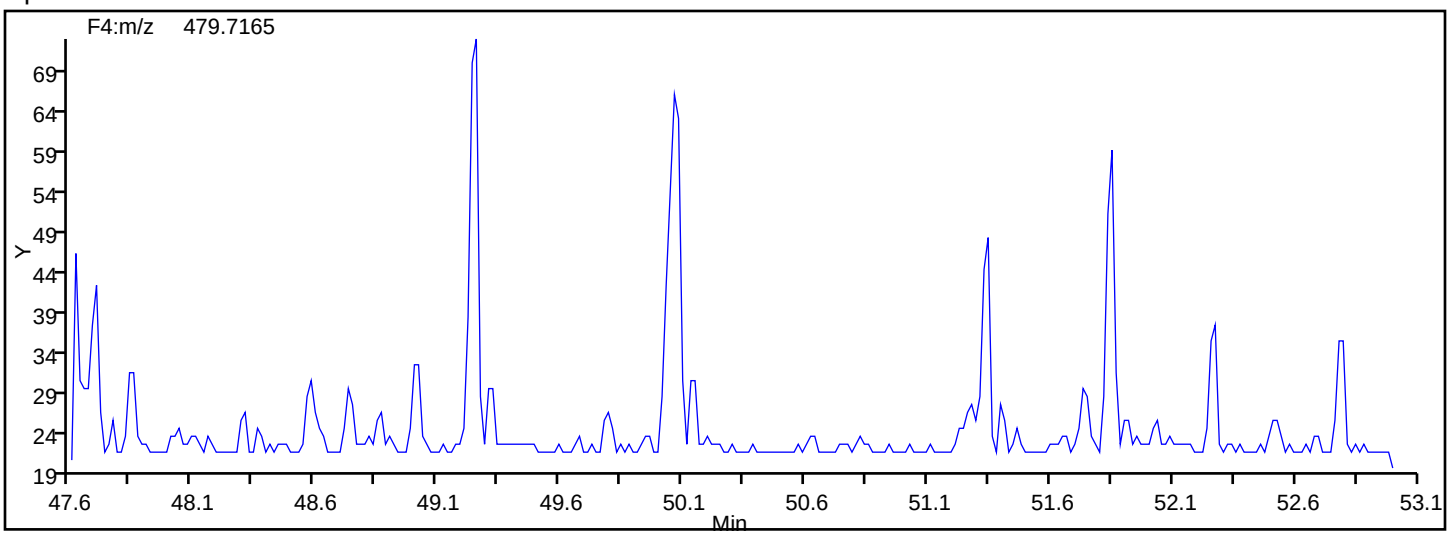
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

HpCDF




HpCDF Interference Mass



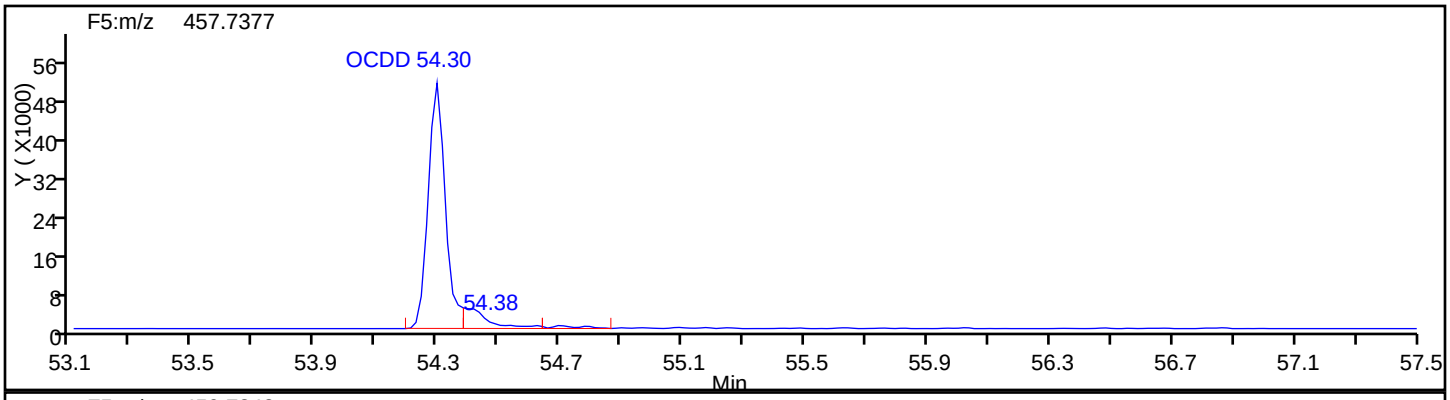
Report Date: 12-Jan-2017 08:09:14 Chrom Revision: 2.2 10-Jan-2017 11:26:10

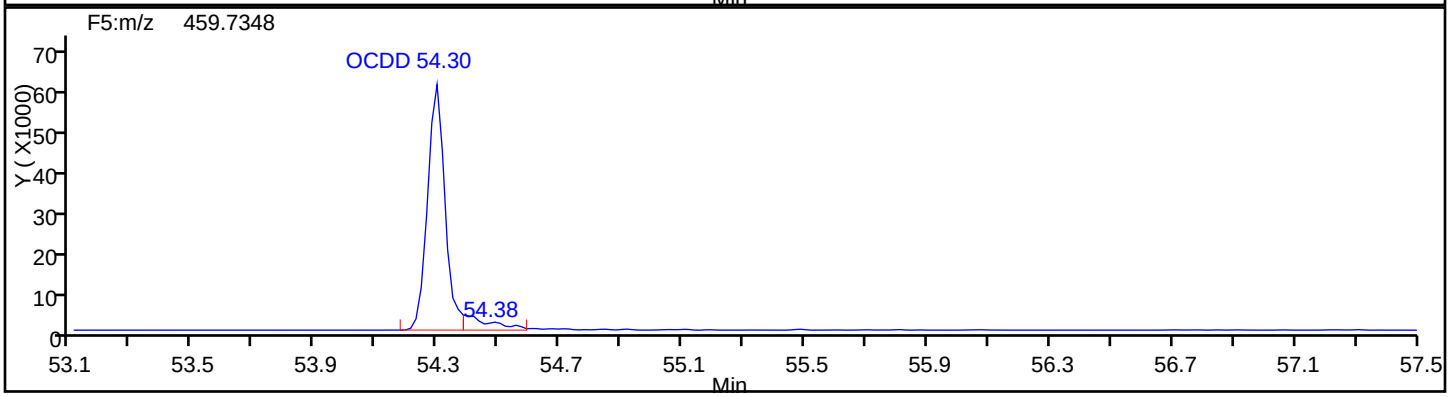
TestAmerica Knoxville

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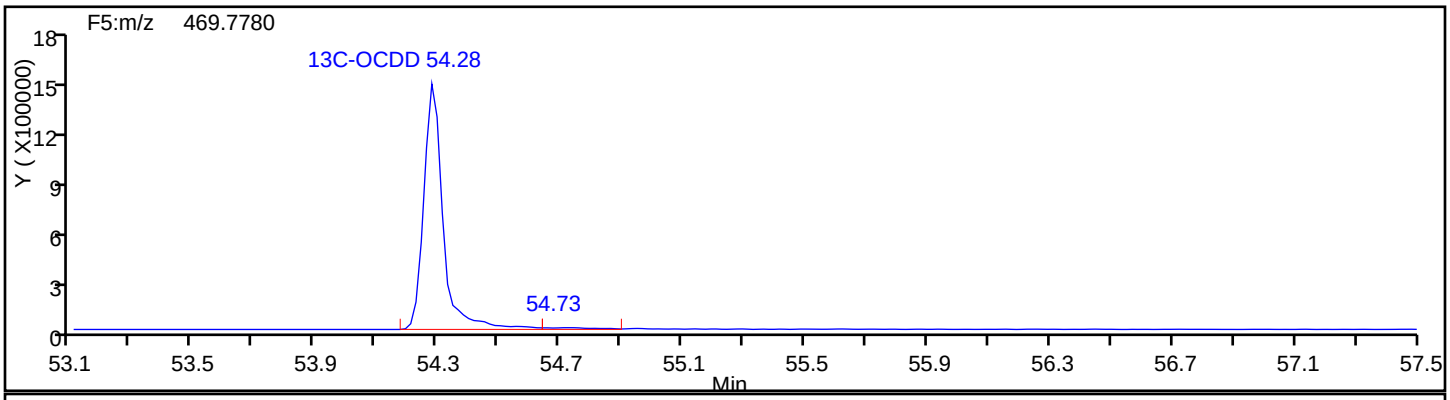
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|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

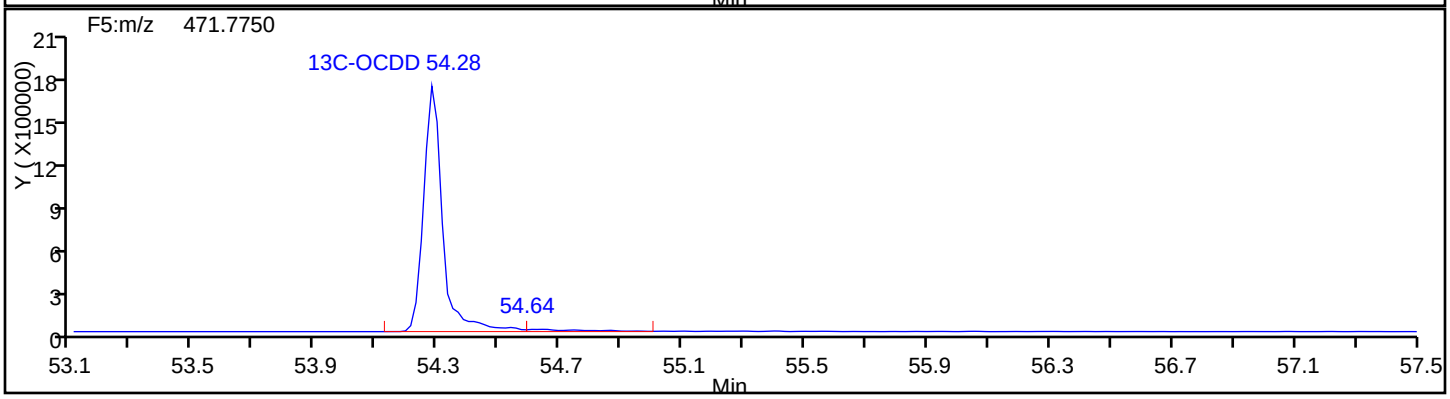
OCDD




OCDD Standards



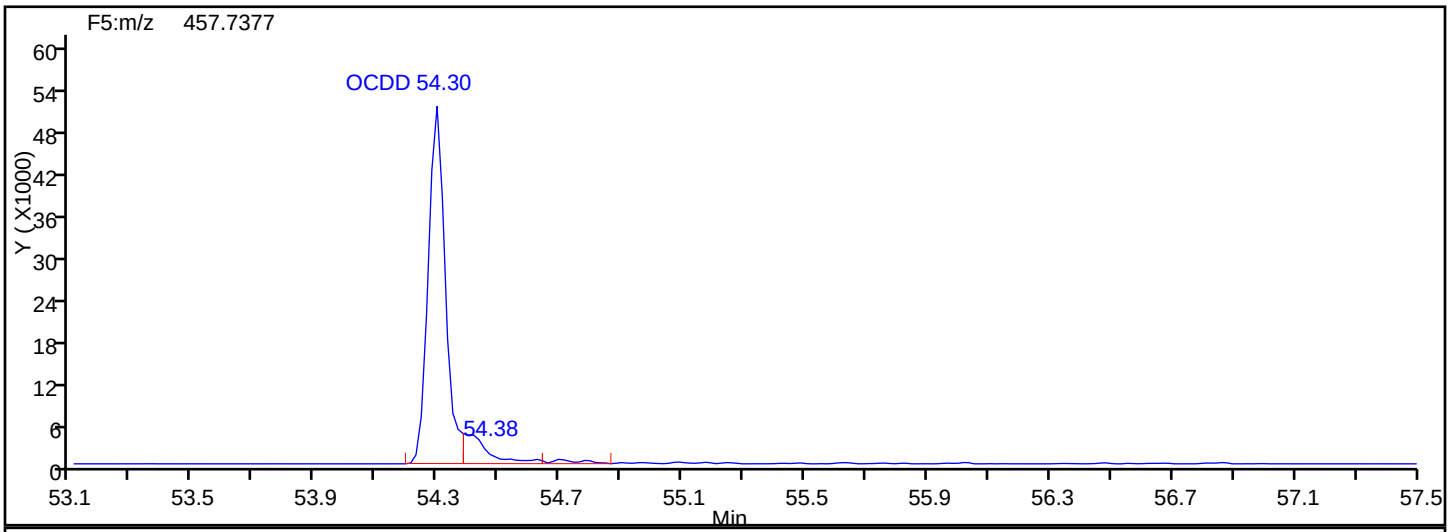



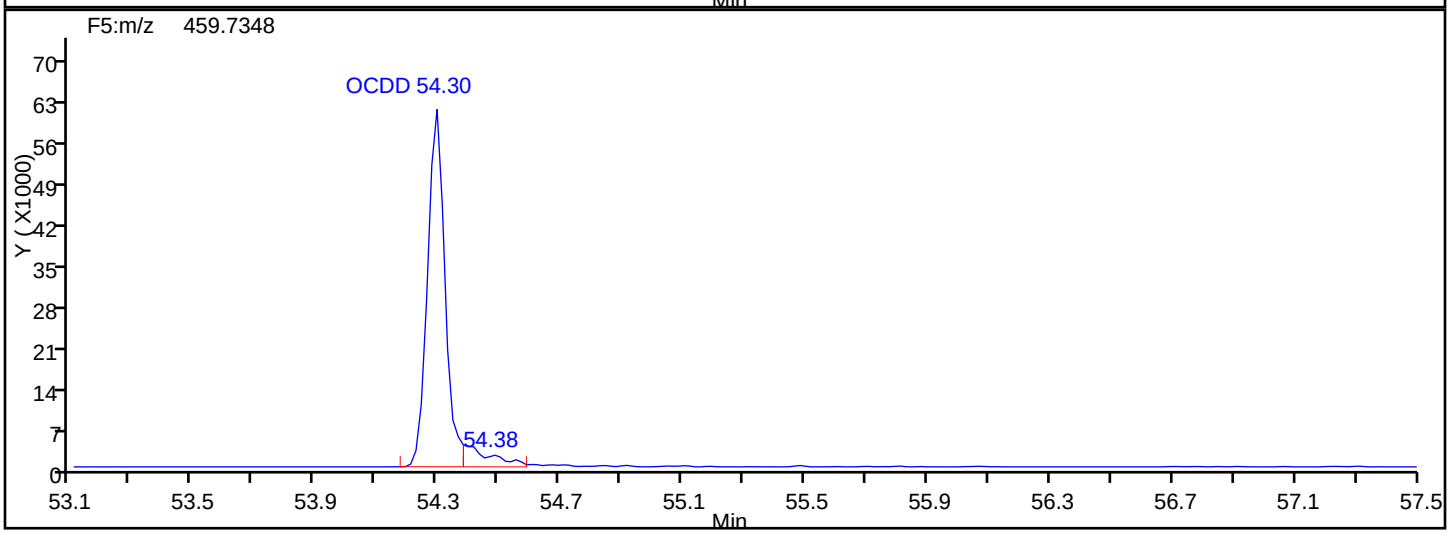
Report Date: 12-Jan-2017 08:09:14 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

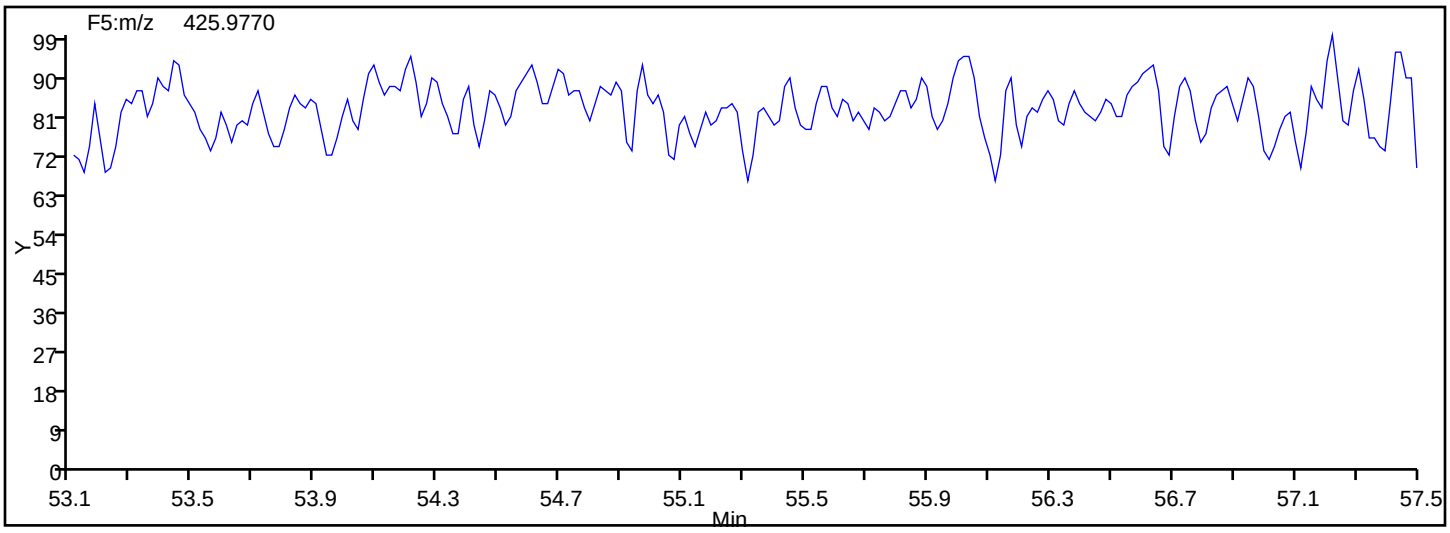
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| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

OCDD




OCDD Lock Mass



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

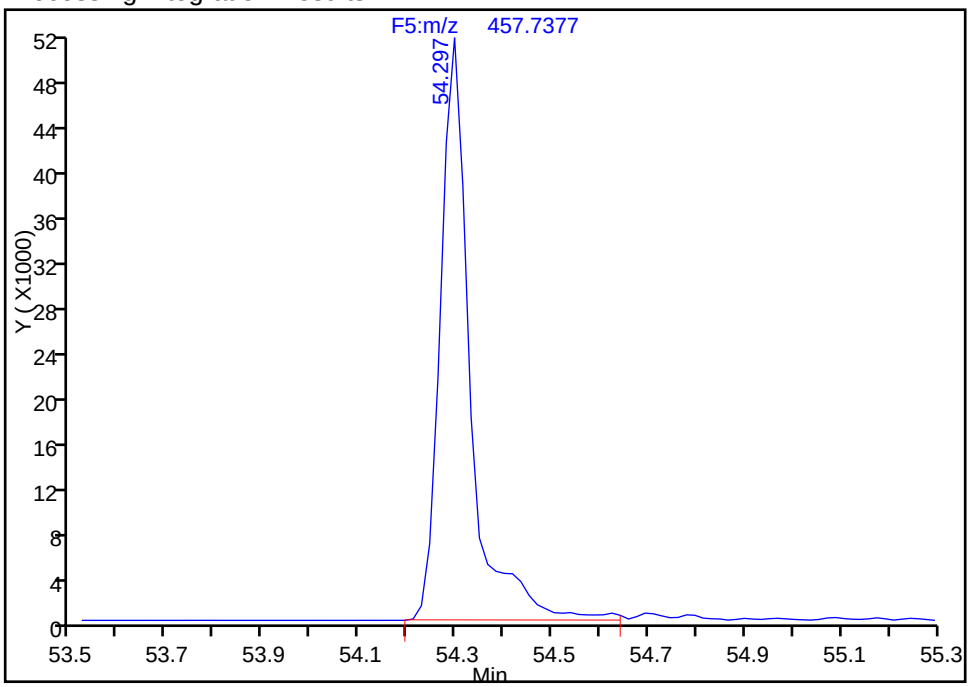
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Injection Date: 16-May-2014 14:26:00 Instrument ID: D2A
Lims ID: IC L1
Client ID:
Operator ID: DavidsonM ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL
Column: Detector F5(52.61 :57.22 )

## OCDD, CAS: 3268-87-9

Signal: 1

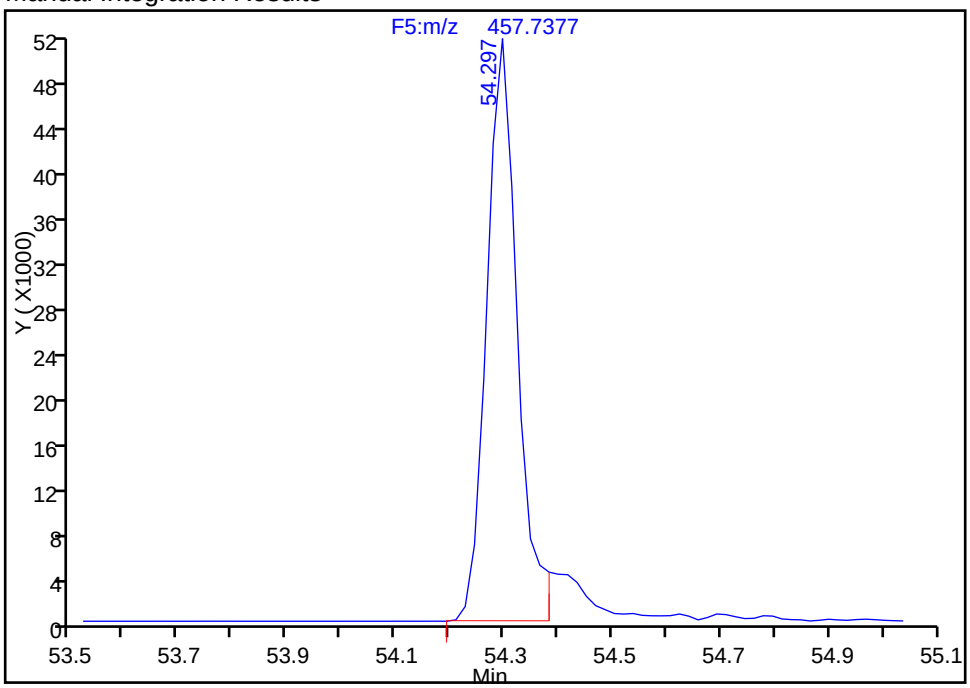
Processing Integration Results

RT: 54.30
Area: 222852
Amount: 5.743015
Amount Units: pg/ul




Manual Integration Results

RT: 54.30
Area: 199351
Amount: 5.315146
Amount Units: pg/ul




Reviewer: davidsonm, 11-Jan-2017 16:11:15
Audit Action: Split an Integrated Peak Audit Reason: Shouldering

Manual Integration/User Assign Peak Report

TestAmerica Knoxville

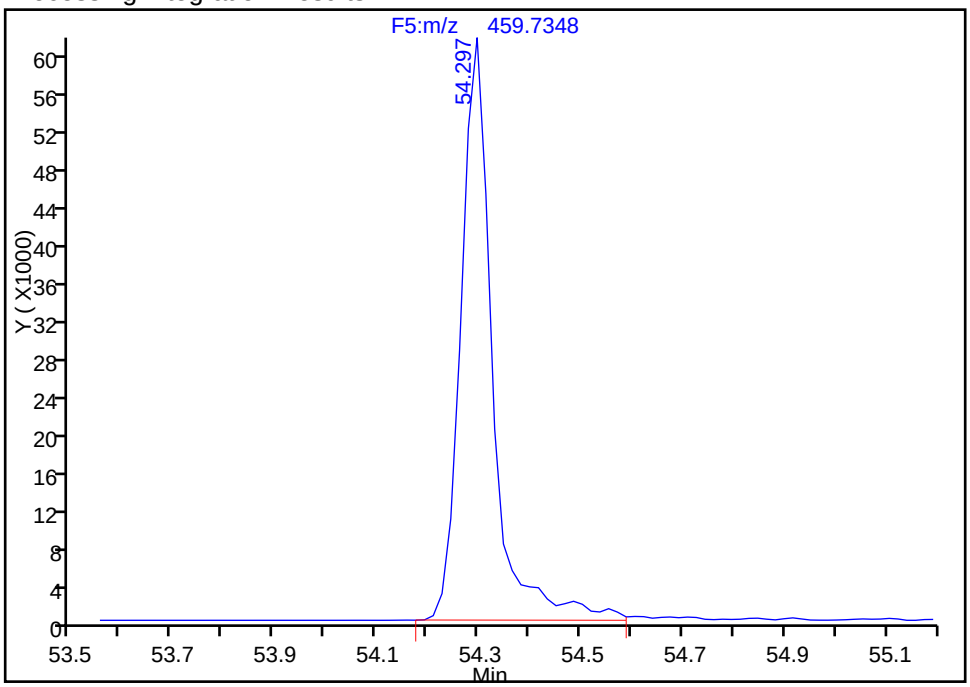
Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d
Injection Date: 16-May-2014 14:26:00 Instrument ID: D2A
Lims ID: IC L1
Client ID:
Operator ID: DavidsonM ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL
Column: Detector F5(52.61 :57.22 )

## OCDD, CAS: 3268-87-9

Signal: 2

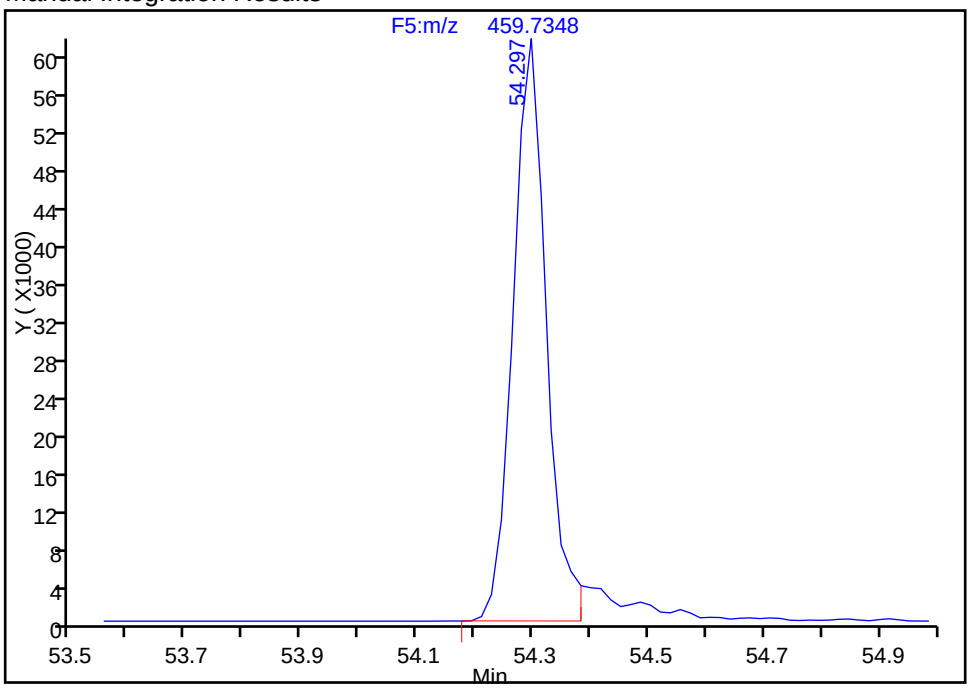
Processing Integration Results

RT: 54.30
Area: 265717
Amount: 5.743015
Amount Units: pg/ul




Manual Integration Results

RT: 54.30
Area: 242990
Amount: 5.315146
Amount Units: pg/ul




Reviewer: davidsonm, 11-Jan-2017 16:11:15
Audit Action: Split an Integrated Peak Audit Reason: Shouldering

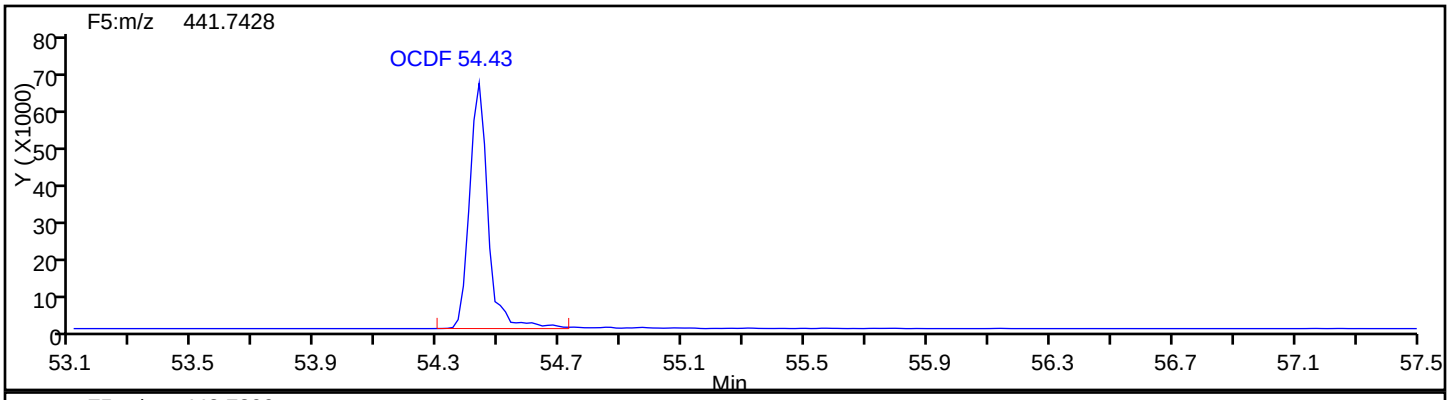
Report Date: 12-Jan-2017 08:09:14 Chrom Revision: 2.2 10-Jan-2017 11:26:10

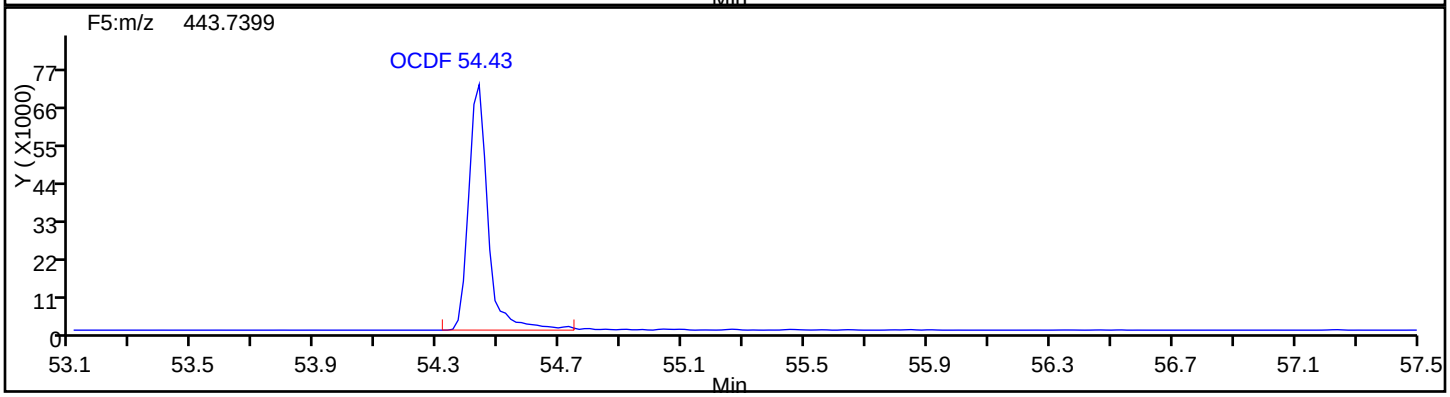
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i1.d

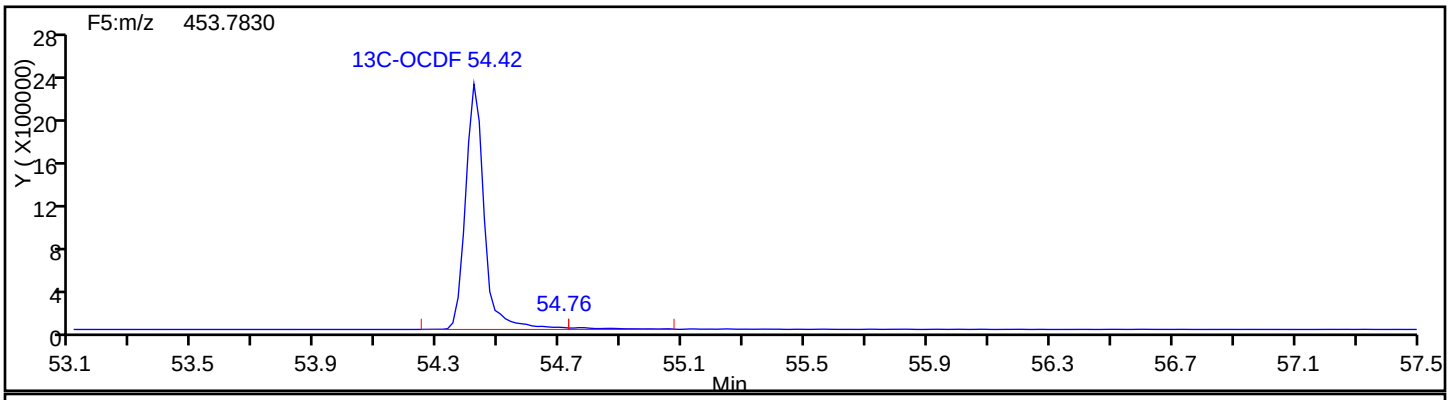
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

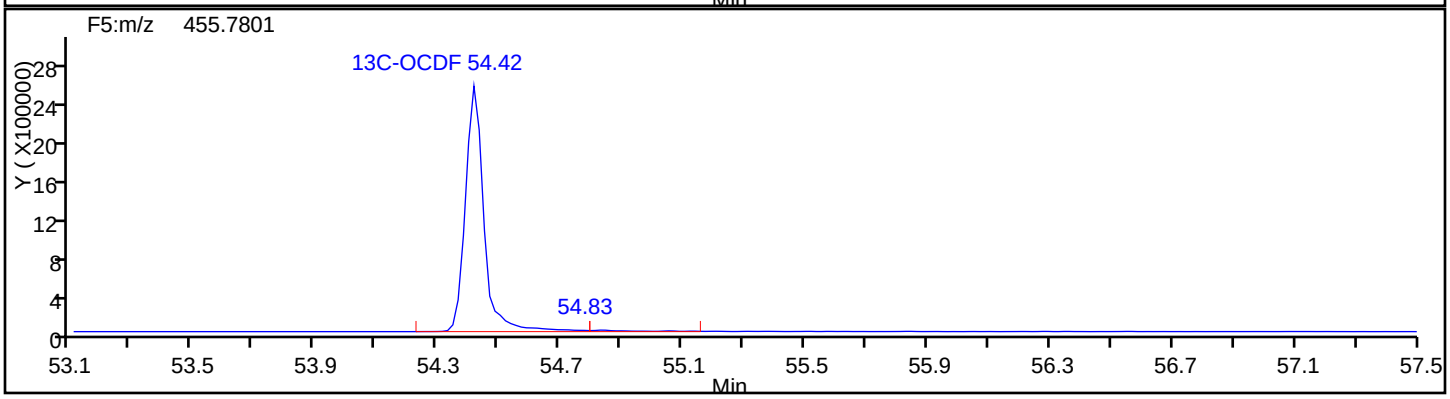
OCDF




OCDF Standards



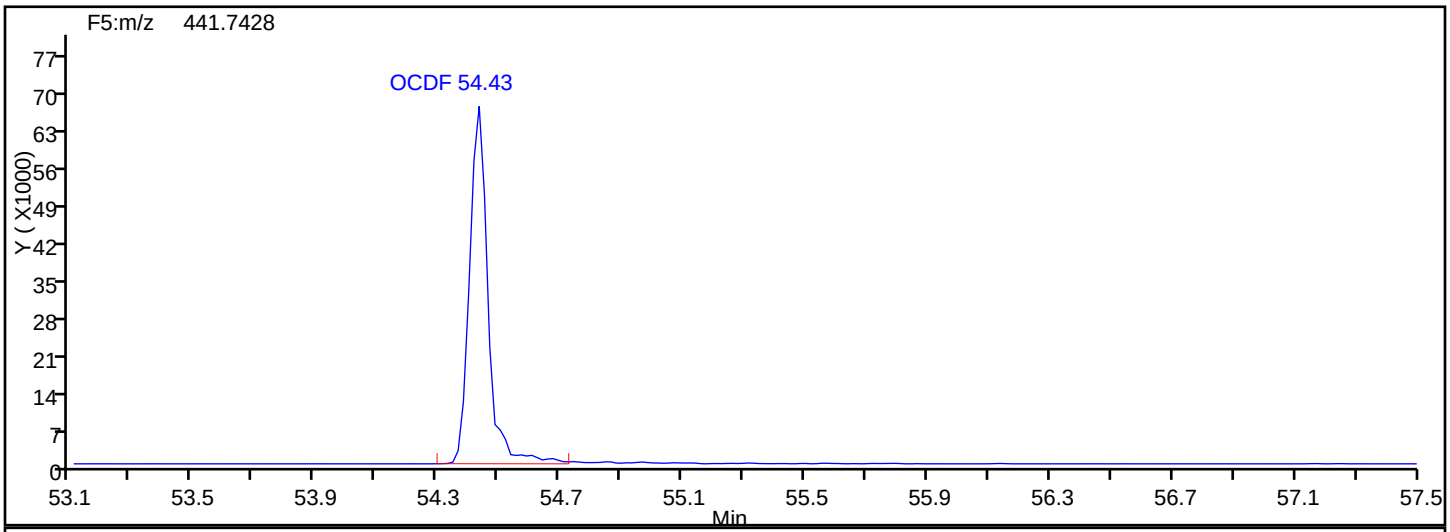
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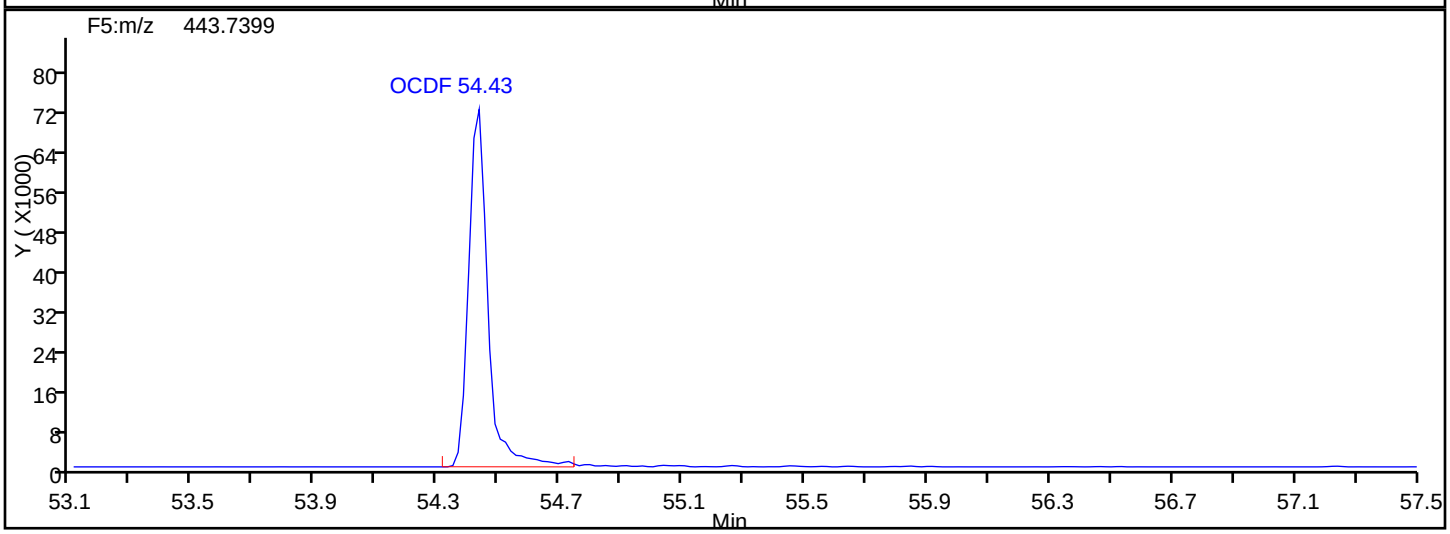
TestAmerica Knoxville

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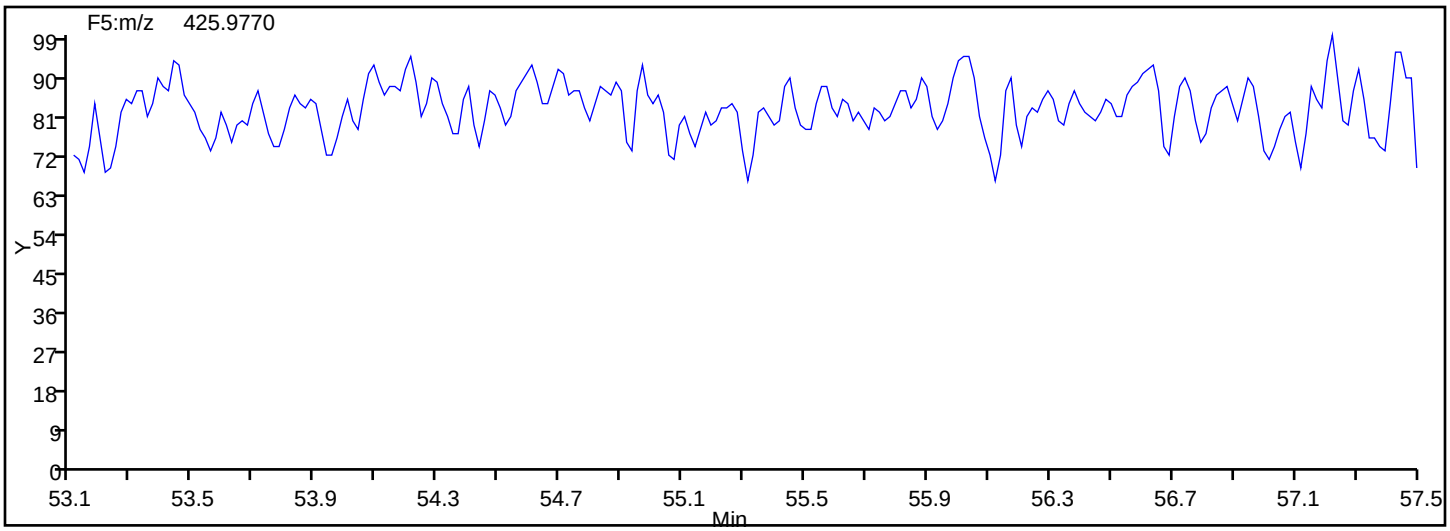
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Lock Mass



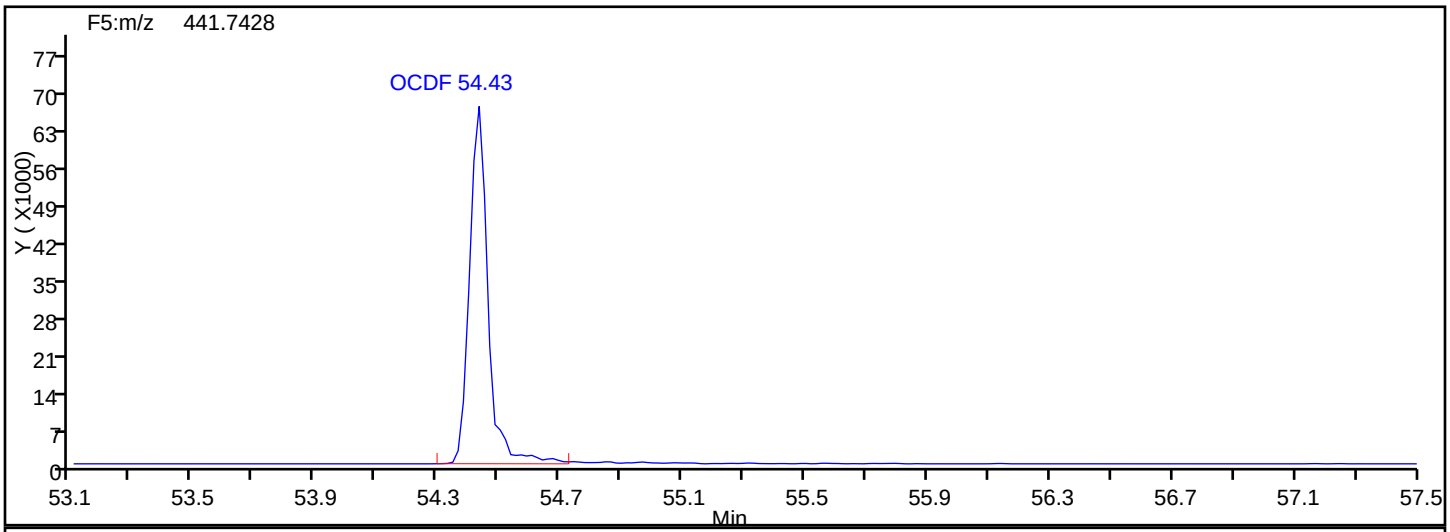
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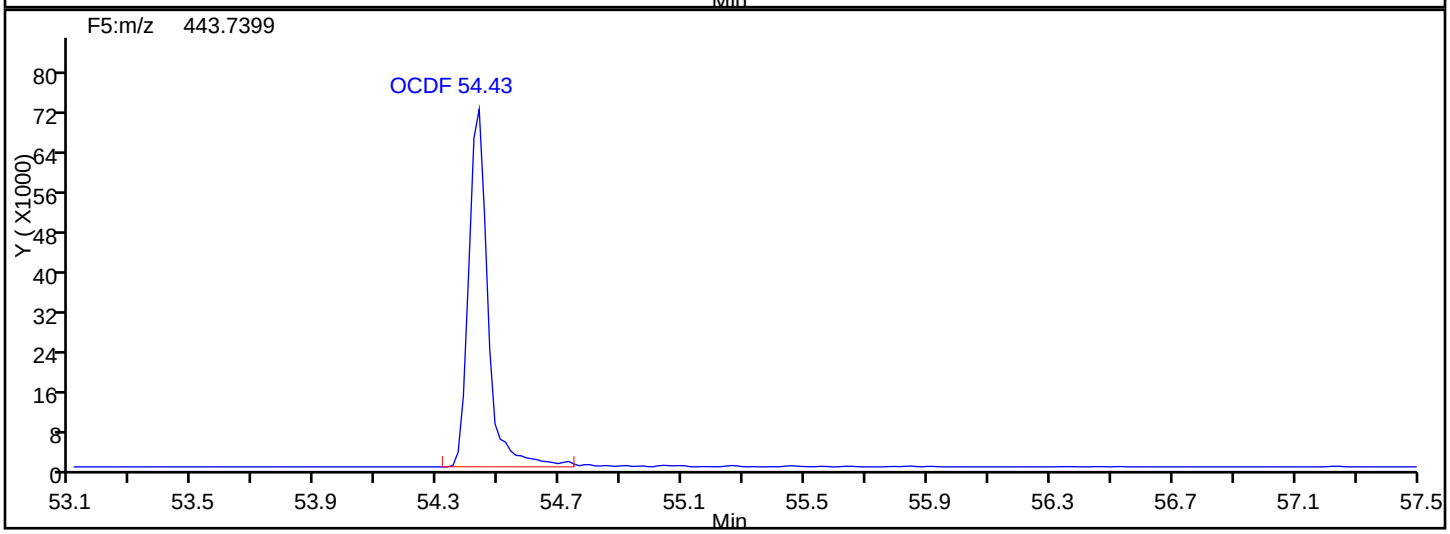
TestAmerica Knoxville

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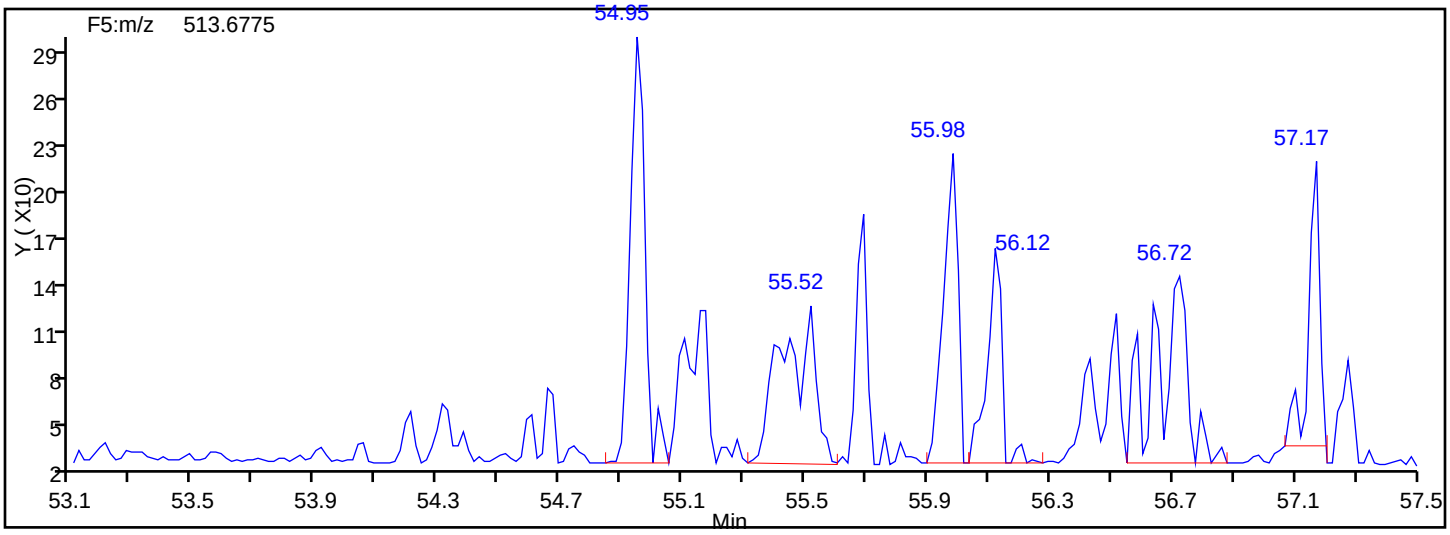
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 14:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 2 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Interference Mass



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i2.d
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 16-May-2014 15:26:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:74cs2 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 12-Jan-2017 08:09:19 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK029

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:13:09

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 31.872 | 230135 | 0.84 | 1.1733 | 2.116 | 2.116 | 0.0116 | 0.0116 | 106 | |
| A Non-2,3,7,8-sub-TCDD | 30.308 | 2309 | 0.77 | 0.0000 | | | | | | RQ |
| S Total TCDD | | | | | 2.116 | 2.116 | 0.0116 | 0.0116 | | RQ |
| 2,3,7,8-TCDF | 29.778 | 328832 | 0.81 | 1.0881 | 1.983 | 1.983 | 0.0162 | 0.0162 | 99.13 | |
| A Non-2,3,7,8-sub-TCDF | 28.995 | | | | | | 0.0 | 0.0 | | |
| S Total TCDF | | | | | 1.983 | 1.983 | 0.0162 | 0.0162 | | |
| 1,2,3,7,8-PeCDD | 41.016 | 743339 | 1.63 | 1.0434 | 10.1 | 10.1 | 0.0242 | 0.0242 | 101 | |
| A Non-2,3,7,8-sub-PeCDD | 39.915 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDD | | | | | 10.1 | 10.1 | 0.0242 | 0.0242 | | |
| 1,2,3,7,8-PeCDF | 39.294 | 1326472 | 1.74 | 1.1898 | 9.979 | 9.979 | 0.0602 | 0.0602 | 99.79 | |
| 2,3,4,7,8-PeCDF | 40.500 | 1259085 | 1.60 | 1.1095 | 9.914 | 9.914 | 0.0581 | 0.0581 | 99.14 | |
| A Non-2,3,7,8-sub-PeCDF | 38.623 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDF | | | | | 19.9 | 19.9 | 0.0592 | 0.0592 | | |
| 1,2,3,4,7,8-HxCDD | 45.234 | 911864 | 1.31 | 1.1409 | 9.848 | 9.848 | 0.0574 | 0.0574 | 98.48 | |
| 1,2,3,6,7,8-HxCDD | 45.352 | 991123 | 1.20 | 1.1481 | 10.3 | 10.3 | 0.0611 | 0.0611 | 103 | |
| 1,2,3,7,8,9-HxCDD | 45.757 | 1060210 | 1.31 | 1.2212 | 10.5 | 10.5 | 0.0555 | 0.0555 | 105 | |
| A Non-2,3,7,8-sub-HxCDD | 44.687 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDD | | | | | 30.6 | 30.6 | 0.0580 | 0.0580 | | |
| 1,2,3,4,7,8-HxCDF | 44.189 | 1500520 | 1.23 | 1.3629 | 9.921 | 9.921 | 0.0398 | 0.0398 | 99.21 | |
| 1,2,3,6,7,8-HxCDF | 44.324 | 1707727 | 1.29 | 1.2762 | 9.881 | 9.881 | 0.0369 | 0.0369 | 98.81 | |
| 2,3,4,6,7,8-HxCDF | 45.066 | 1529879 | 1.31 | 1.2654 | 9.728 | 9.728 | 0.0415 | 0.0415 | 97.28 | |
| 1,2,3,7,8,9-HxCDF | 46.027 | 1432850 | 1.26 | 1.2573 | 10.1 | 10.1 | 0.0503 | 0.0503 | 101 | |
| A Non-2,3,7,8-sub-HxCDF | 44.552 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDF | | | | | 39.7 | 39.7 | 0.0421 | 0.0421 | | |
| 1,2,3,4,6,7,8-HpCDD | 50.166 | 848864 | 1.01 | 1.1204 | 10.0 | 10.0 | 0.0501 | 0.0501 | 100 | |
| A Non-2,3,7,8-sub-HpCDD | 49.566 | 6350 | 1.04 | 0.0000 | | | | | | RQ |
| S Total HpCDD | | | | | 10.0 | 10.0 | 0.0501 | 0.0501 | | RQ |
| 1,2,3,4,6,7,8-HpCDF | 48.463 | 1475215 | 1.04 | 1.4984 | 10.1 | 10.1 | 0.0435 | 0.0435 | 101 | |
| 1,2,3,4,7,8,9-HpCDF | 50.808 | 1153014 | 1.04 | 1.3807 | 10.2 | 10.2 | 0.0586 | 0.0586 | 102 | |

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HpCDF | 49.625 | | | | | | 0.0 | 0.0 | | |
| S Total HpCDF | | | | | 20.3 | 20.3 | 0.0510 | 0.0510 | | |
| OCDD | 54.294 | 1537141 | 0.91 | 1.2073 | 19.6 | 19.6 | 0.0762 | 0.0762 | 98.07 | |
| OCDF | 54.432 | 2160278 | 0.93 | 1.1162 | 20.2 | 20.2 | 0.0484 | 0.0484 | 101 | |
| D 13C-2,3,7,8-TCDD | 31.805 | 9269717 | 0.82 | 1.0709 | 100.0 | 100.0 | 0.2668 | 0.2668 | 100 | |
| D 13C-2,3,7,8-TCDF | 29.728 | 15241754 | 0.81 | 1.7545 | 100.4 | 100.4 | 0.1062 | 0.1062 | 100 | |
| D 13C-1,2,3,7,8-PeCDD | 40.999 | 7066036 | 1.63 | 0.8743 | 93.4 | 93.4 | 0.2755 | 0.2755 | 93.39 | |
| D 13C-1,2,3,7,8-PeCDF | 39.277 | 11172583 | 1.58 | 1.3704 | 94.2 | 94.2 | 0.1693 | 0.1693 | 94.20 | |
| D 13C-2,3,4,7,8-PeCDF | 40.482 | 11446462 | 1.55 | 1.3837 | 95.6 | 95.6 | 0.1676 | 0.1676 | 95.58 | |
| D 13C-1,2,3,4,7,8-HxCDD | 45.217 | 8116369 | 1.26 | 0.8772 | 99.6 | 99.6 | 0.2015 | 0.2015 | 99.55 | |
| D 13C-1,2,3,6,7,8-HxCDD | 45.336 | 8407393 | 1.21 | 0.9171 | 98.6 | 98.6 | 0.1928 | 0.1928 | 98.64 | |
| D 13C-1,2,3,4,7,8-HxCDF | 44.172 | 11097986 | 0.53 | 1.1892 | 100.4 | 100.4 | 0.1771 | 0.1771 | 100 | |
| D 13C-1,2,3,6,7,8-HxCDF | 44.307 | 13542561 | 0.54 | 1.4625 | 99.6 | 99.6 | 0.1440 | 0.1440 | 99.63 | |
| D 13C-2,3,4,6,7,8-HxCDF | 45.049 | 12428502 | 0.55 | 1.3197 | 101.3 | 101.3 | 0.1596 | 0.1596 | 101 | |
| D 13C-1,2,3,7,8,9-HxCDF | 46.010 | 11246135 | 0.55 | 1.2001 | 100.8 | 100.8 | 0.1755 | 0.1755 | 101 | |
| D 13C-1,2,3,4,6,7,8-HpCDD | 50.150 | 7575508 | 1.08 | 0.8155 | 100.0 | 100.0 | 0.3177 | 0.3177 | 99.95 | |
| D 13C-1,2,3,4,6,7,8-HpCDF | 48.446 | 9744462 | 0.47 | 1.0496 | 99.9 | 99.9 | 0.1813 | 0.1813 | 99.89 | |
| D 13C-1,2,3,4,7,8,9-HpCDF | 50.791 | 8217931 | 0.47 | 0.8947 | 98.8 | 98.8 | 0.2127 | 0.2127 | 98.82 | |
| D 13C-OCDD | 54.277 | 12983405 | 0.91 | 0.7044 | 198.3 | 198.3 | 0.1912 | 0.1912 | 99.16 | |
| D 13C-OCDF | 54.415 | 19166588 | 0.91 | 1.0615 | 194.3 | 194.3 | 0.1123 | 0.1123 | 97.14 | |
| $ 37Cl4-2,3,7,8-TCDD | 31.872 | 209201 | | 1.2266 | 1.971 | 1.971 | 0.0120 | 0.0120 | 98.54 | |
| * 13C-1,2,3,4-TCDD | 31.273 | 8654331 | 0.82 | 9.1E+04 | 100.0 | 100.0 | | | | |
| * 13C-1,2,3,7,8,9-HxCDD | 45.740 | 9294113 | 1.25 | 1E+05 | 100.0 | 100.0 | | | | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

## Reagents:

61L21613OP_00001 Amount Added: 20.00 Units: uL

Report Date: 12-Jan-2017 08:09:20 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i2.d
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 16-May-2014 15:26:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:74cs2 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 12-Jan-2017 08:09:19 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK029

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:13:09

| Signal | RT (min.) | Adj RT (min.) | Δ Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | |
| 319.8965 | 31.872 | 31.871 | 0 | 1.002 | 105137 | 10705 | 24 | 60 | 446 | | |
| 321.8936 | 31.872 | 31.871 | 0 | 1.002 | 124998 | 12622 | 29 | 72 | 435 | 0.84(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | RQ |
| 319.8965 | 25.705 | 30.308 | -276 | | 1151 | 291 | 24 | 60 | 12 | | |
| 321.8936 | 25.705 | 30.308 | -276 | | 550 | 169 | 29 | 72 | 6 | 2.09(0.65-0.89) | |
| 319.8965 | 29.778 | 30.308 | -32 | | 2272 | 356 | 24 | 60 | 15 | | |
| 321.8936 | 29.744 | 30.308 | -34 | | 755 | 219 | 29 | 72 | 8 | 3.01(0.65-0.89) | |
| 2,3,7,8-TCDF | | | | | | | | | | | |
| 303.9016 | 29.778 | 29.793 | -1 | 1.002 | 147166 | 16694 | 44 | 110 | 379 | | |
| 305.8987 | 29.778 | 29.793 | -1 | 1.002 | 181666 | 20565 | 77 | 192 | 267 | 0.81(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | |
| 303.9016 | 28.995 | | | | | | 44 | 110 | | | |
| 305.8987 | 28.995 | | | | | | 77 | 192 | | | |
| 1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 355.8546 | 41.016 | 41.031 | -1 | 1.000 | 460269 | 109322 | 93 | 232 | 1176 | | |
| 357.8516 | 41.016 | 41.031 | -1 | 1.000 | 283070 | 69655 | 78 | 195 | 893 | 1.63(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | |
| 355.8546 | 39.915 | | | | | | 93 | 232 | | | |
| 357.8516 | 39.915 | | | | | | 78 | 195 | | | |
| 1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 39.294 | 39.309 | -1 | 1.000 | 842515 | 173754 | 306 | 765 | 568 | | |
| 341.8567 | 39.294 | 39.309 | -1 | 1.000 | 483957 | 102696 | 354 | 885 | 290 | 1.74(1.32-1.78) | |
| 2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 40.500 | 40.497 | 0 | 1.000 | 774900 | 176689 | 306 | 765 | 577 | | |
| 341.8567 | 40.500 | 40.497 | 0 | 1.000 | 484185 | 107161 | 354 | 885 | 303 | 1.60(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | |
| 339.8597 | 38.623 | | | | | | 306 | 765 | | | |
| 341.8567 | 38.623 | | | | | | 354 | 885 | | | |
| 1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.234 | 45.249 | -1 | 1.000 | 517114 | 131641 | 379 | 947 | 347 | | |
| 391.8127 | 45.234 | 45.249 | -1 | 1.000 | 394750 | 105750 | 159 | 397 | 665 | 1.31(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.352 | 45.367 | -1 | 1.000 | 540243 | 124591 | 379 | 947 | 329 | | |
| 391.8127 | 45.352 | 45.367 | -1 | 1.000 | 450880 | 101458 | 159 | 397 | 638 | 1.20(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.757 | 45.755 | 0 | 1.012 | 601411 | 131634 | 379 | 947 | 347 | | |
| 391.8127 | 45.757 | 45.755 | 0 | 1.012 | 458799 | 102497 | 159 | 397 | 645 | 1.31(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | |
| 389.8158 | 44.687 | | | | | | 379 | 947 | | | |
| 391.8127 | 44.687 | | | | | | 159 | 397 | | | |
| 1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.189 | 44.203 | -1 | 1.000 | 827290 | 222657 | 289 | 722 | 770 | | |
| 375.8178 | 44.189 | 44.203 | -1 | 1.000 | 673230 | 180873 | 347 | 867 | 521 | 1.23(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.324 | 44.338 | -1 | 1.000 | 960846 | 235756 | 289 | 722 | 816 | | |
| 375.8178 | 44.324 | 44.338 | -1 | 1.000 | 746881 | 183324 | 347 | 867 | 528 | 1.29(1.05-1.43) | |
| 2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 45.066 | 45.064 | 0 | 1.000 | 866416 | 213222 | 289 | 722 | 738 | | |
| 375.8178 | 45.066 | 45.064 | 0 | 1.000 | 663463 | 158603 | 347 | 867 | 457 | 1.31(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 46.027 | 46.042 | -1 | 1.000 | 797958 | 175751 | 289 | 722 | 608 | | |
| 375.8178 | 46.027 | 46.042 | -1 | 1.000 | 634892 | 142607 | 347 | 867 | 411 | 1.26(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.552 | | | | | | 289 | 722 | | | |
| 375.8178 | 44.552 | | | | | | 347 | 867 | | | |
| 1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 423.7767 | 50.166 | 50.180 | -1 | 1.000 | 427584 | 80925 | 123 | 307 | 658 | | |
| 425.7737 | 50.166 | 50.180 | -1 | 1.000 | 421280 | 81582 | 202 | 505 | 404 | 1.01(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | RQ |
| 423.7767 | 48.985 | 49.566 | -35 | | 4300 | 861 | 123 | 307 | 7 | | |
| 425.7737 | 48.935 | 49.566 | -38 | | 3113 | 807 | 202 | 505 | 4 | 1.38(0.88-1.20) | |
| 1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 407.7817 | 48.463 | 48.476 | -1 | 1.000 | 750395 | 153068 | 256 | 640 | 598 | | |
| 409.7788 | 48.463 | 48.476 | -1 | 1.000 | 724820 | 145983 | 260 | 650 | 561 | 1.04(0.88-1.20) | |
| 1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 407.7817 | 50.808 | 50.821 | -1 | 1.000 | 587255 | 115873 | 256 | 640 | 453 | | |
| 409.7788 | 50.808 | 50.821 | -1 | 1.000 | 565759 | 108261 | 260 | 650 | 416 | 1.04(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | |
| 407.7817 | 49.625 | | | | | | 256 | 640 | | | |
| 409.7788 | 49.625 | | | | | | 260 | 650 | | | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCDD | | | | | | | | | | | |
| 457.7377 | 54.294 | 54.308 | -1 | 1.000 | 730971 | 169627 | 183 | 457 | 927 | | |
| 459.7348 | 54.294 | 54.308 | -1 | 1.000 | 806170 | 185096 | 363 | 907 | 510 | 0.91(0.76-1.02) | |
| OCDF | | | | | | | | | | | |
| 441.7428 | 54.432 | 54.429 | 0 | 1.000 | 1042747 | 243488 | 254 | 635 | 959 | | |
| 443.7399 | 54.432 | 54.429 | 0 | 1.000 | 1117531 | 261792 | 237 | 592 | 1105 | 0.93(0.76-1.02) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 31.805 | 31.804 | 0 | 1.017 | 4184694 | 440025 | 599 | 1497 | 735 | | |
| 333.9338 | 31.805 | 31.804 | 0 | 1.017 | 5085023 | 528497 | 490 | 1225 | 1079 | 0.82(0.65-0.89) | |
| 13C-2,3,7,8-TCDF | | | | | | | | | | | |
| 315.9419 | 29.728 | 29.743 | -1 | 0.951 | 6812939 | 771003 | 420 | 1050 | 1836 | | |
| 317.9389 | 29.728 | 29.743 | -1 | 0.951 | 8428815 | 941455 | 290 | 725 | 3246 | 0.81(0.65-0.89) | |
| 13C-1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 367.8949 | 40.999 | 40.997 | 0 | 1.311 | 4380561 | 1046952 | 545 | 1362 | 1921 | | |
| 369.8919 | 40.999 | 40.997 | 0 | 1.311 | 2685475 | 644525 | 373 | 932 | 1728 | 1.63(1.32-1.78) | |
| 13C-1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 39.277 | 39.275 | 0 | 1.256 | 6848053 | 1415913 | 538 | 1345 | 2632 | | |
| 353.8970 | 39.277 | 39.275 | 0 | 1.256 | 4324530 | 886761 | 346 | 865 | 2563 | 1.58(1.32-1.78) | |
| 13C-2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 40.482 | 40.480 | 0 | 1.294 | 6951956 | 1552875 | 538 | 1345 | 2886 | | |
| 353.8970 | 40.482 | 40.480 | 0 | 1.294 | 4494506 | 1006563 | 346 | 865 | 2909 | 1.55(1.32-1.78) | |
| 13C-1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.217 | 45.232 | -1 | 0.989 | 4529719 | 1128595 | 642 | 1605 | 1758 | | |
| 403.8529 | 45.217 | 45.232 | -1 | 0.989 | 3586650 | 926324 | 827 | 2067 | 1120 | 1.26(1.05-1.43) | |
| 13C-1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.336 | 45.350 | -1 | 0.991 | 4600091 | 1049243 | 642 | 1605 | 1634 | | |
| 403.8529 | 45.336 | 45.350 | -1 | 0.991 | 3807302 | 867168 | 827 | 2067 | 1049 | 1.21(1.05-1.43) | |
| 13C-1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44.172 | 44.187 | -1 | 0.966 | 3853425 | 1005394 | 766 | 1915 | 1313 | | |
| 385.8610 | 44.172 | 44.187 | -1 | 0.966 | 7244561 | 1927282 | 984 | 2460 | 1959 | 0.53(0.43-0.59) | |
| 13C-1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44.307 | 44.322 | -1 | 0.969 | 4736265 | 1199842 | 766 | 1915 | 1566 | | |
| 385.8610 | 44.307 | 44.322 | -1 | 0.969 | 8806296 | 2175827 | 984 | 2460 | 2211 | 0.54(0.43-0.59) | |
| 13C-2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 45.049 | 45.047 | 0 | 0.985 | 4388561 | 1067375 | 766 | 1915 | 1393 | | |
| 385.8610 | 45.049 | 45.047 | 0 | 0.985 | 8039941 | 1958619 | 984 | 2460 | 1990 | 0.55(0.43-0.59) | |
| 13C-1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 383.8639 | 46.010 | 46.025 | -1 | 1.006 | 3979151 | 877838 | 766 | 1915 | 1146 | | |
| 385.8610 | 46.010 | 46.025 | -1 | 1.006 | 7266984 | 1638180 | 984 | 2460 | 1665 | 0.55(0.43-0.59) | |
| 13C-1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 435.8169 | 50.150 | 50.163 | -1 | 1.096 | 3934053 | 755146 | 1326 | 3315 | 569 | | |
| 437.8140 | 50.150 | 50.163 | -1 | 1.096 | 3641455 | 691211 | 827 | 2067 | 836 | 1.08(0.88-1.20) | |
| 13C-1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 417.8250 | 48.446 | 48.443 | 0 | 1.059 | 3102669 | 628947 | 672 | 1680 | 936 | | |
| 419.8220 | 48.446 | 48.443 | 0 | 1.059 | 6641793 | 1352437 | 909 | 2272 | 1488 | 0.47(0.51-0.37) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 417.8250 | 50.791 | 50.804 | -1 | 1.110 | 2611435 | 505141 | 672 | 1680 | 752 | | |
| 419.8220 | 50.791 | 50.804 | -1 | 1.110 | 5606496 | 1088299 | 909 | 2272 | 1197 | 0.47(0.37-0.51) | |
| 13C-OCDD | | | | | | | | | | | |
| 469.7780 | 54.277 | 54.291 | -1 | 1.187 | 6185183 | 1427483 | 463 | 1157 | 3083 | | |
| 471.7750 | 54.277 | 54.291 | -1 | 1.187 | 6798222 | 1539237 | 656 | 1640 | 2346 | 0.91(0.76-1.02) | |
| 13C-OCDF | | | | | | | | | | | |
| 453.7830 | 54.415 | 54.429 | -1 | 1.190 | 9156675 | 2180826 | 439 | 1097 | 4968 | | |
| 455.7801 | 54.415 | 54.429 | -1 | 1.190 | 10009913 | 2358456 | 551 | 1377 | 4280 | 0.91(0.76-1.02) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31.872 | 31.871 | 0 | 1.019 | 209201 | 21001 | 56 | 140 | 375 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 31.273 | 31.289 | -1 | | 3894273 | 420853 | 599 | 1497 | 703 | | |
| 333.9338 | 31.273 | 31.289 | -1 | | 4760058 | 531850 | 490 | 1225 | 1085 | 0.82(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.740 | 45.738 | 0 | | 5160532 | 1151072 | 642 | 1605 | 1793 | | |
| 403.8529 | 45.740 | 45.738 | 0 | | 4133581 | 926028 | 827 | 2067 | 1120 | 1.25(1.05-1.43) | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

## Reagents:

61L21613OP_00001 Amount Added: 20.00 Units: uL

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i2.d
Lims ID: IC L2
Client ID:
Inject. Date: 16-May-2014 15:26:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 2
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 3
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDD, RT: 30.308

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 319.8965 Area | 319.8965 Height | 321.8936 Area | 321.8936 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 25.705 | 1151 | 291 | 550 | 169 | | 2.09 | Rn |
| 29.778 | 2272 | 356 | 755 | 219 | | 3.01 | Rn |
| Signal Totals: | | | | | | | |
| | 3423 | 647 | 1305 | 388 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 4728 | 1035 | | | | 2.62 | RQ |
| | 2309 | 686 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4728 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (2309 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i2.d
Lims ID: IC L2
Client ID:
Inject. Date: 16-May-2014 15:26:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 2
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 3
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-HpCDD, RT: 49.566

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 423.7767 Area | 423.7767 Height | 425.7737 Area | 425.7737 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 48.985 | 4300 | 861 | 3113 | 807 | | 1.38 | Rn |
| Signal Totals: | | | | | | | |
| | 4300 | 861 | 3113 | 807 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 7413 | 1668 | | | | 1.38 | RQ |
| | 6350 | 1646 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (7413 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (6350 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

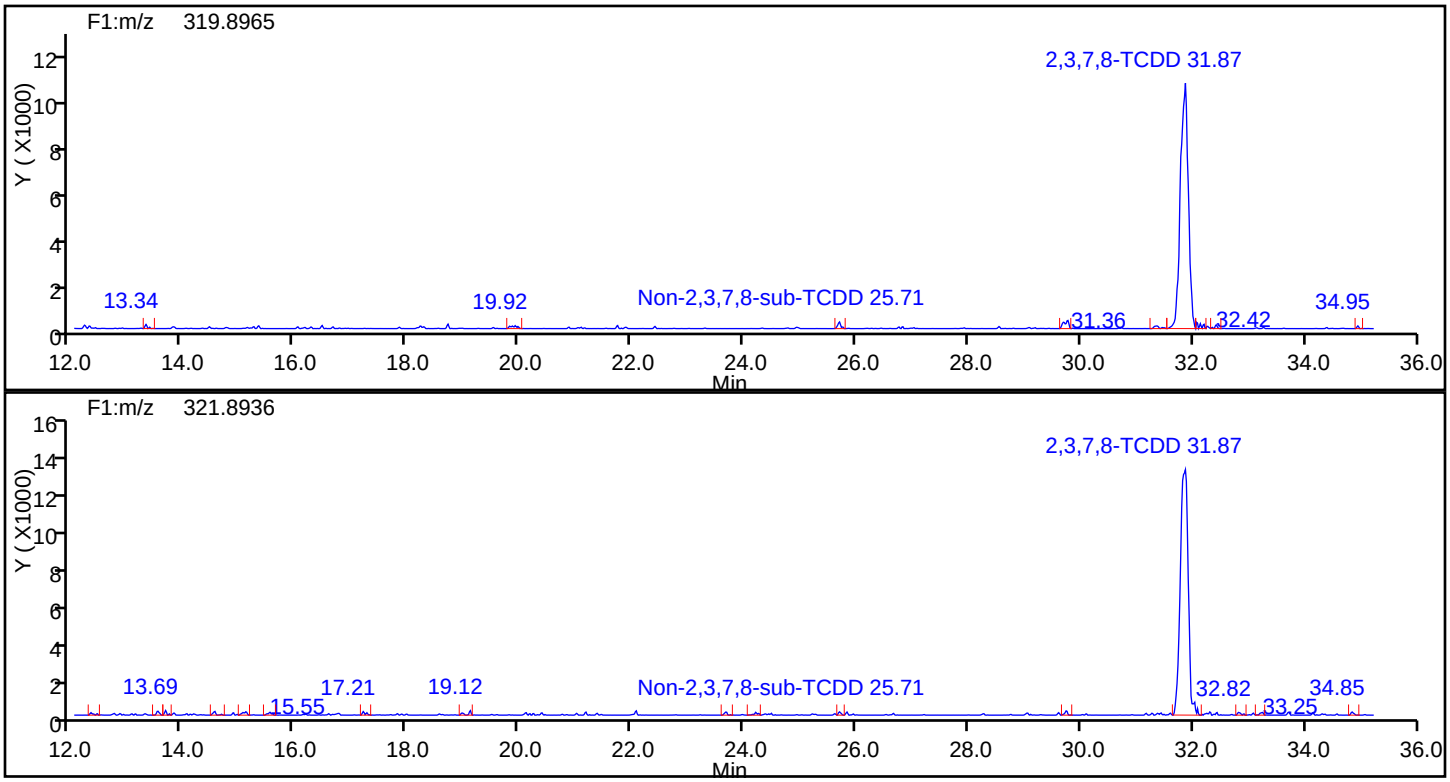
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TestAmerica Knoxville

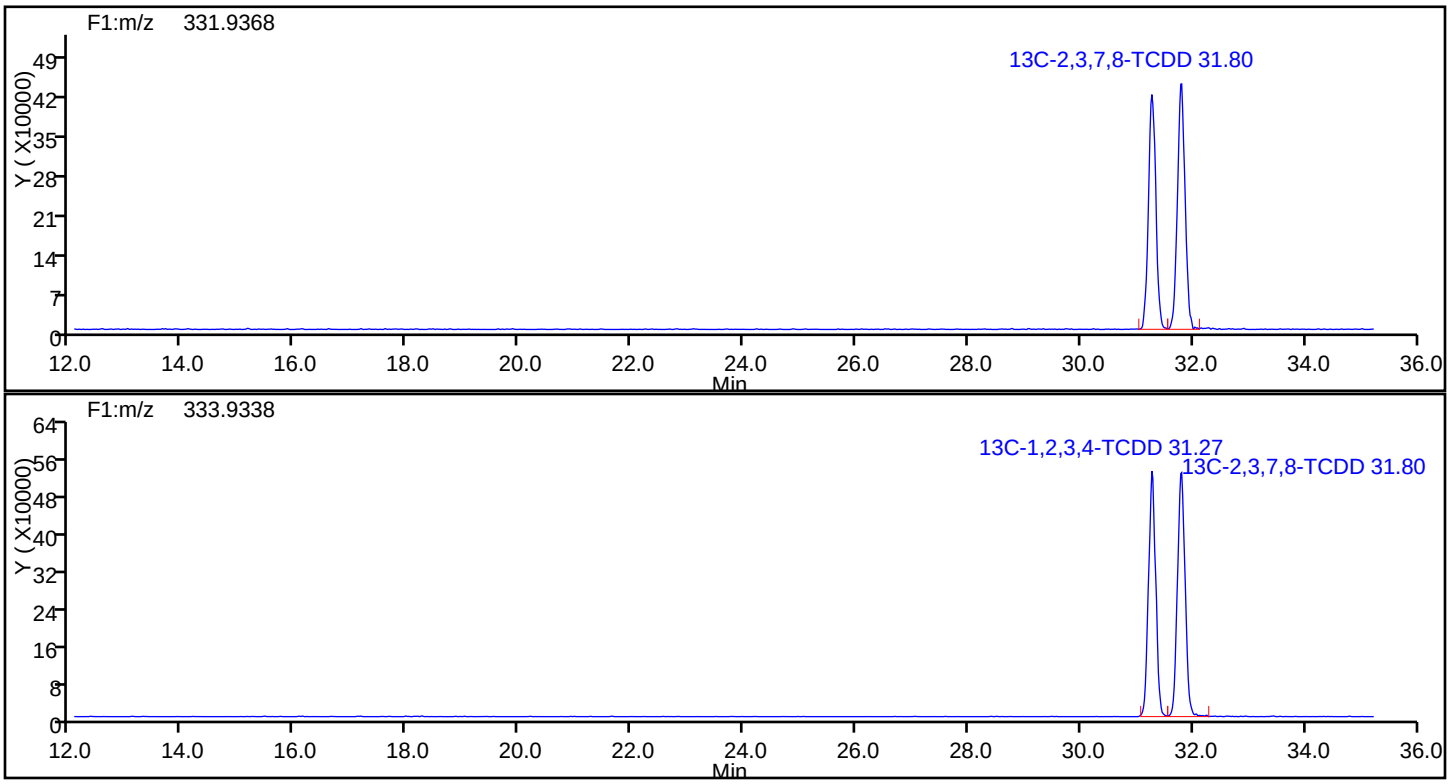
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|---|---|---|---|
| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Standards

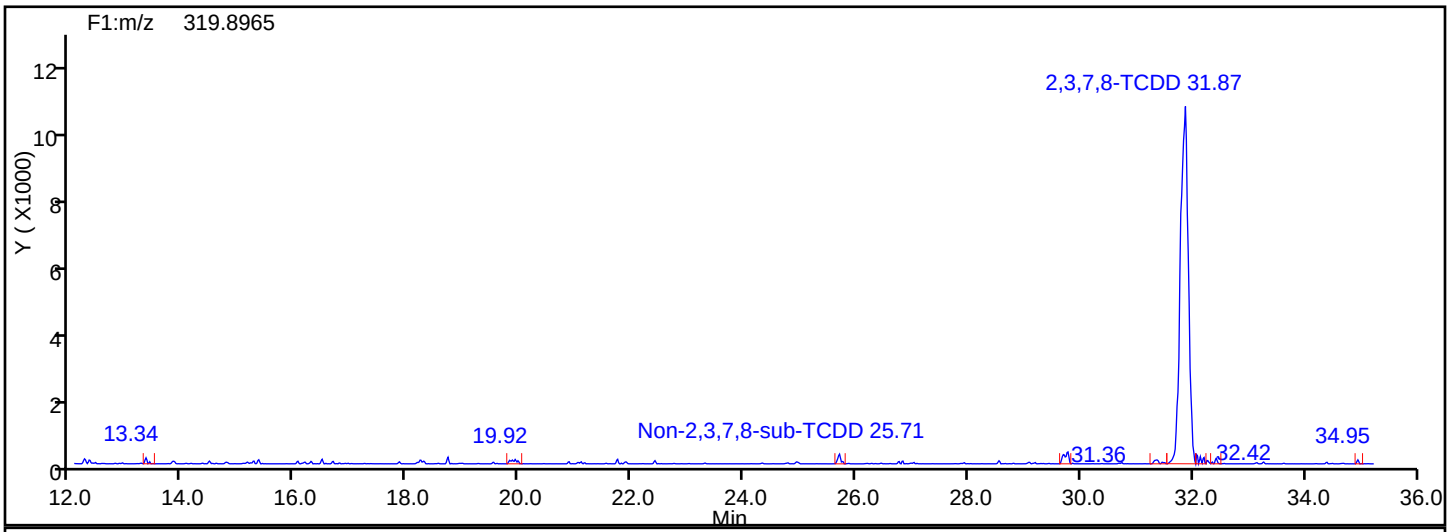


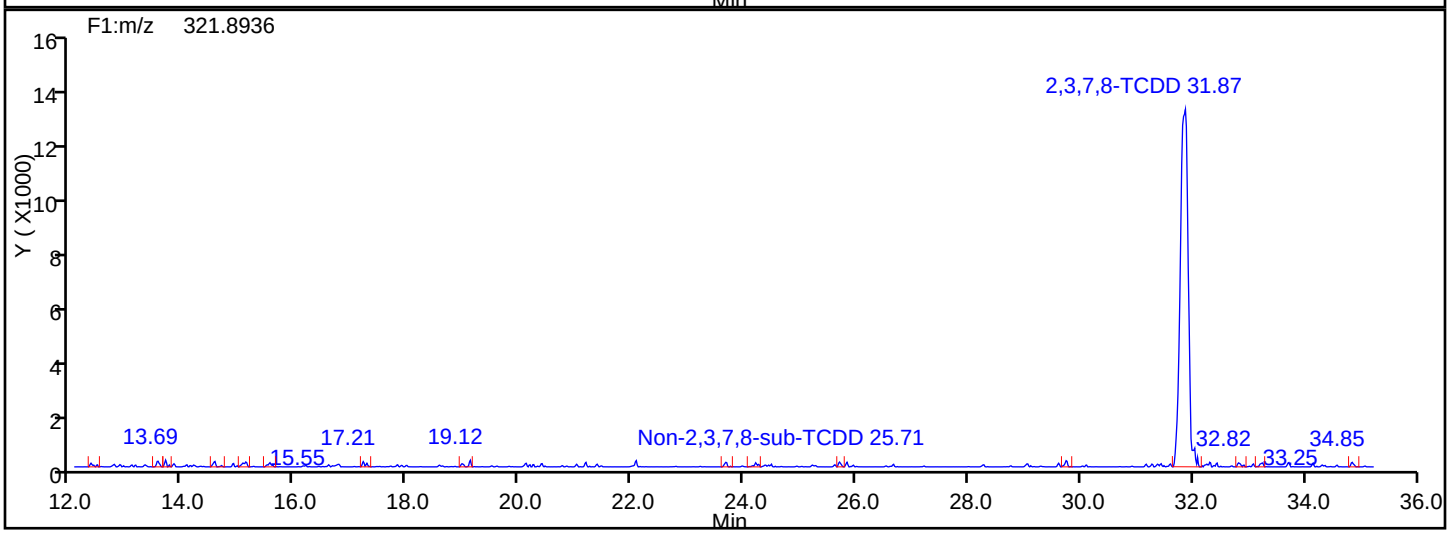
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TestAmerica Knoxville

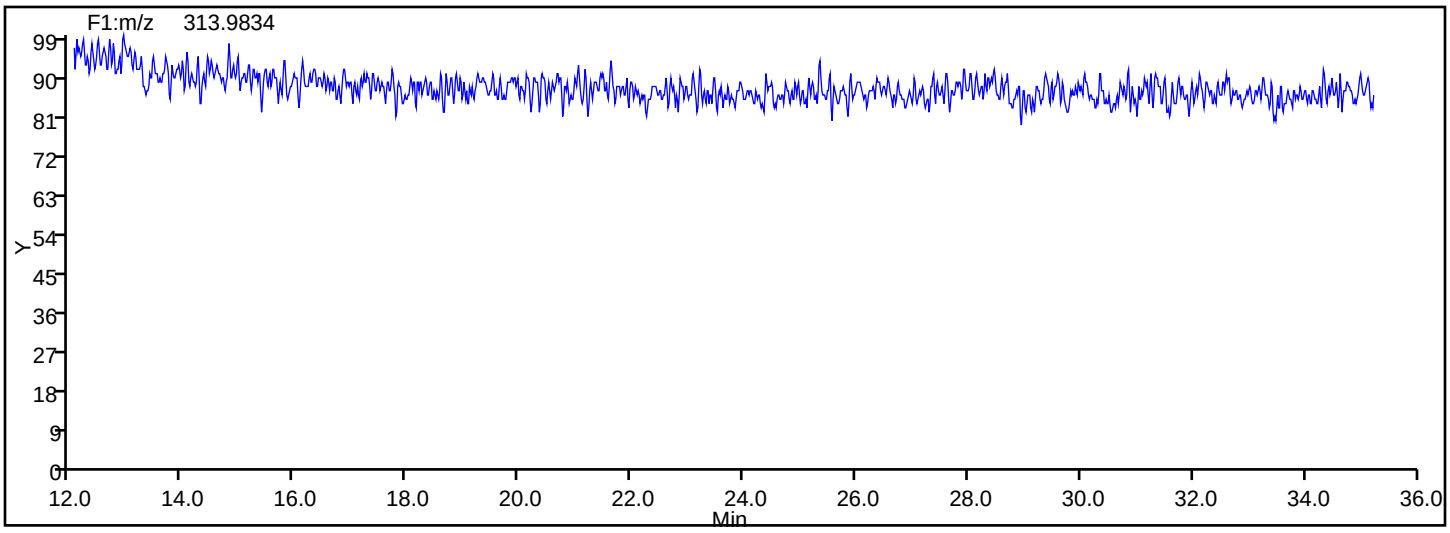
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| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



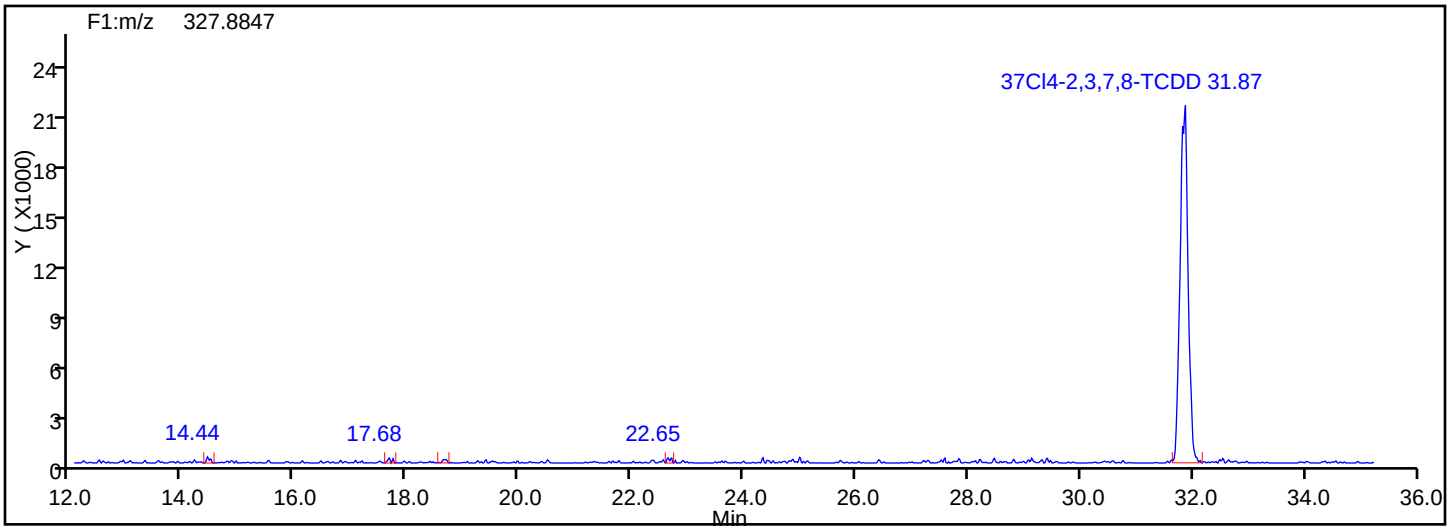
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TestAmerica Knoxville

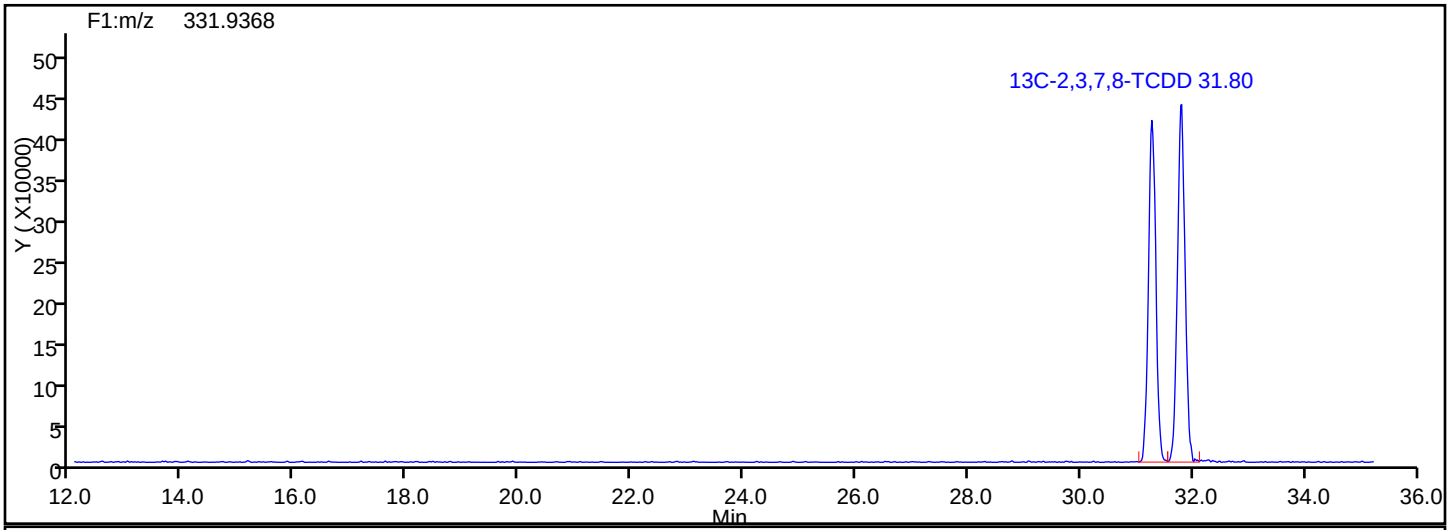
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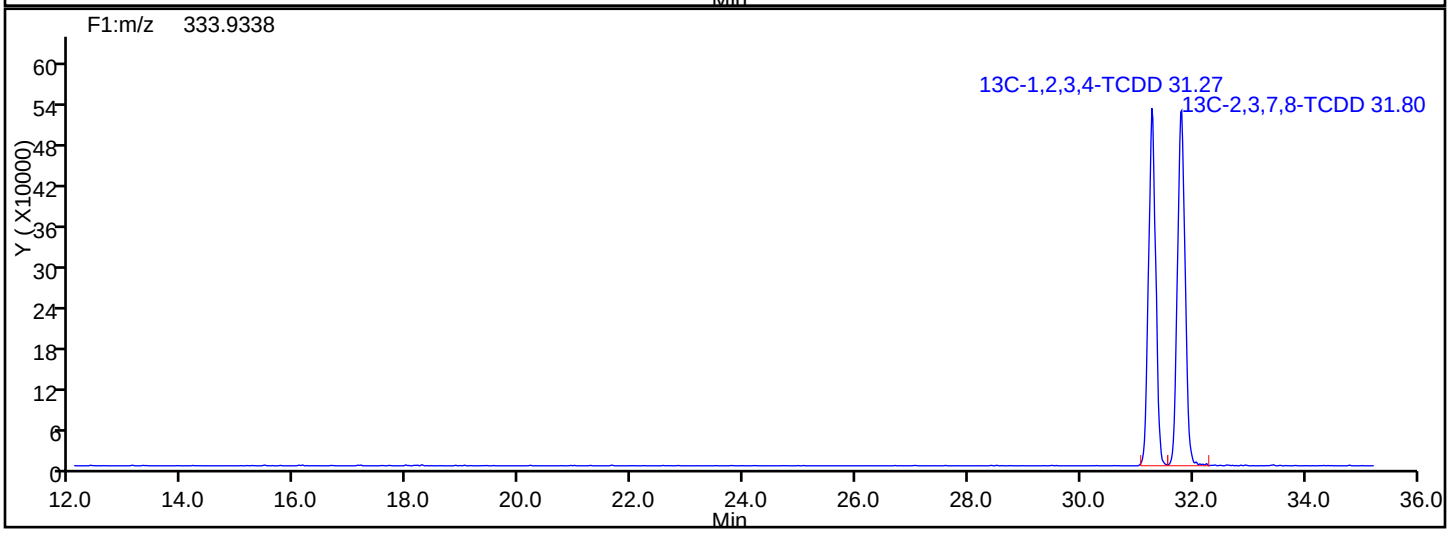
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|---|---|---|---|
| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



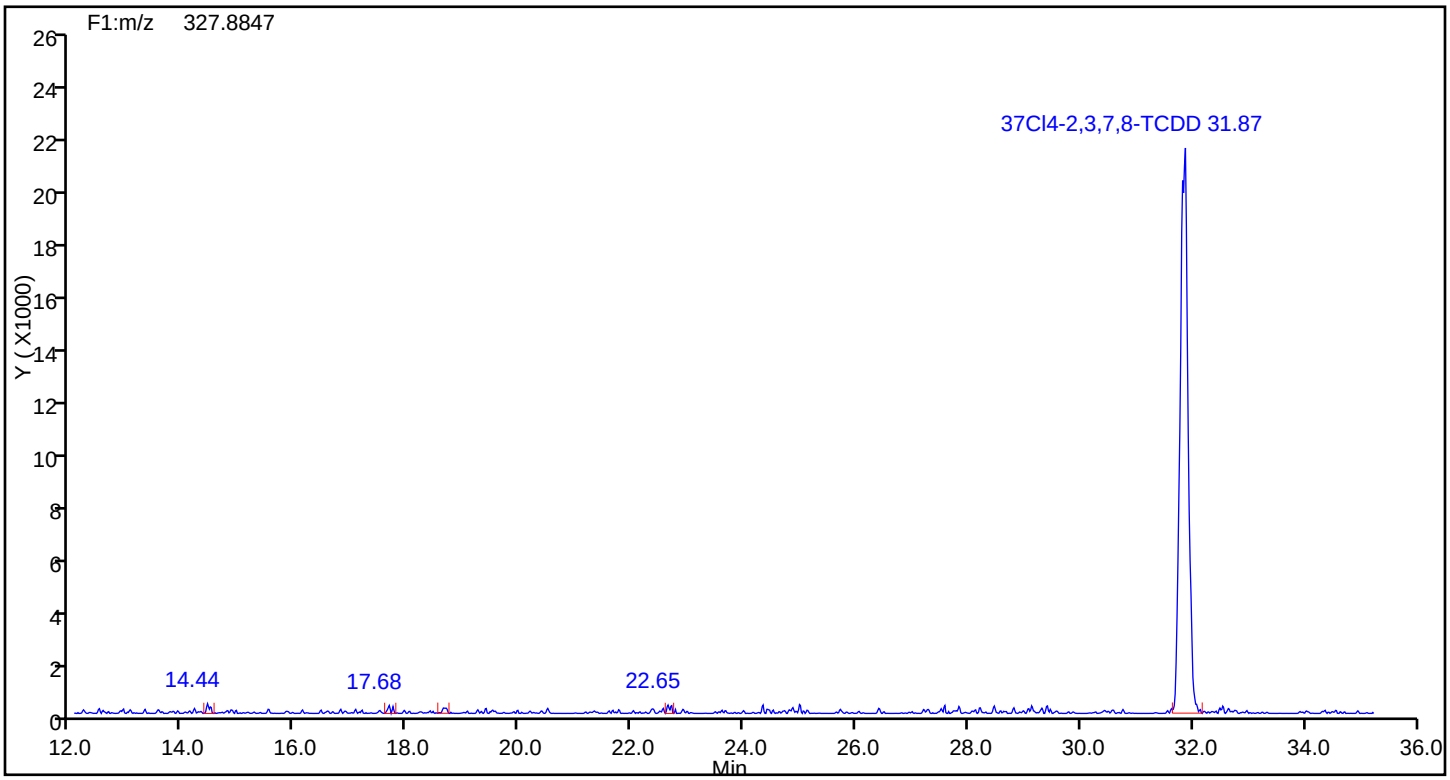
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TestAmerica Knoxville

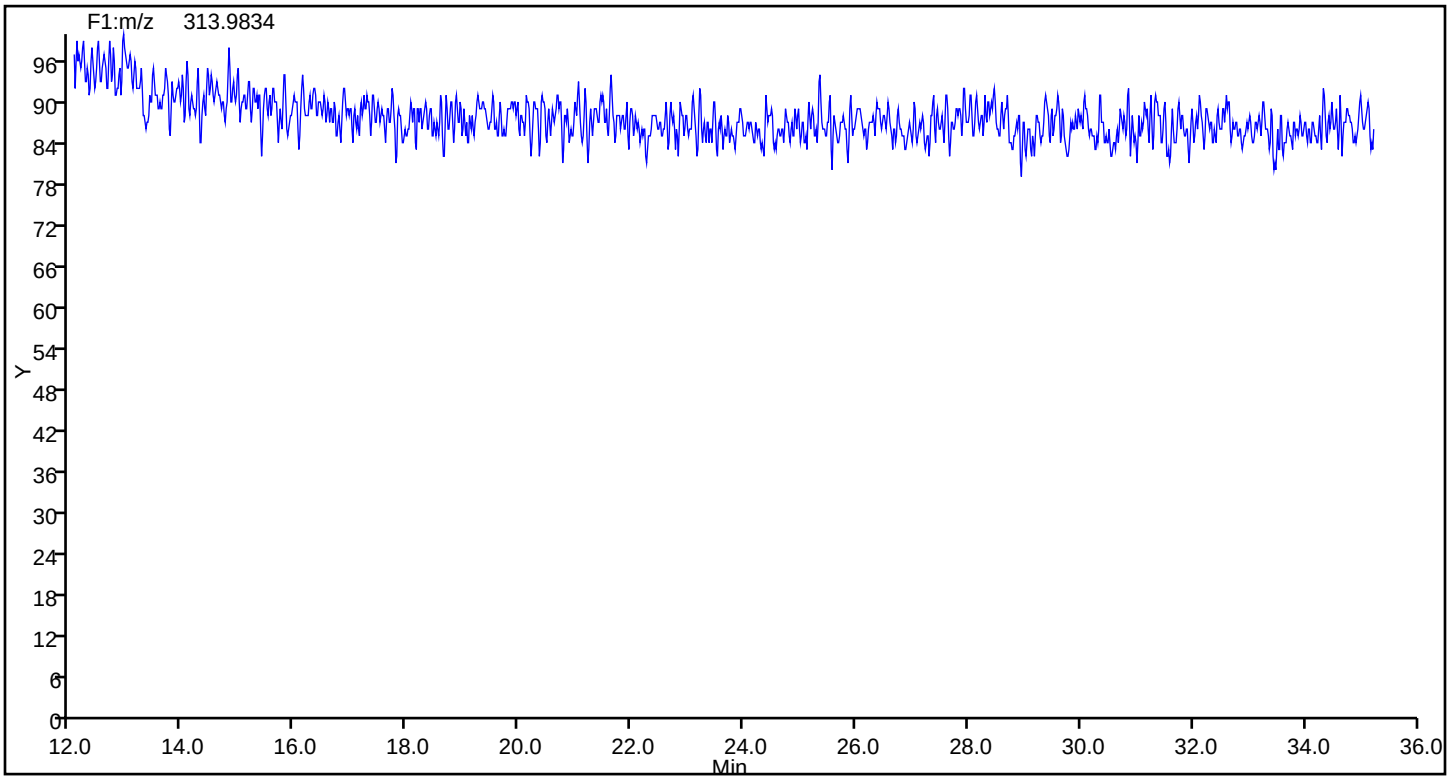
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| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Lock Mass



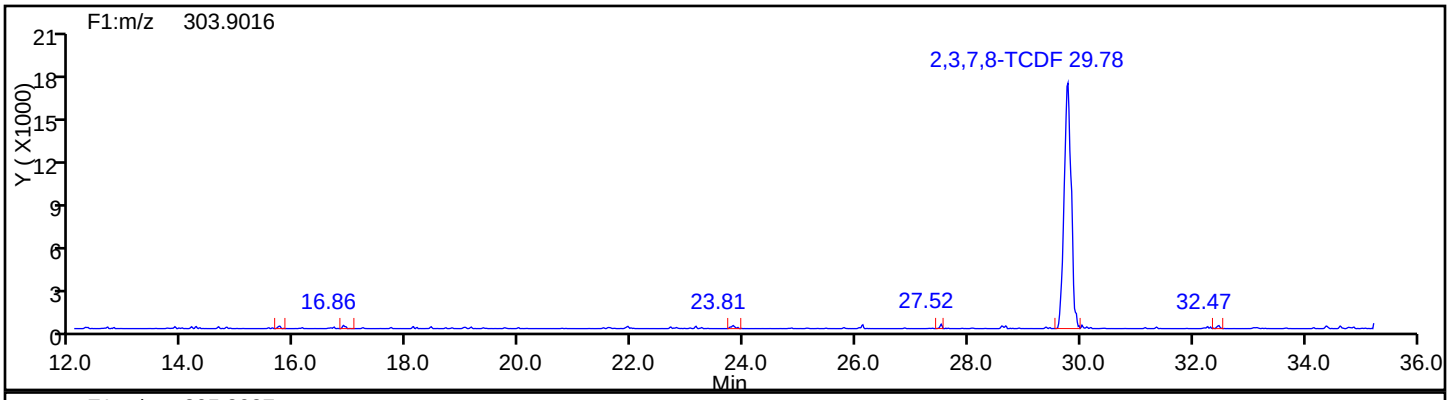
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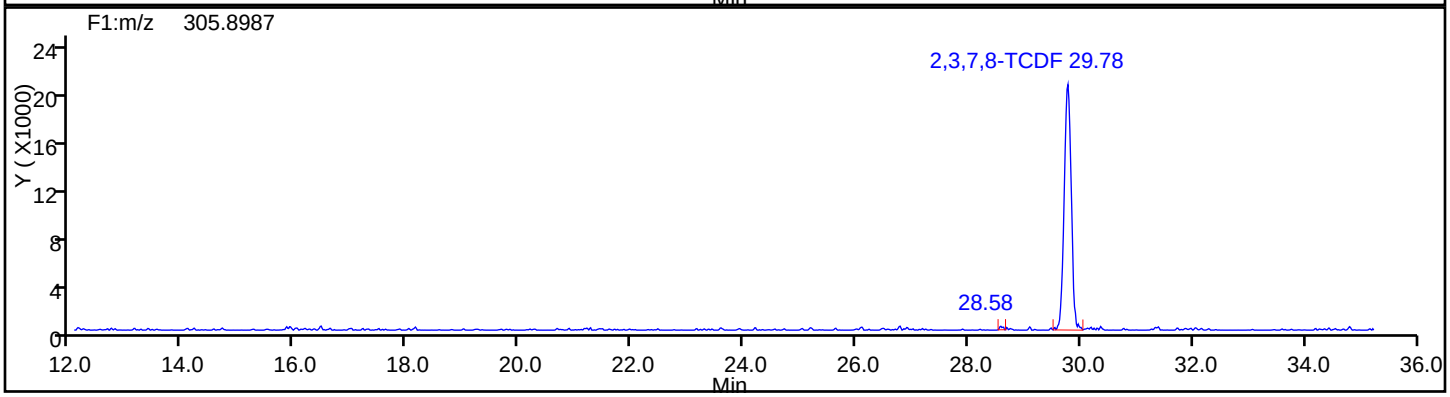
TestAmerica Knoxville

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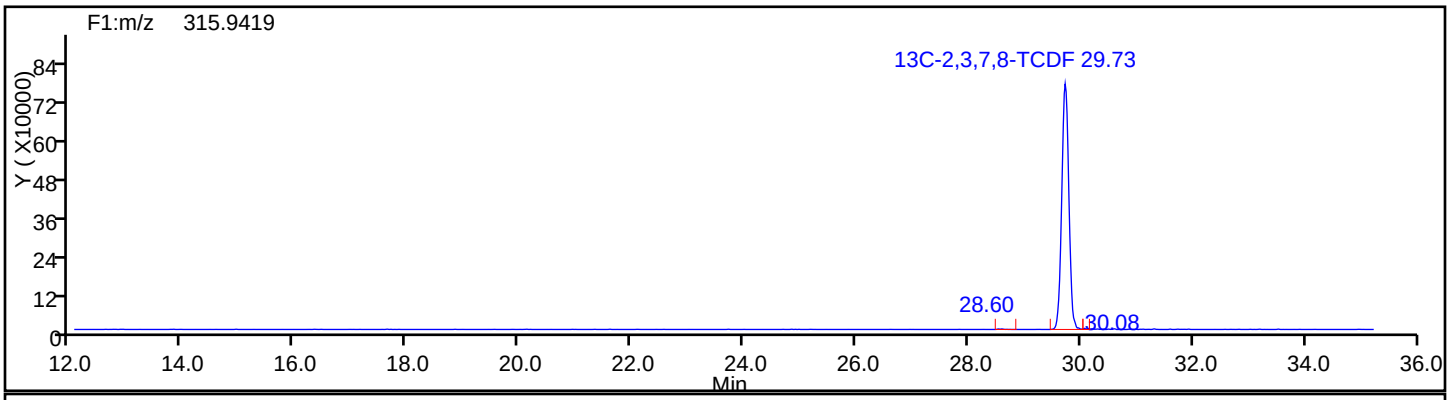
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| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

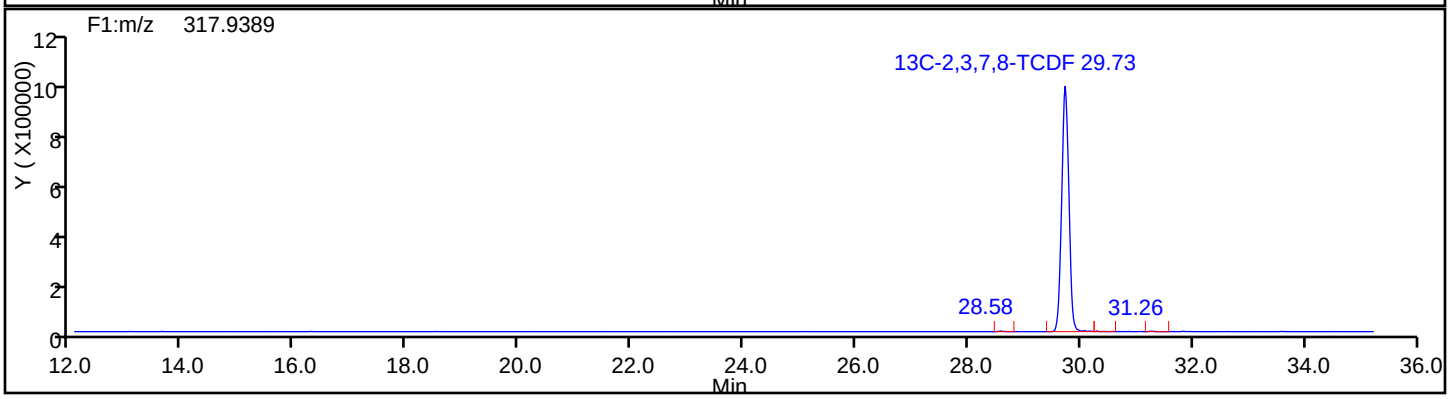
TCDF




TCDF Standards



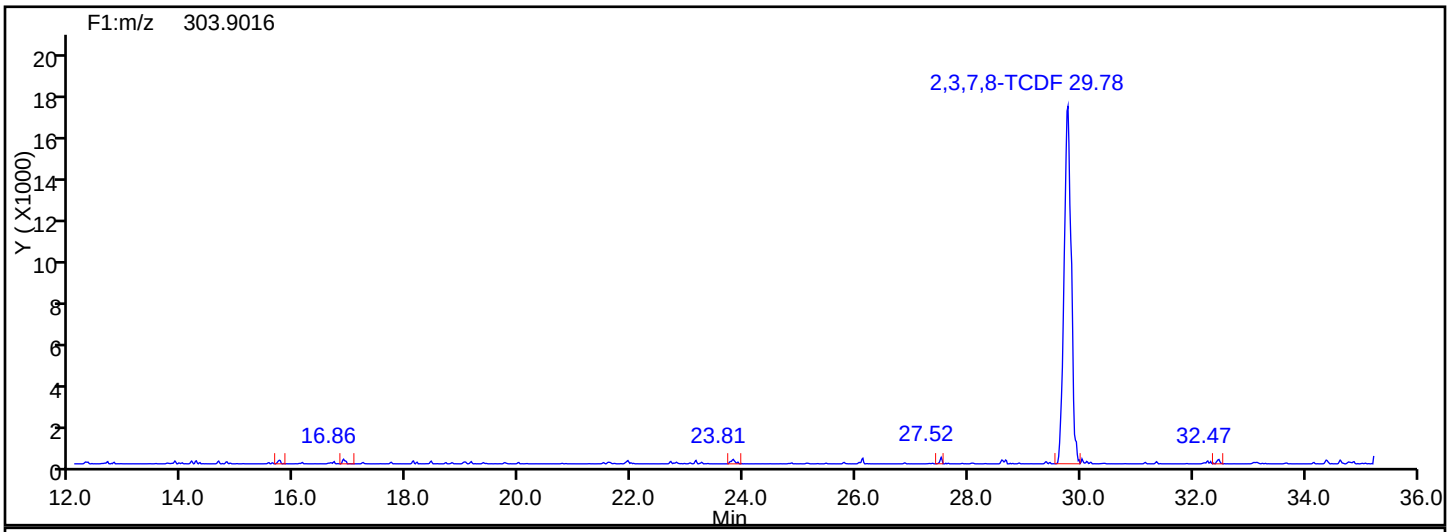
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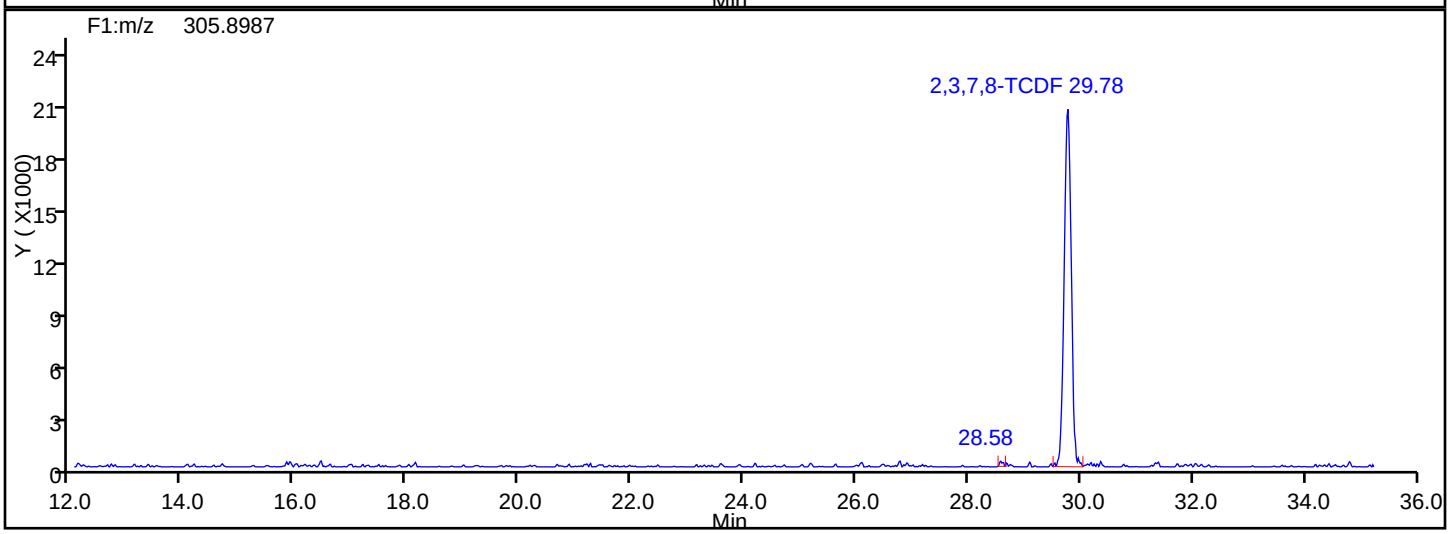
TestAmerica Knoxville

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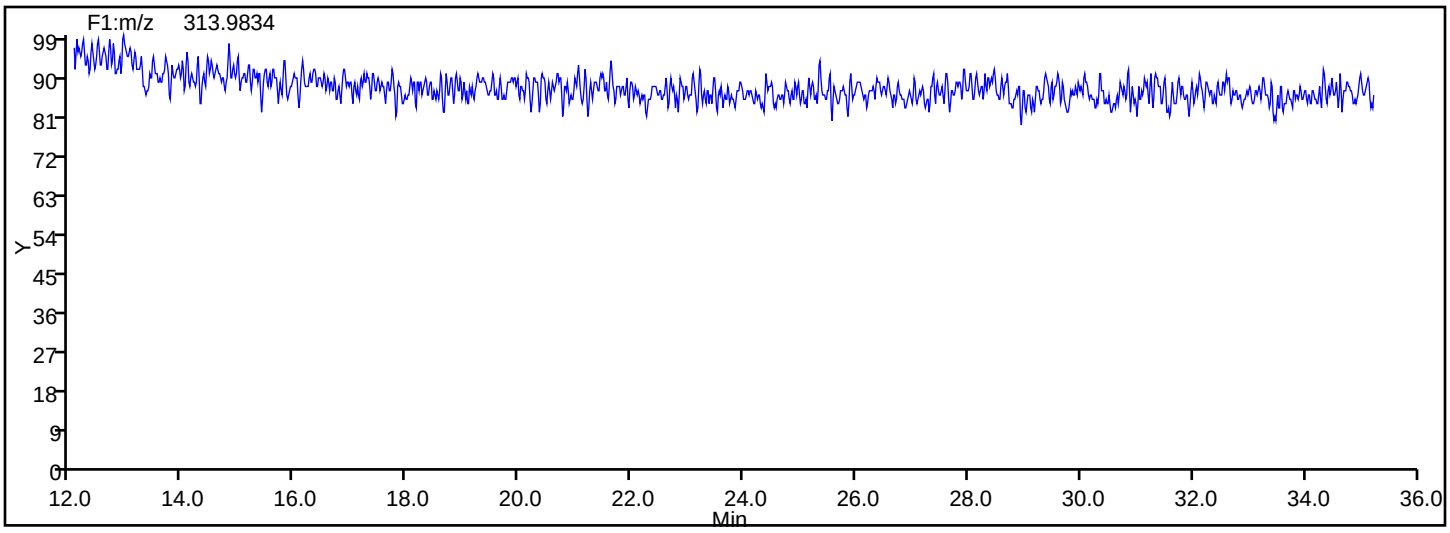
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

TCDF




TCDF Lock Mass

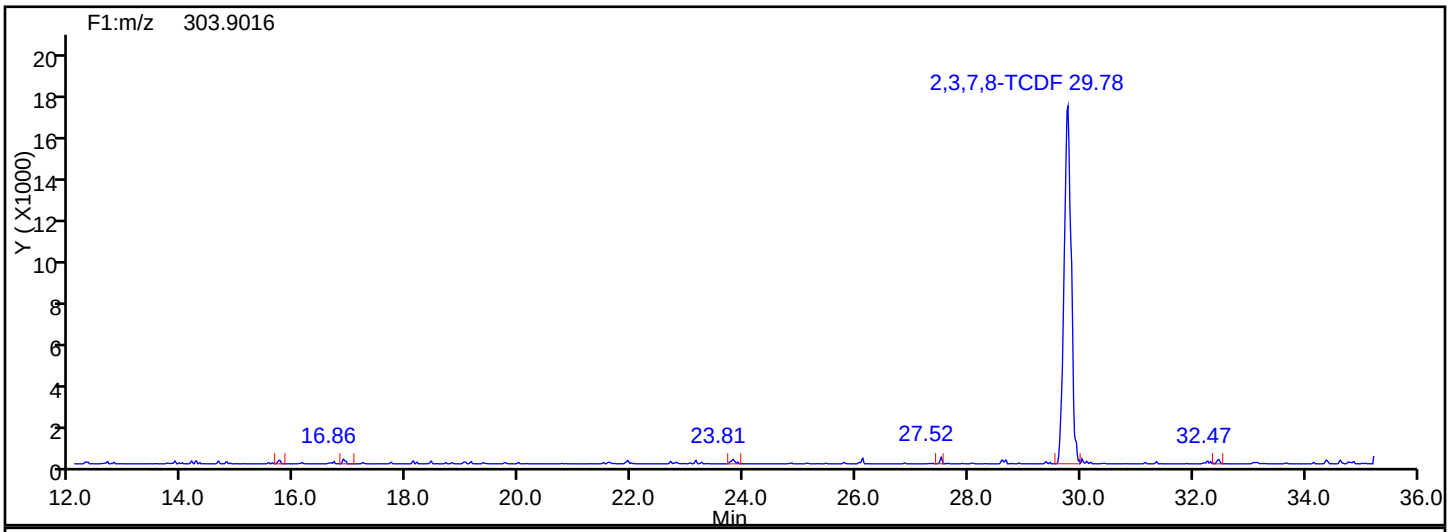


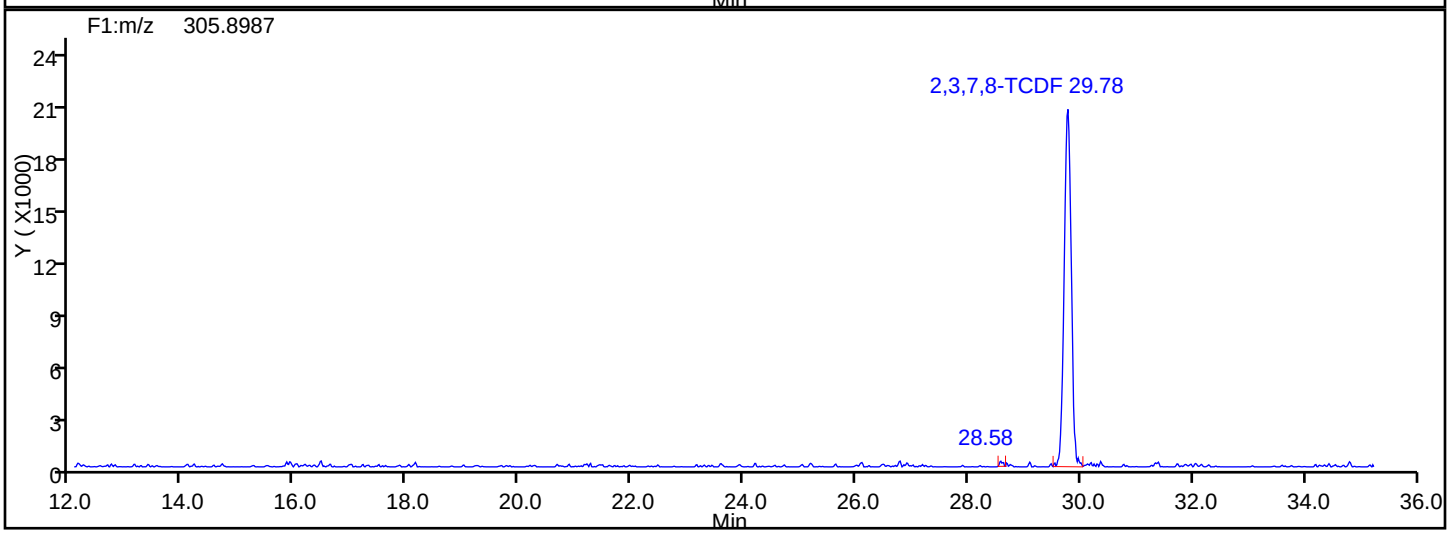
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TestAmerica Knoxville

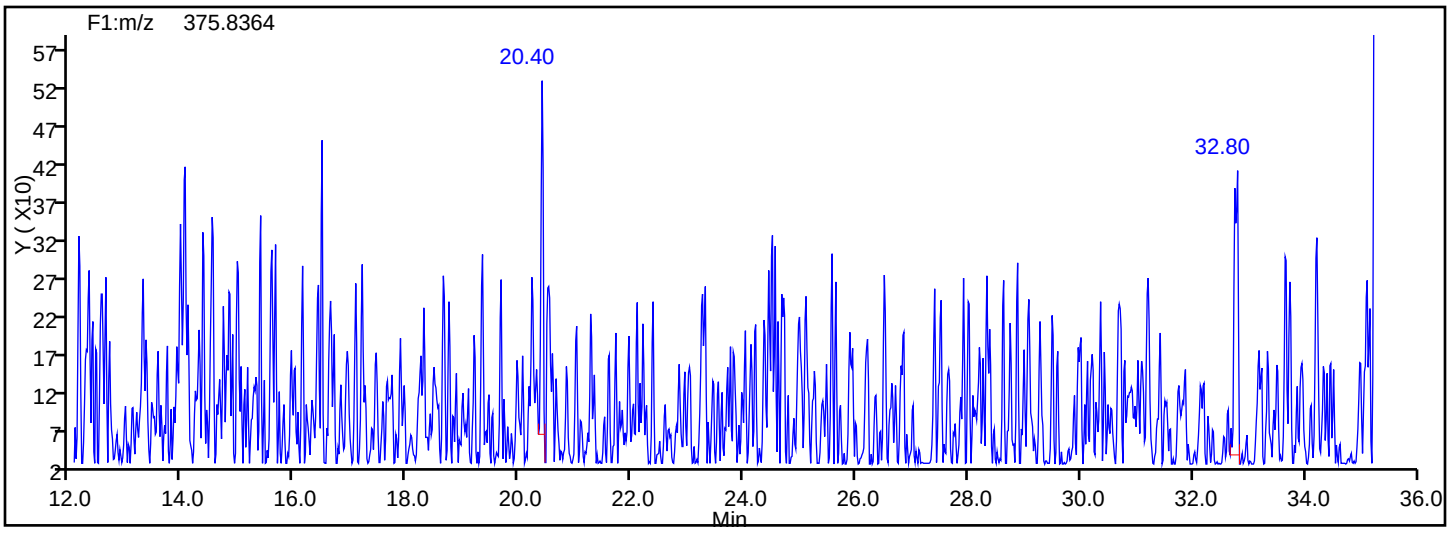
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| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

TCDF




TCDF Interference Mass



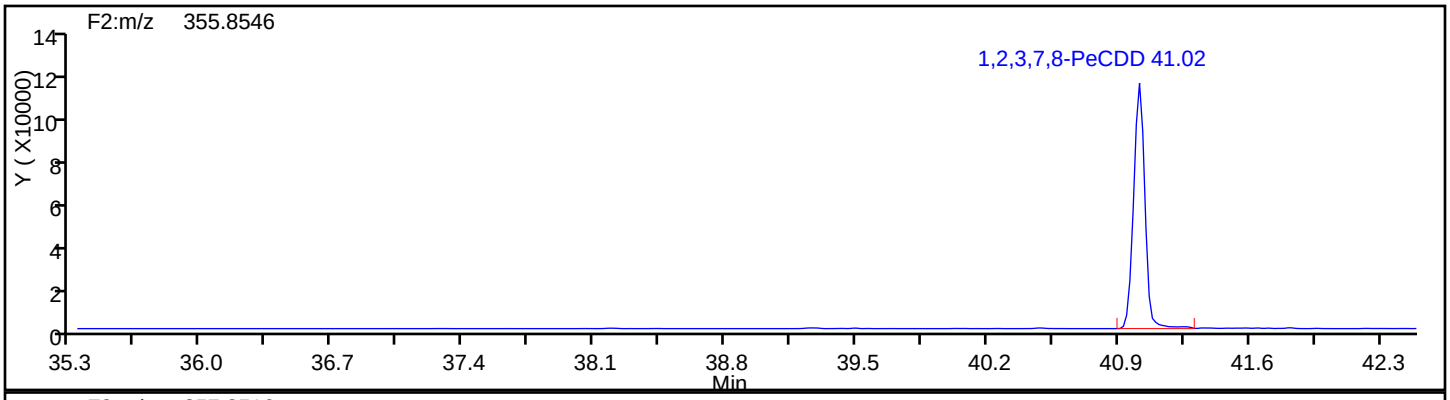
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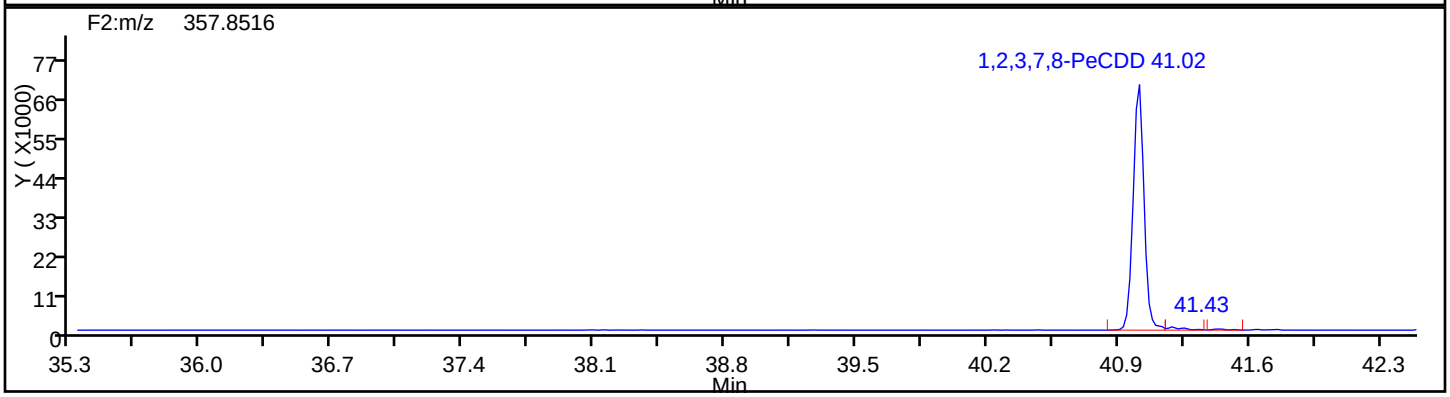
TestAmerica Knoxville

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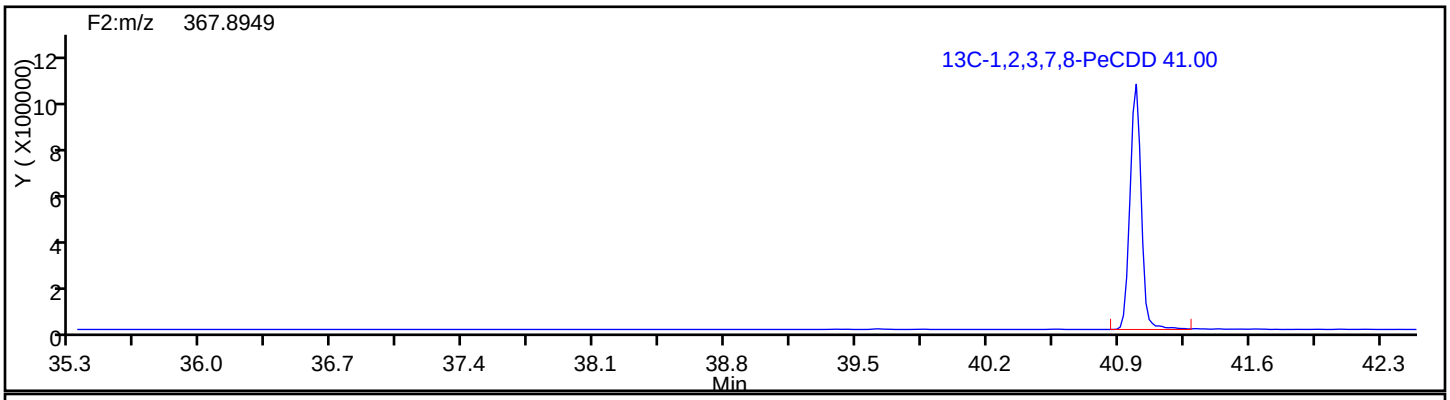
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|---|---|---|---|
| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

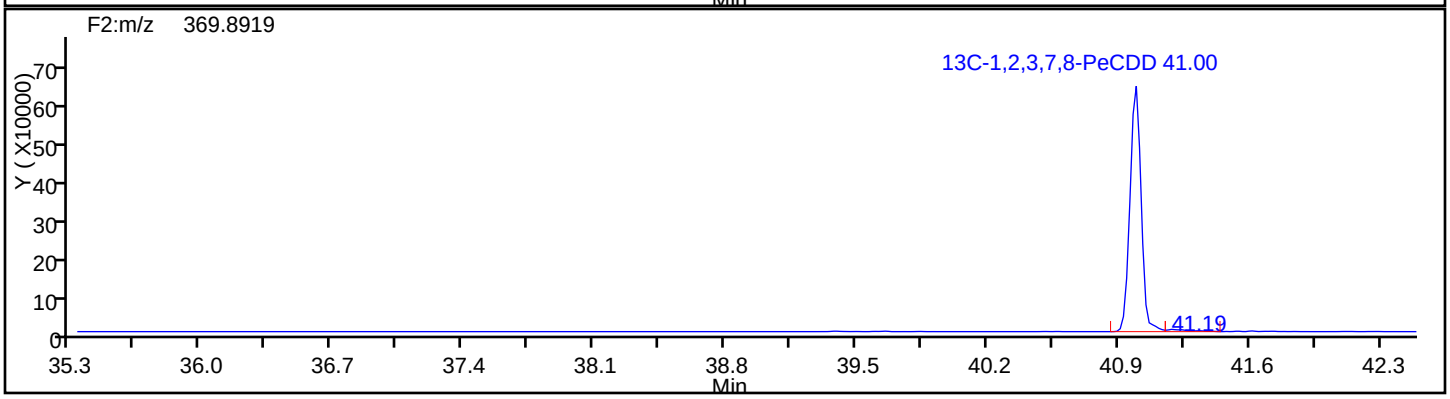
PeCDD




PeCDD Standards



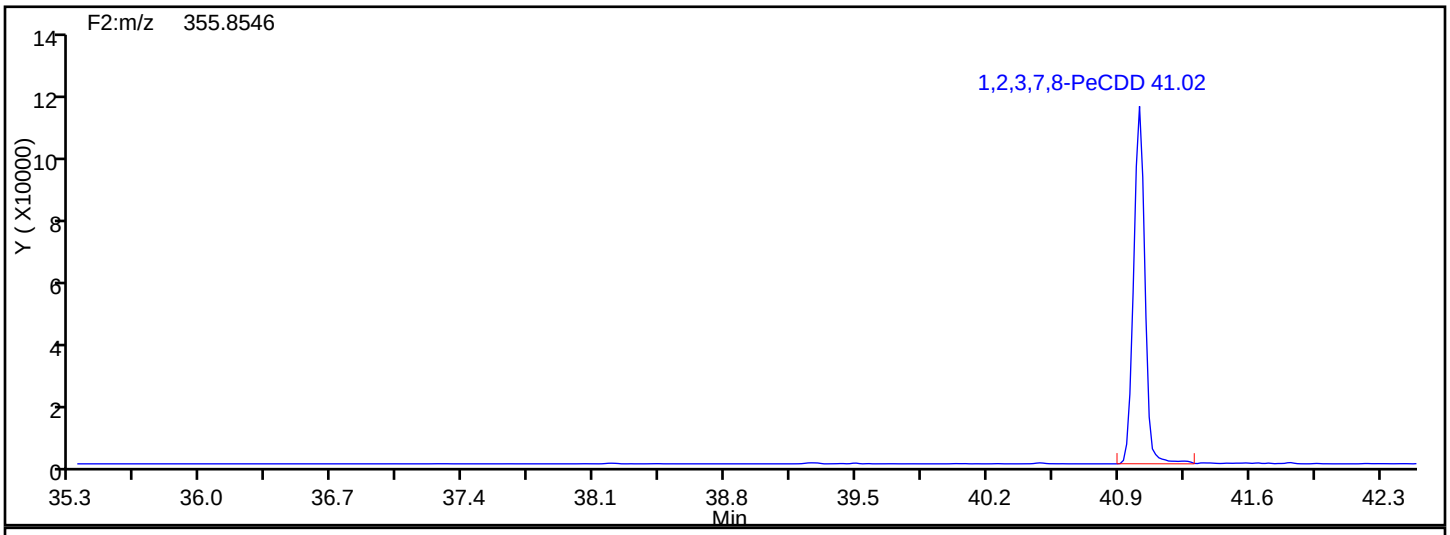



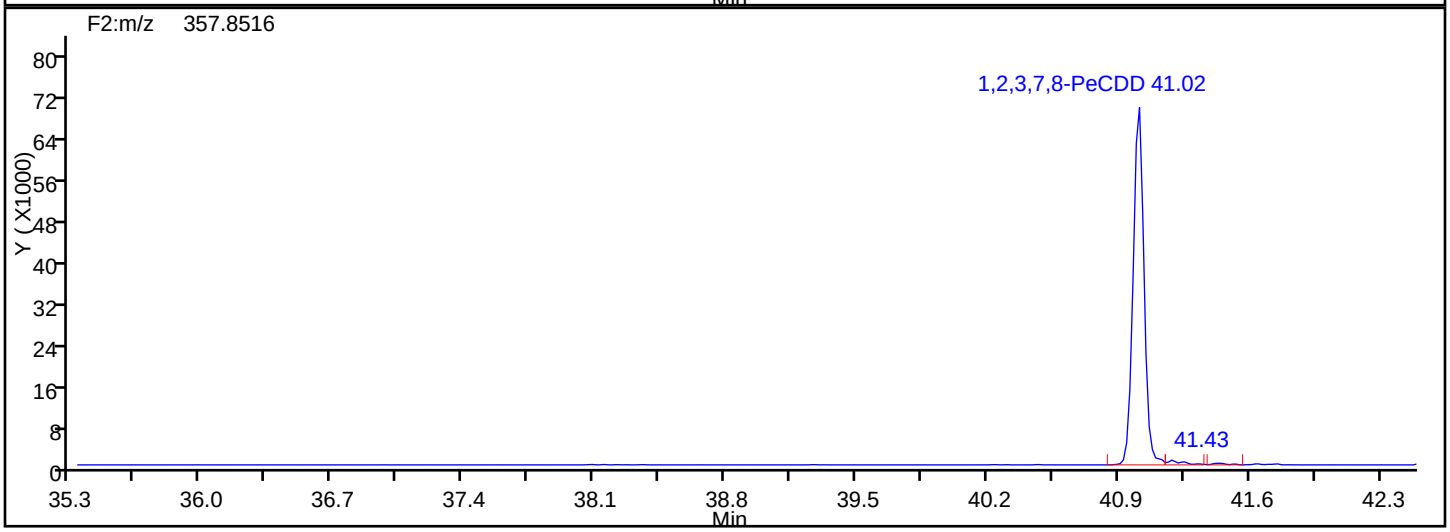
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TestAmerica Knoxville

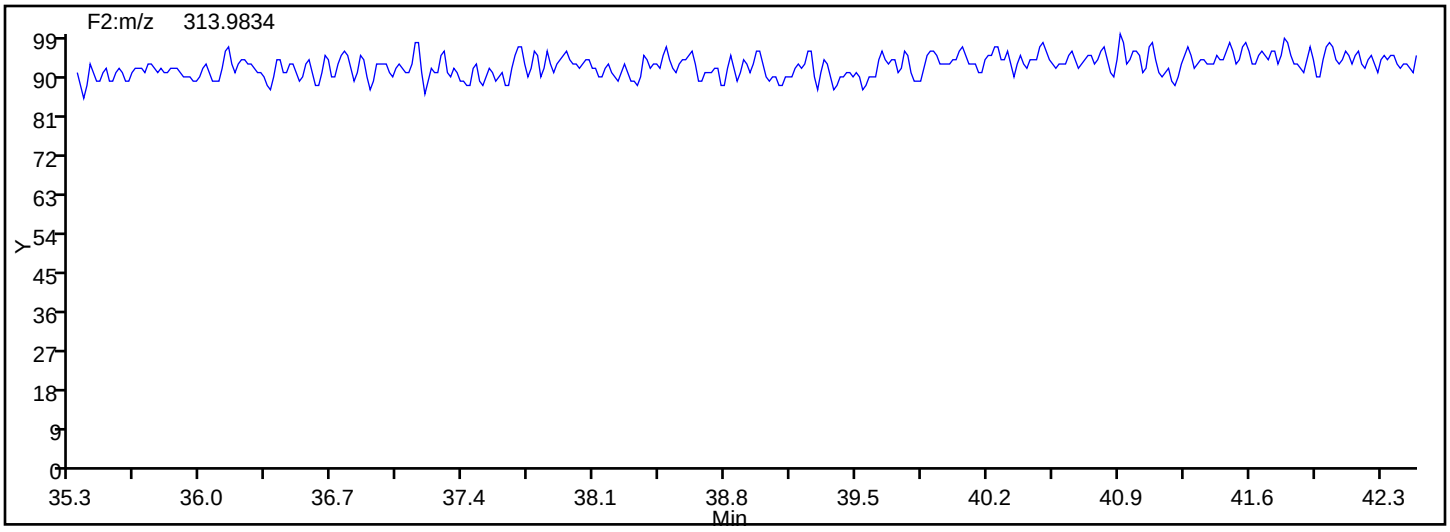
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Injection Date: 16-May-2014 15:26:00 Injection Vol: 1.0 ul
Instrument ID: D2A Operator ID: DavidsonM
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL
Client ID:
Worklist#: 7768 Sample Line#: 3
Column Type: Column Dia:

PeCDD




PeCDD Lock Mass



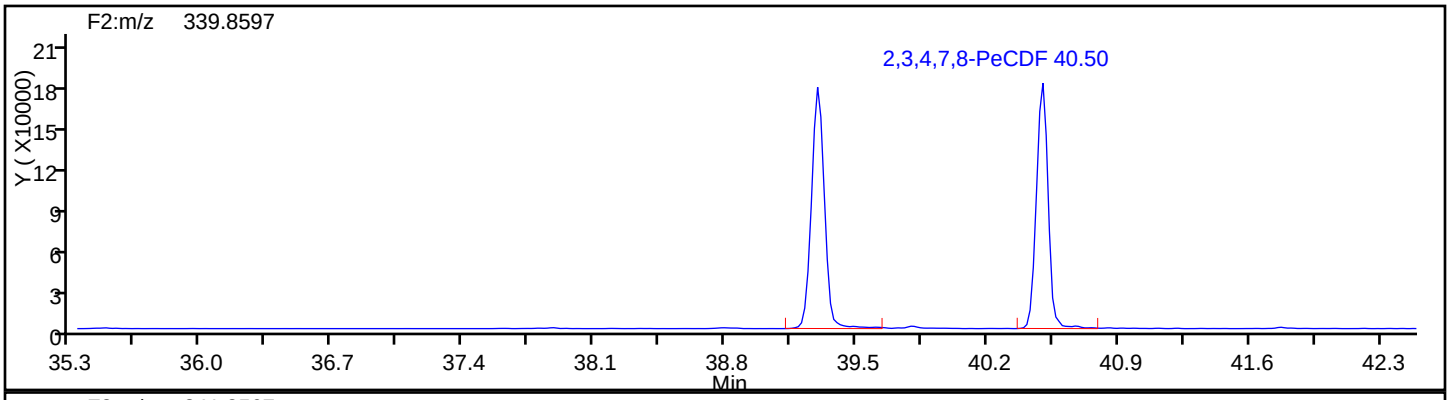
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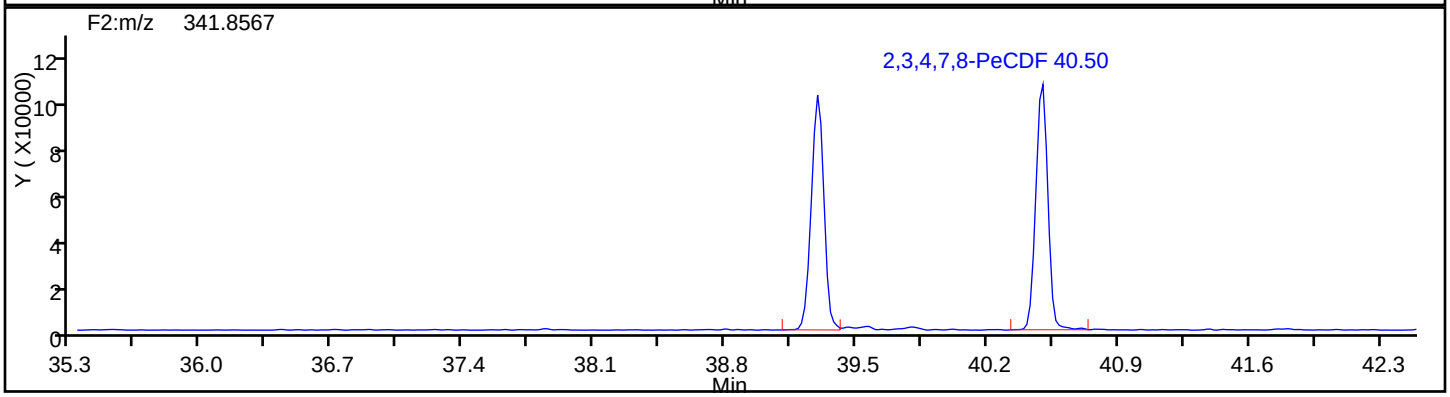
TestAmerica Knoxville

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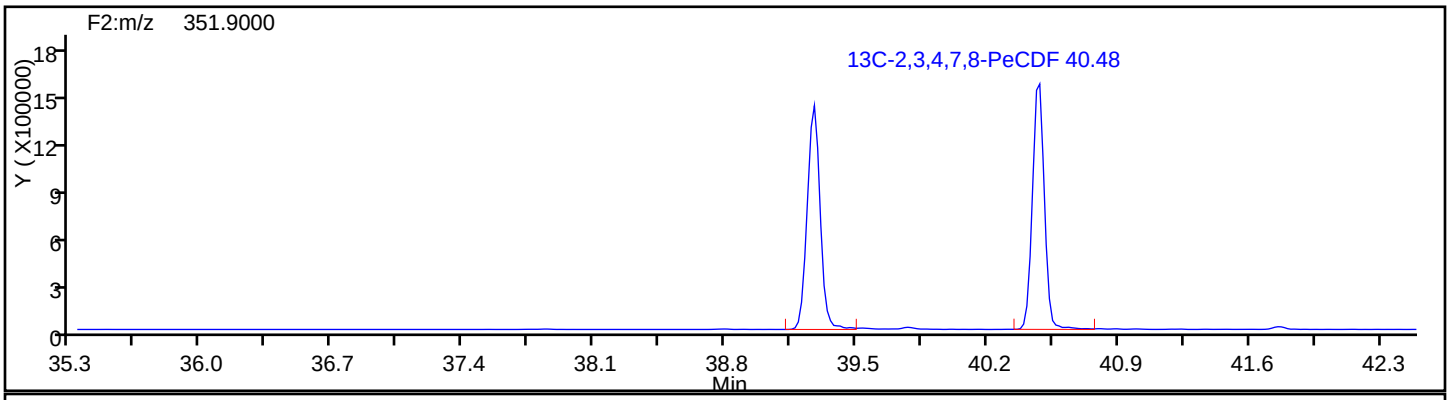
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| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

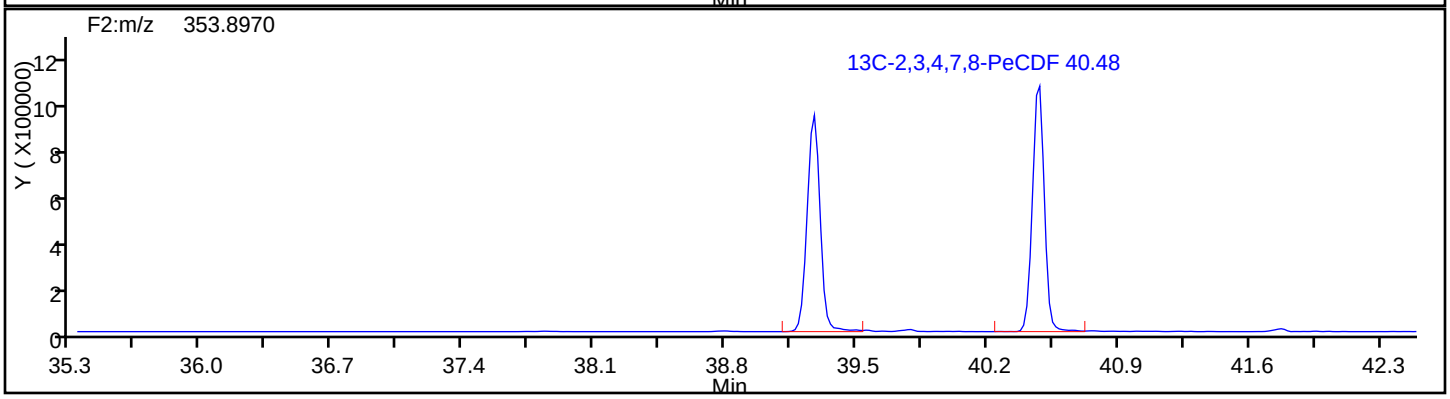
PeCDF




PeCDF Standards



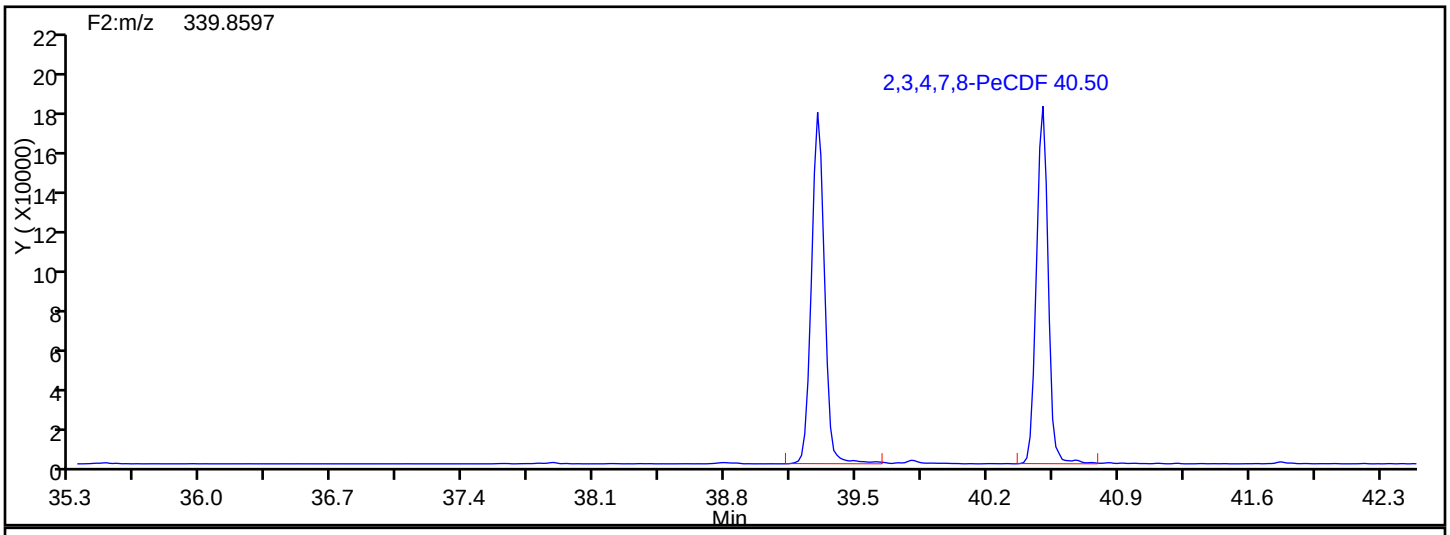
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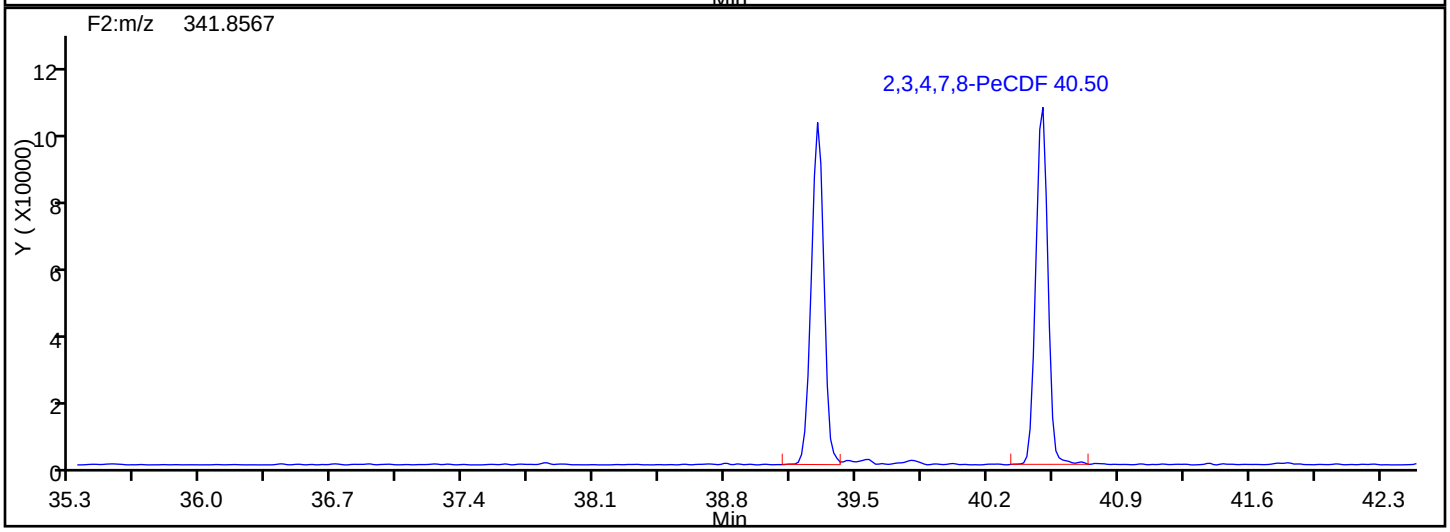
TestAmerica Knoxville

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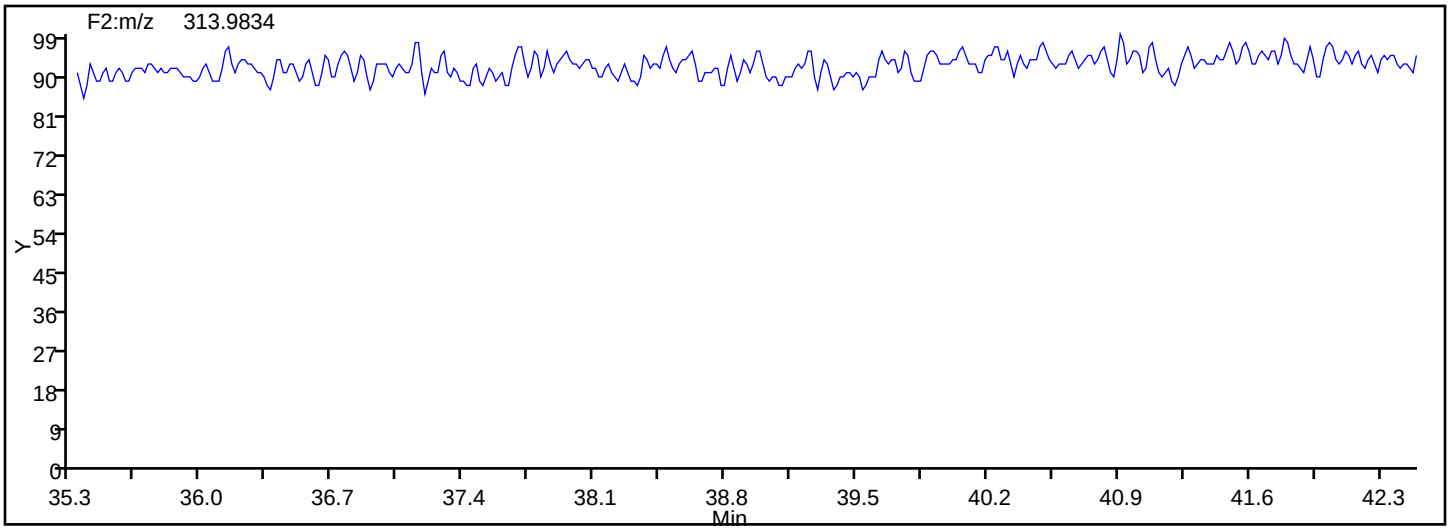
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

PeCDF




PeCDF Lock Mass



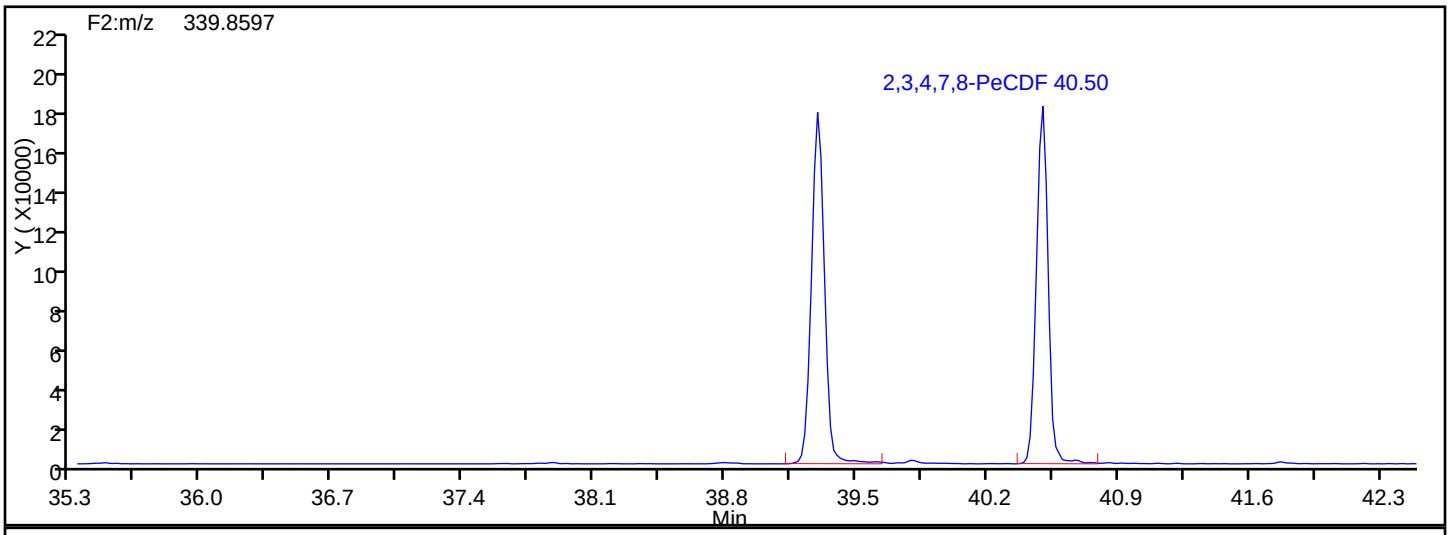
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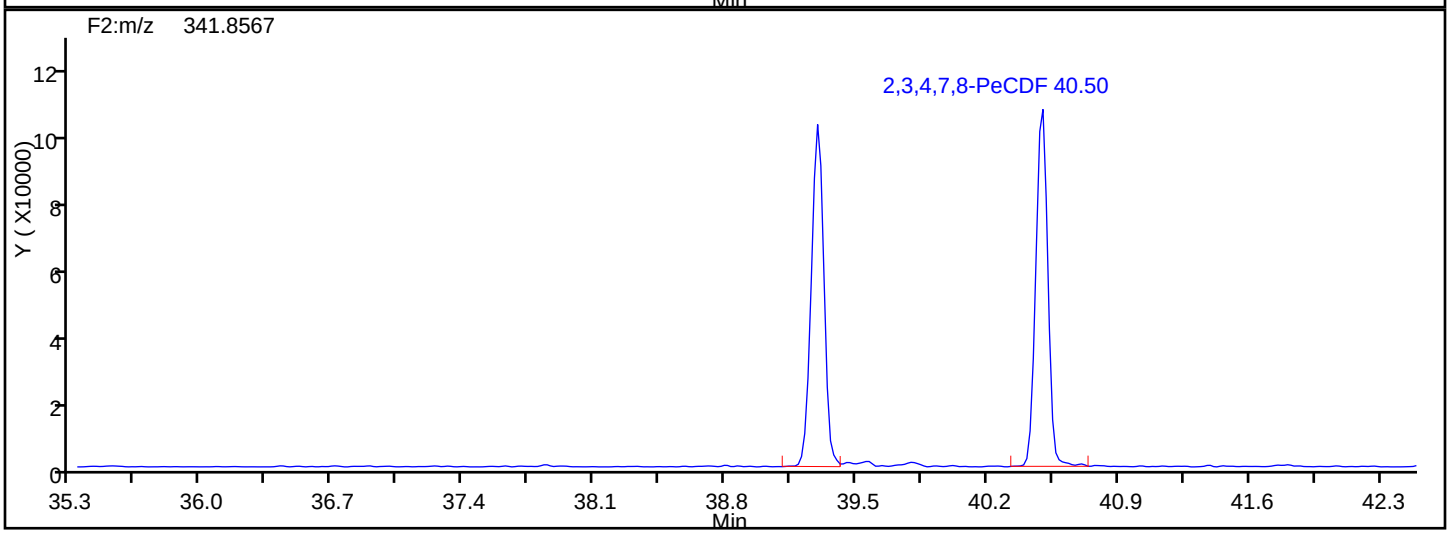
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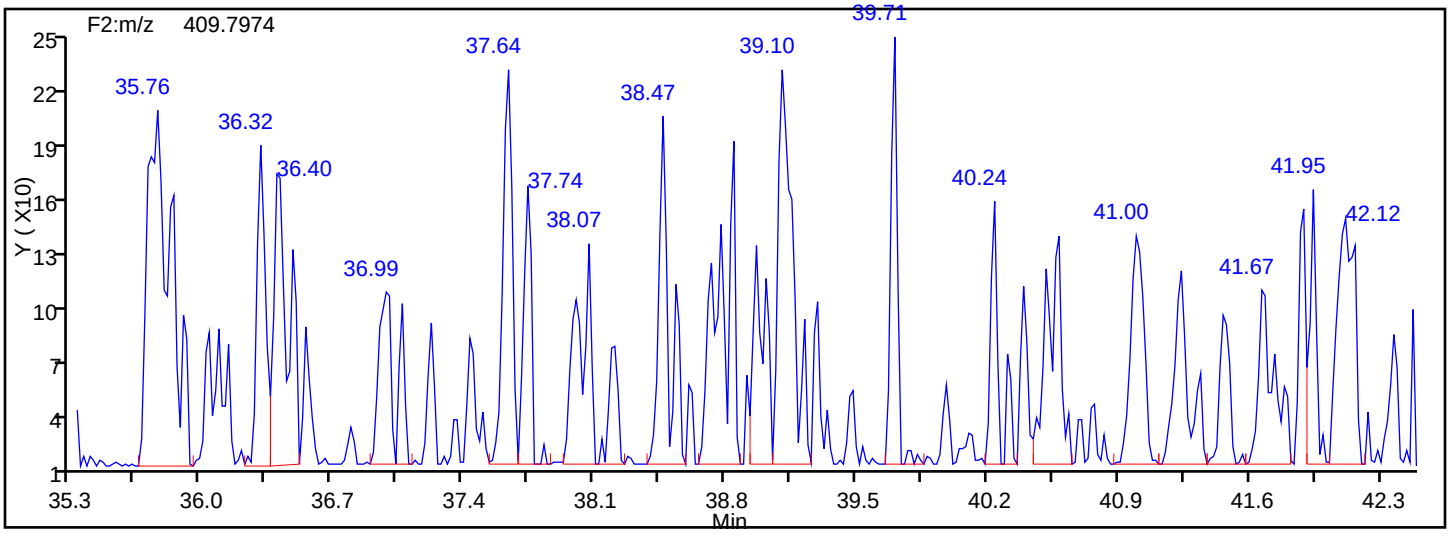
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

PeCDF




PeCDF Interference Mass



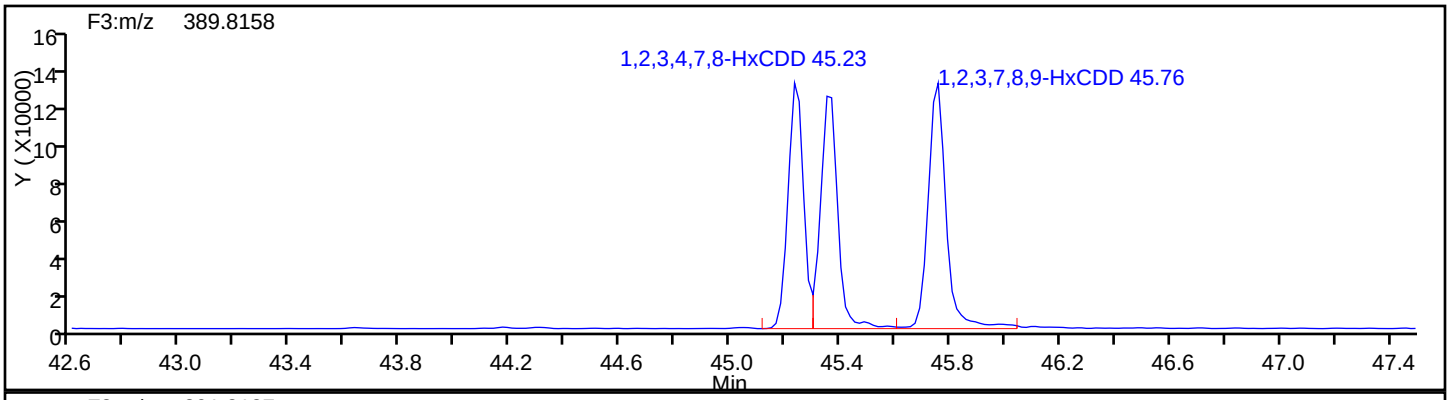
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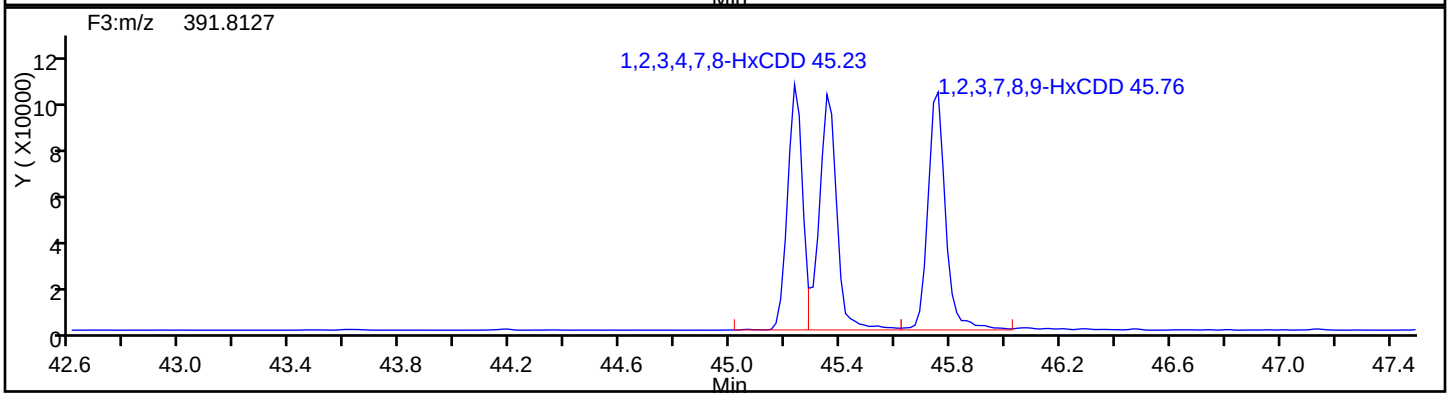
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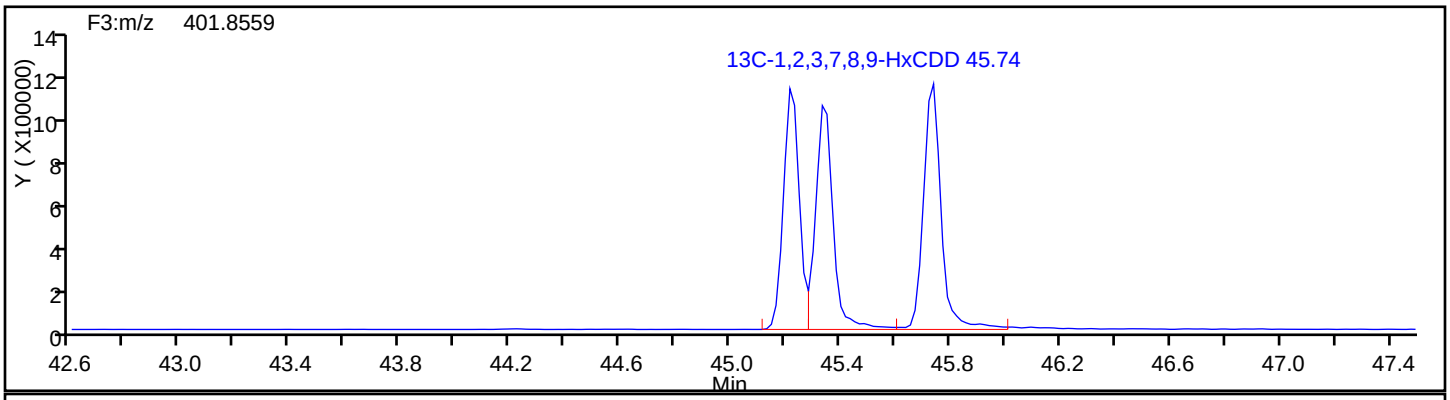
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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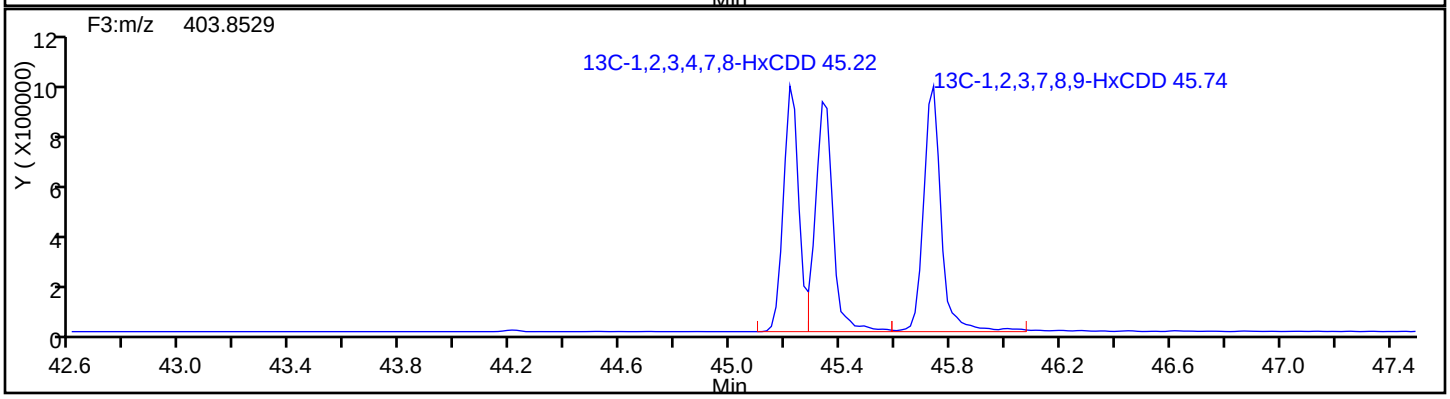
HxCDD




HxCDD Standards



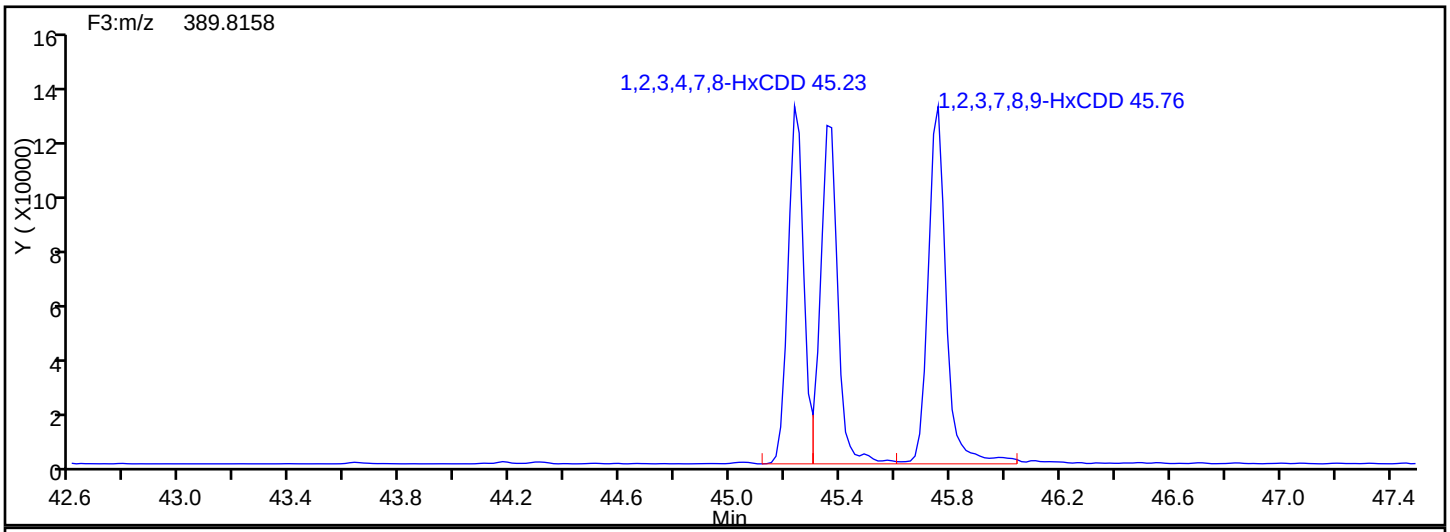
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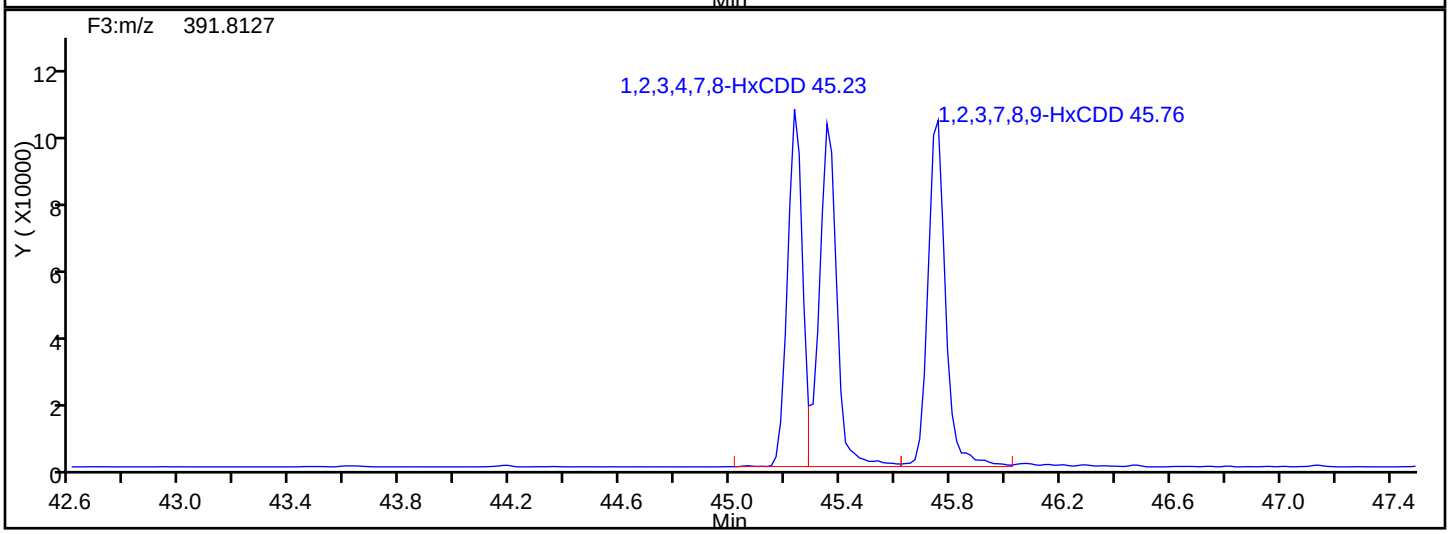
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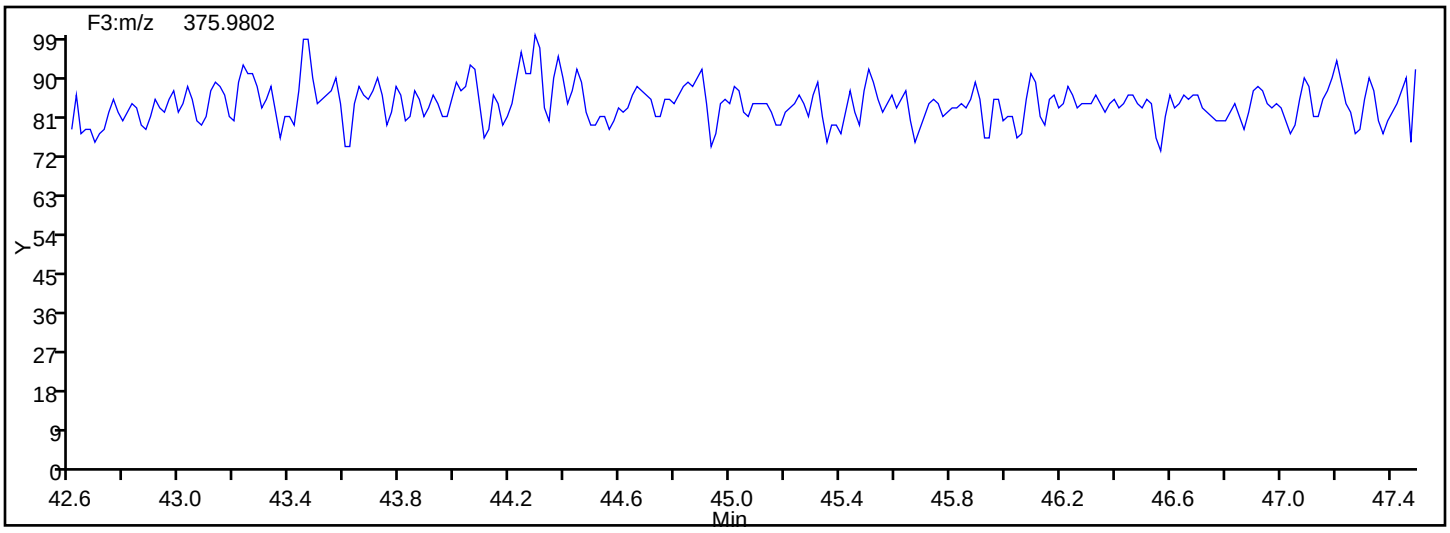
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HxCDD




HxCDD Lock Mass



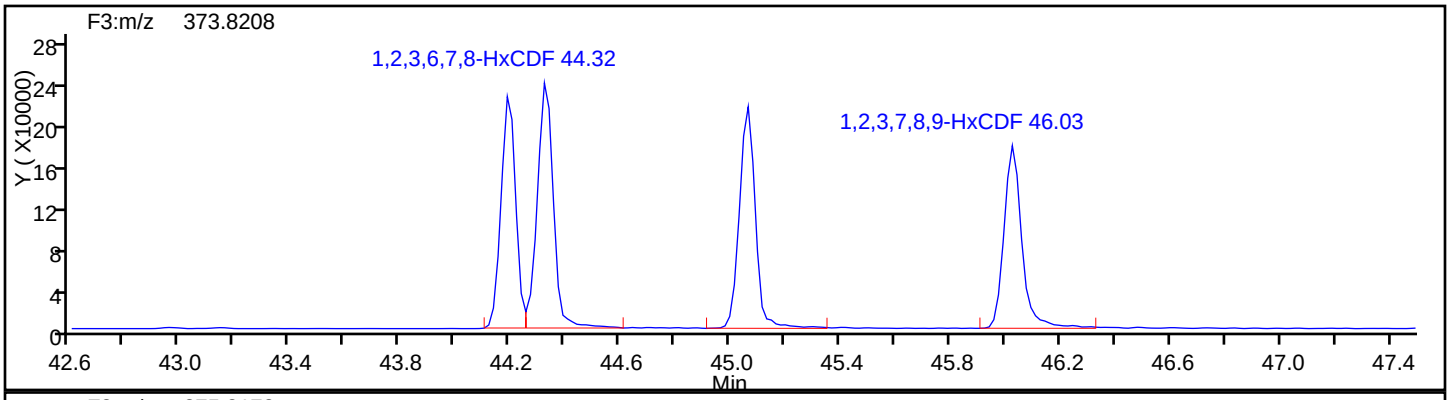
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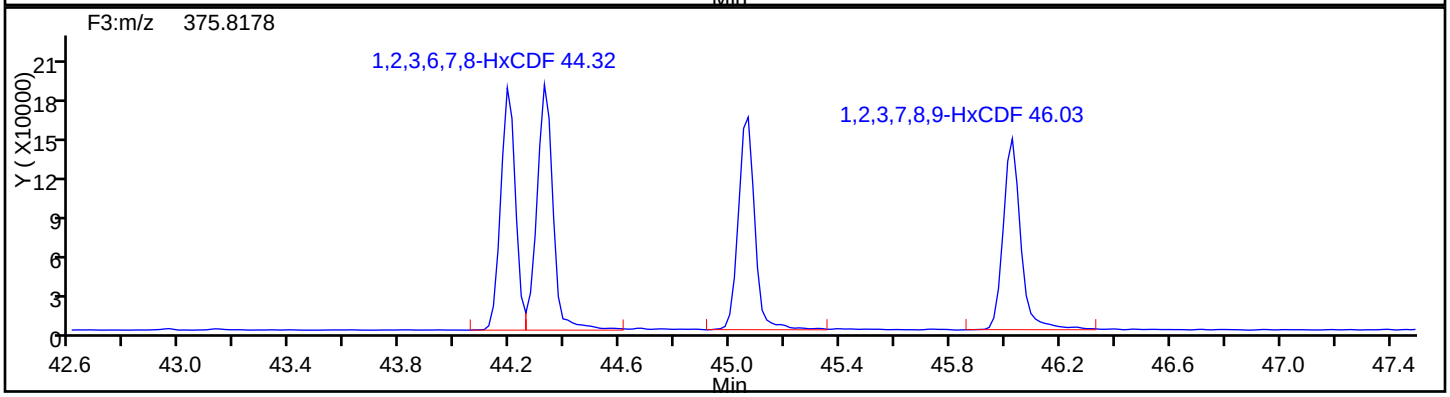
TestAmerica Knoxville

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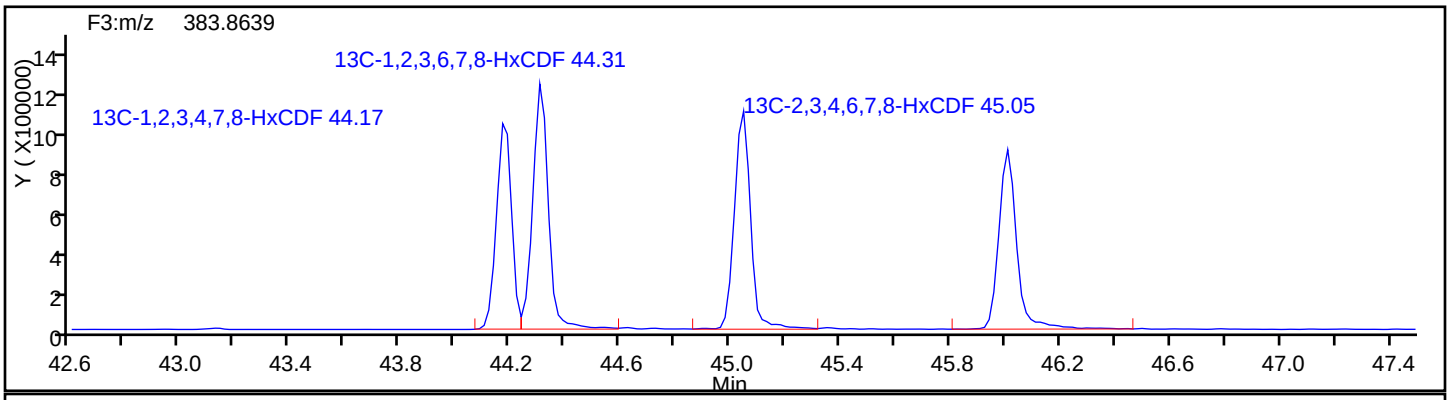
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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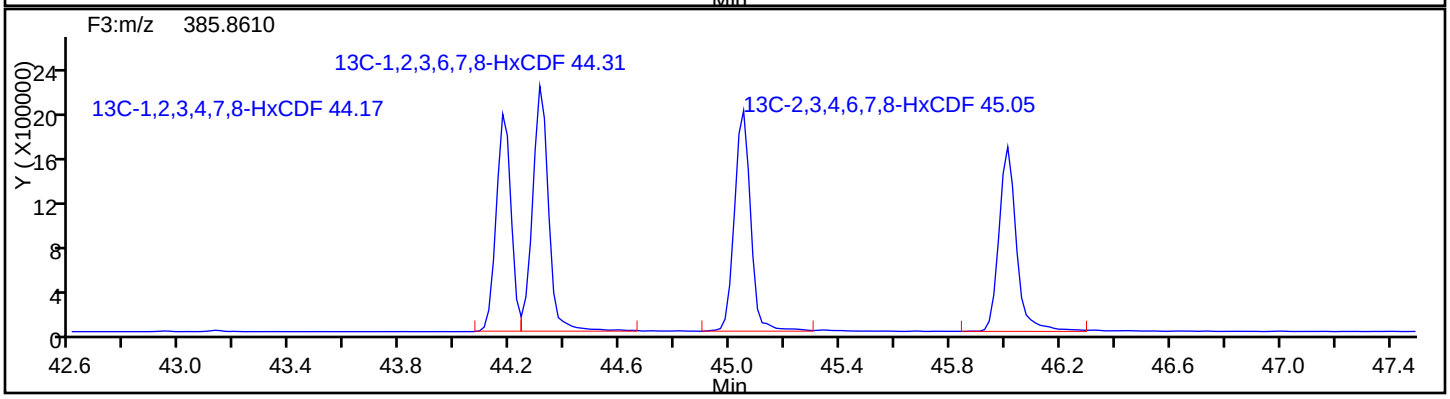
HxCDF




HxCDF Standards



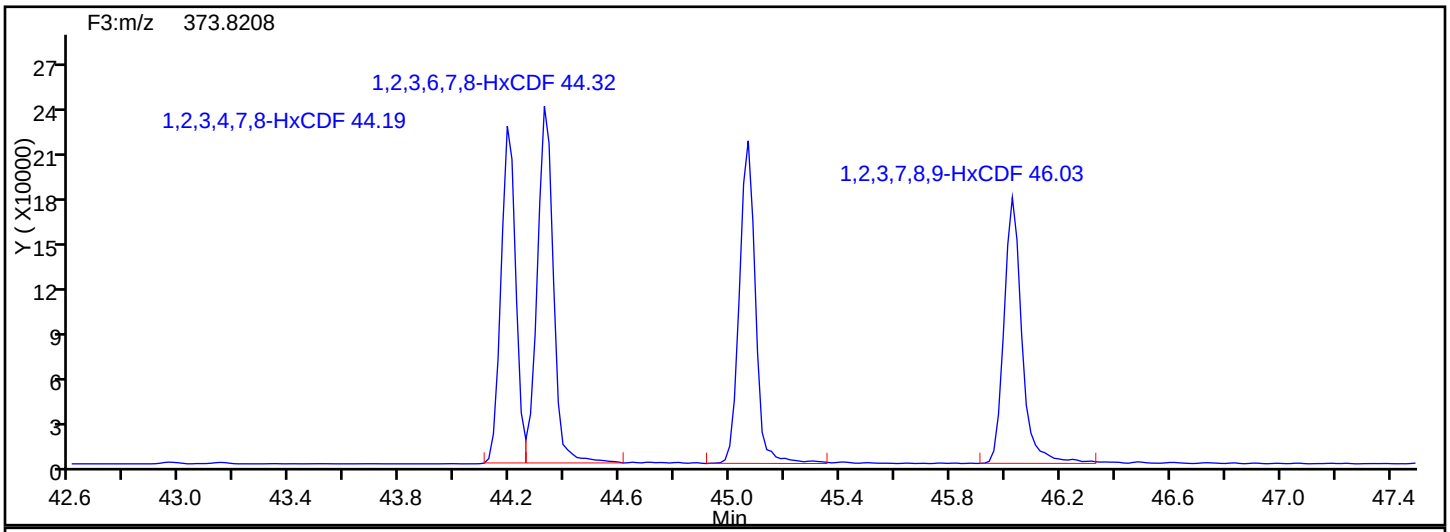
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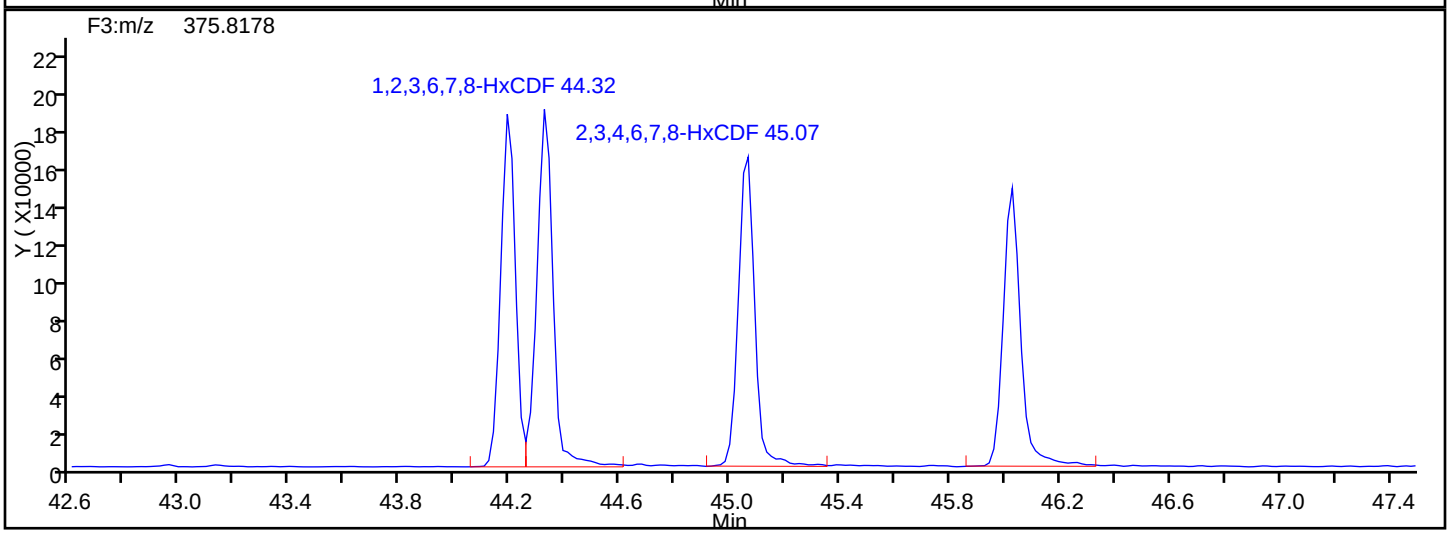
TestAmerica Knoxville

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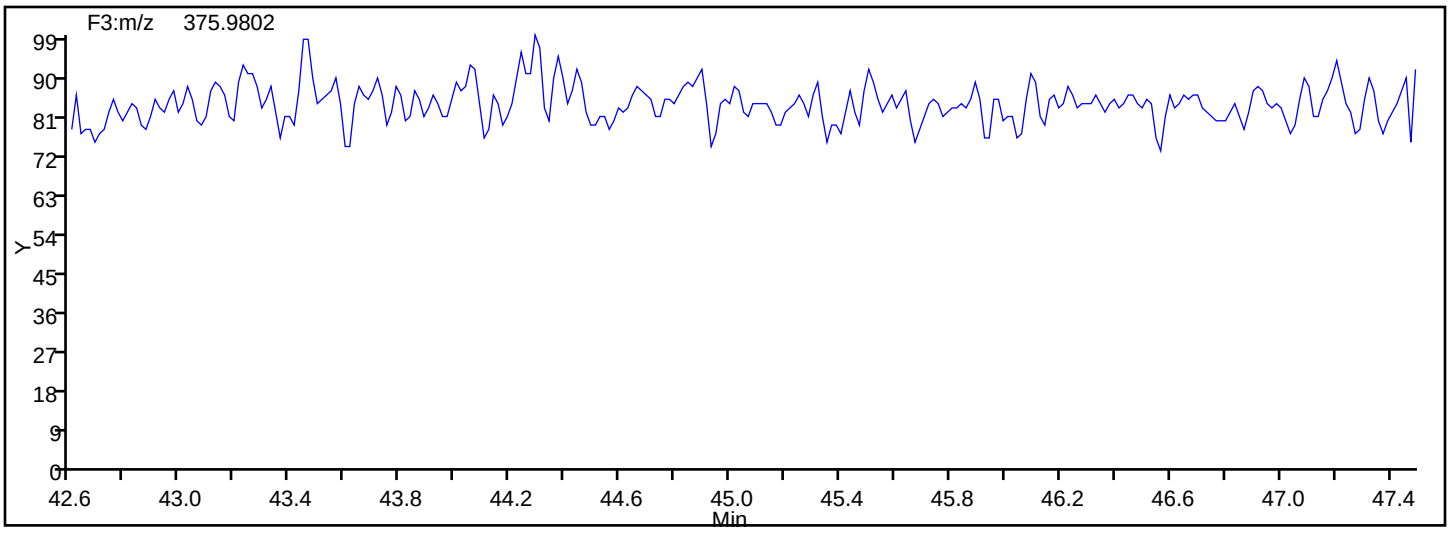
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HxCDF




HxCDF Lock Mass



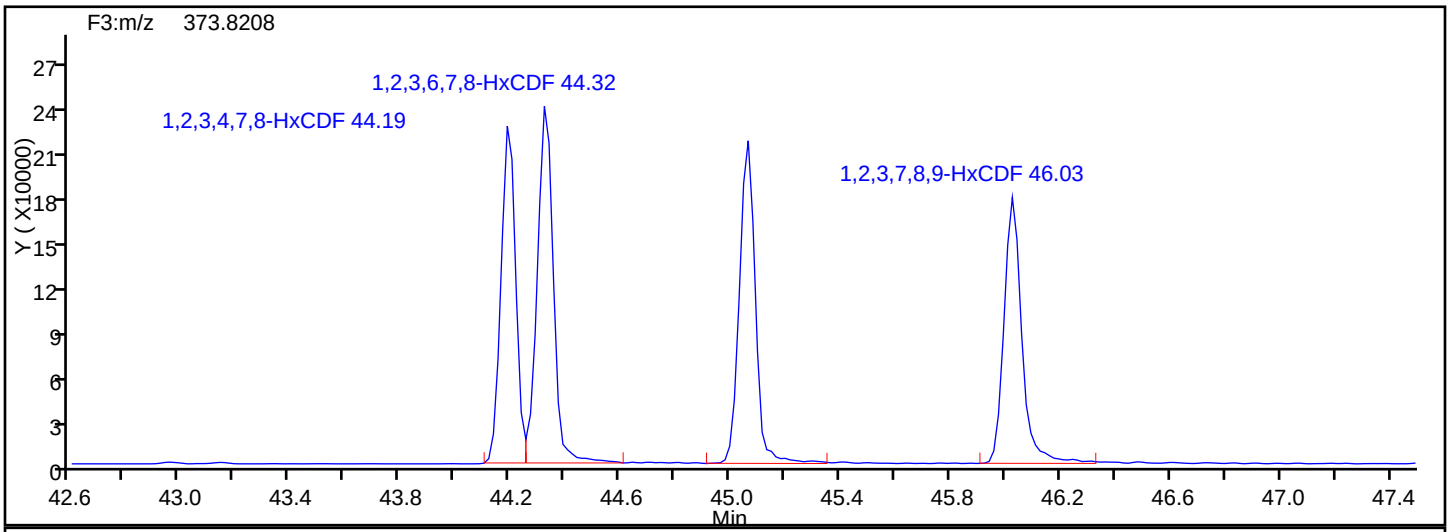
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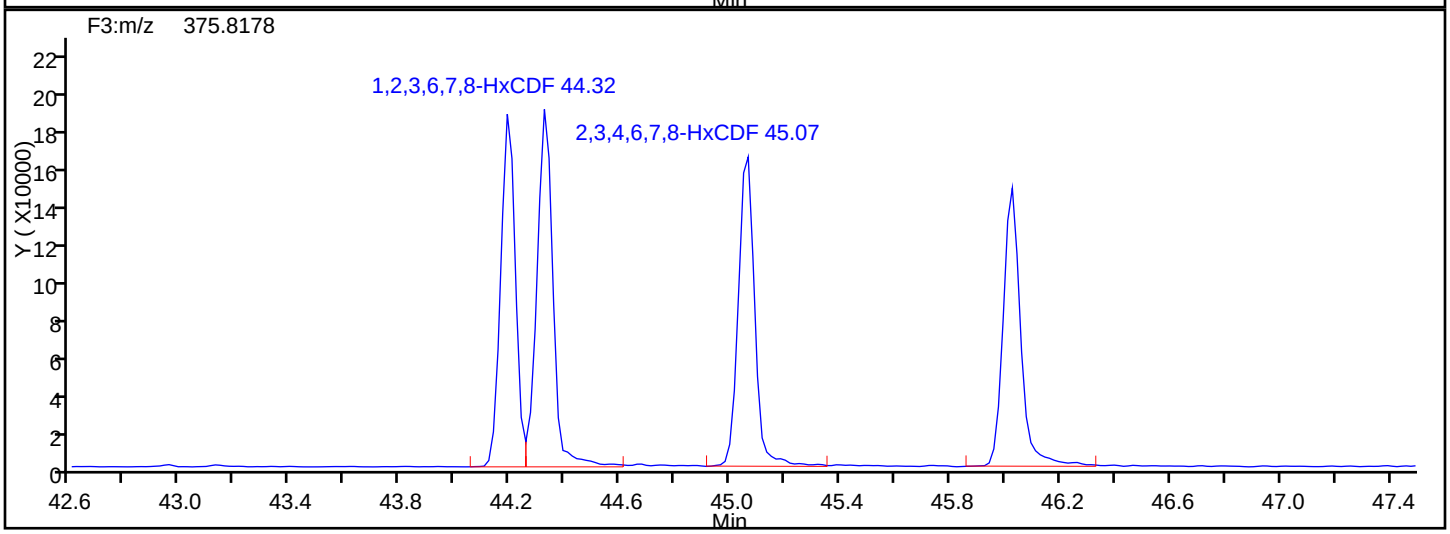
TestAmerica Knoxville

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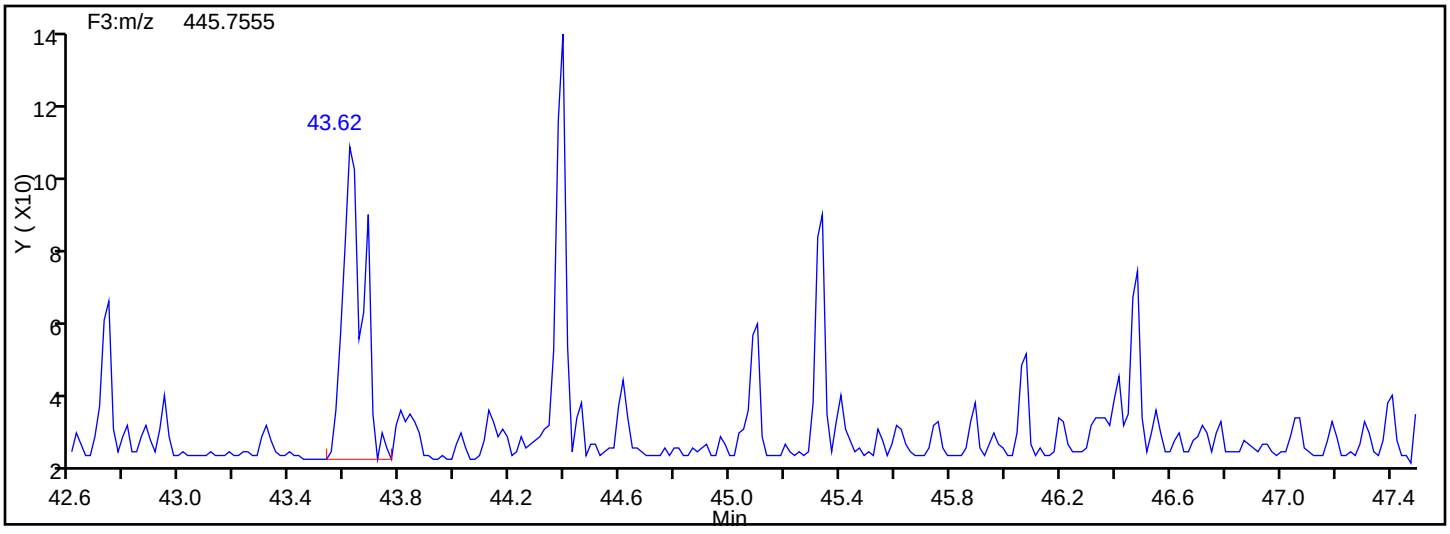
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

HxCDF




HxCDF Interference Mass



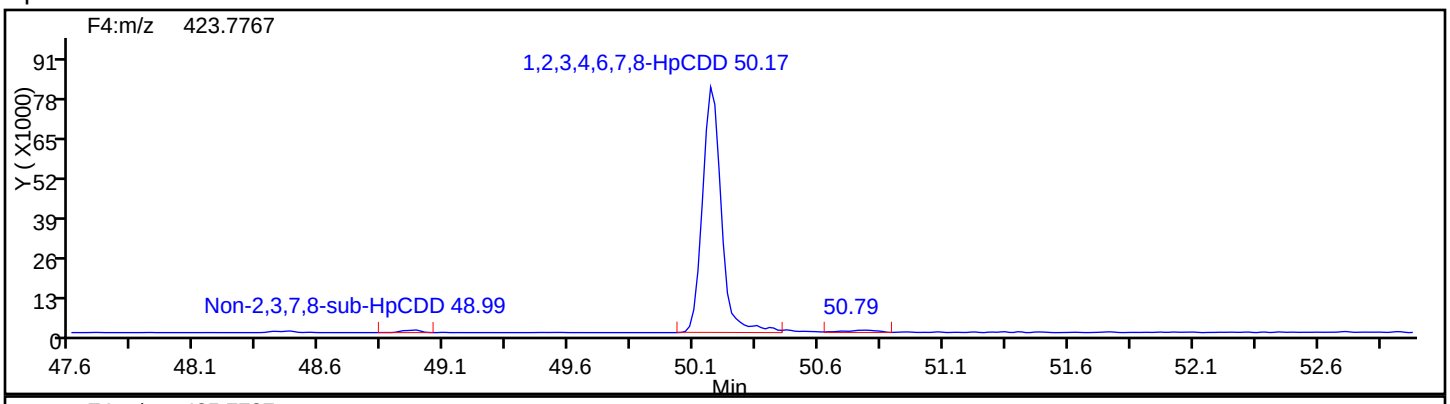
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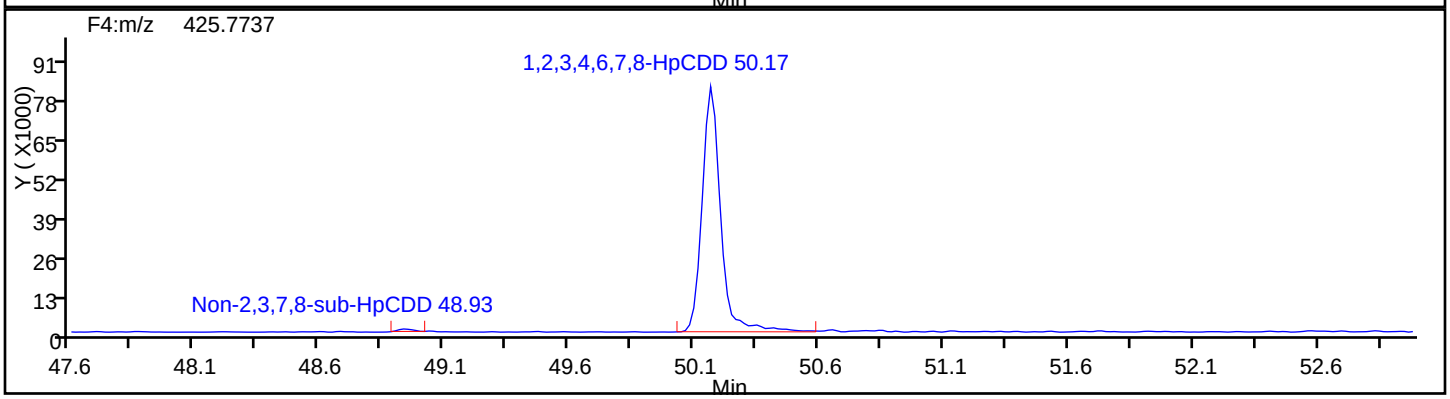
TestAmerica Knoxville

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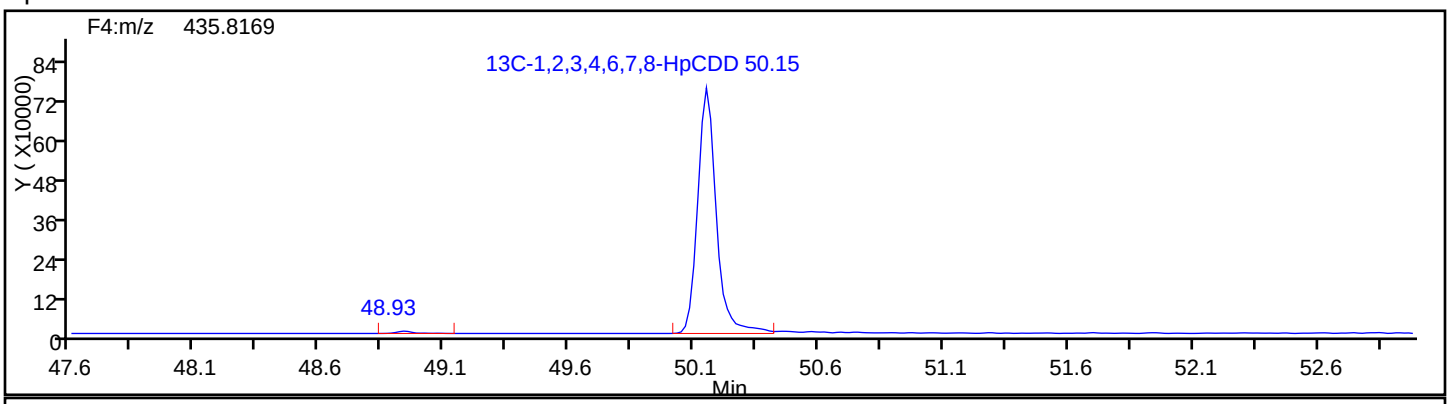
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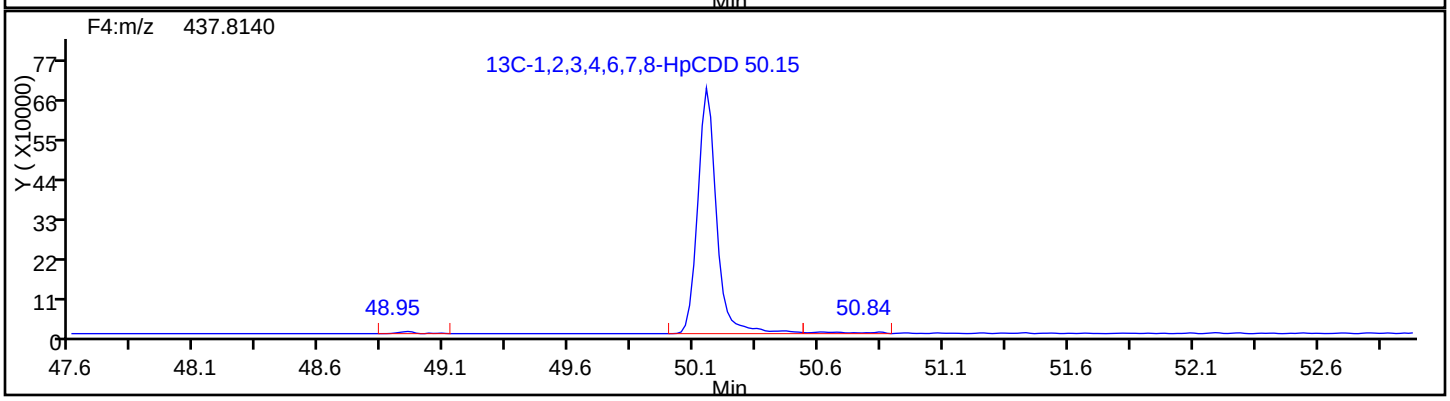
HpCDD




HpCDD Standards



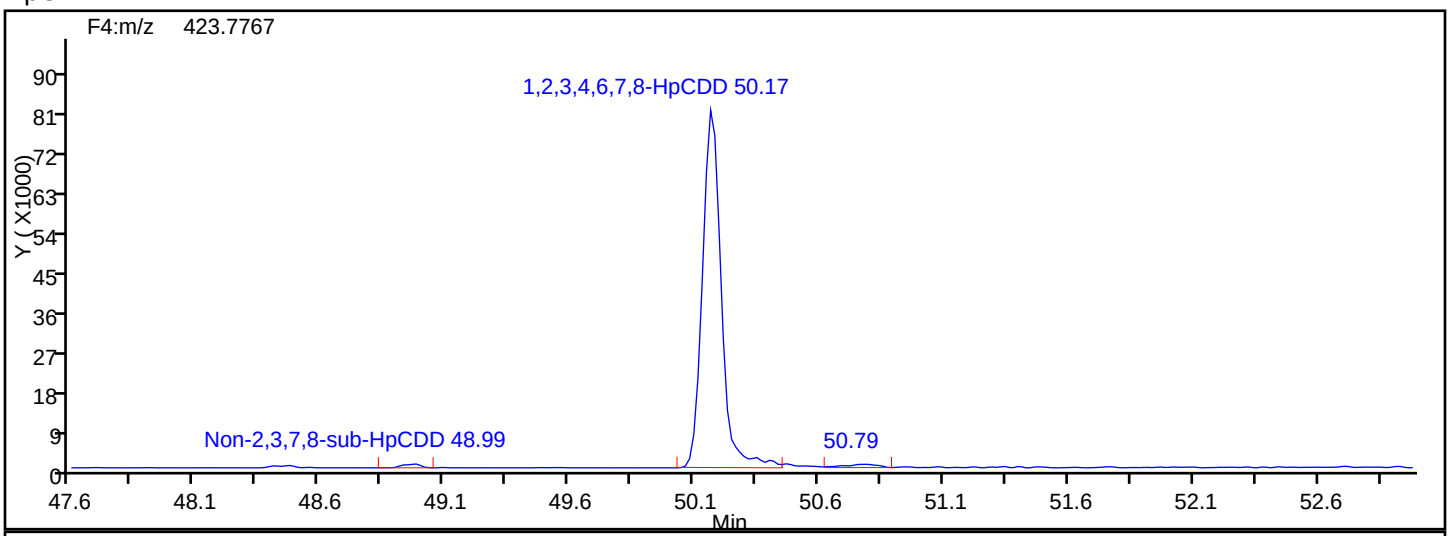
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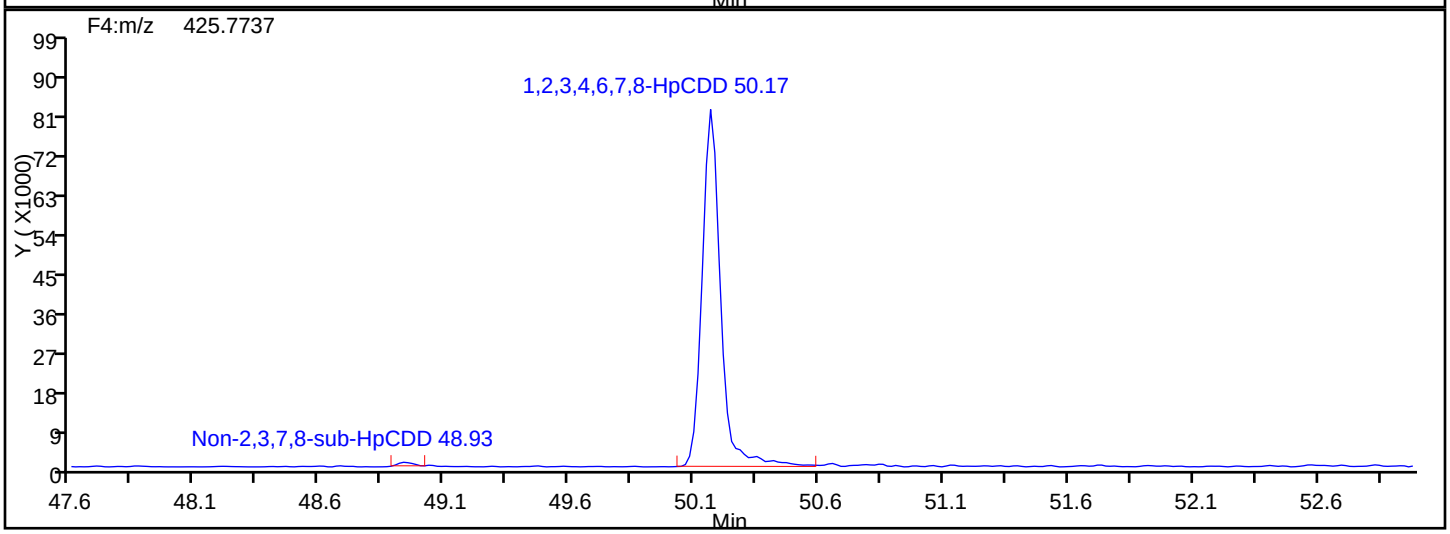
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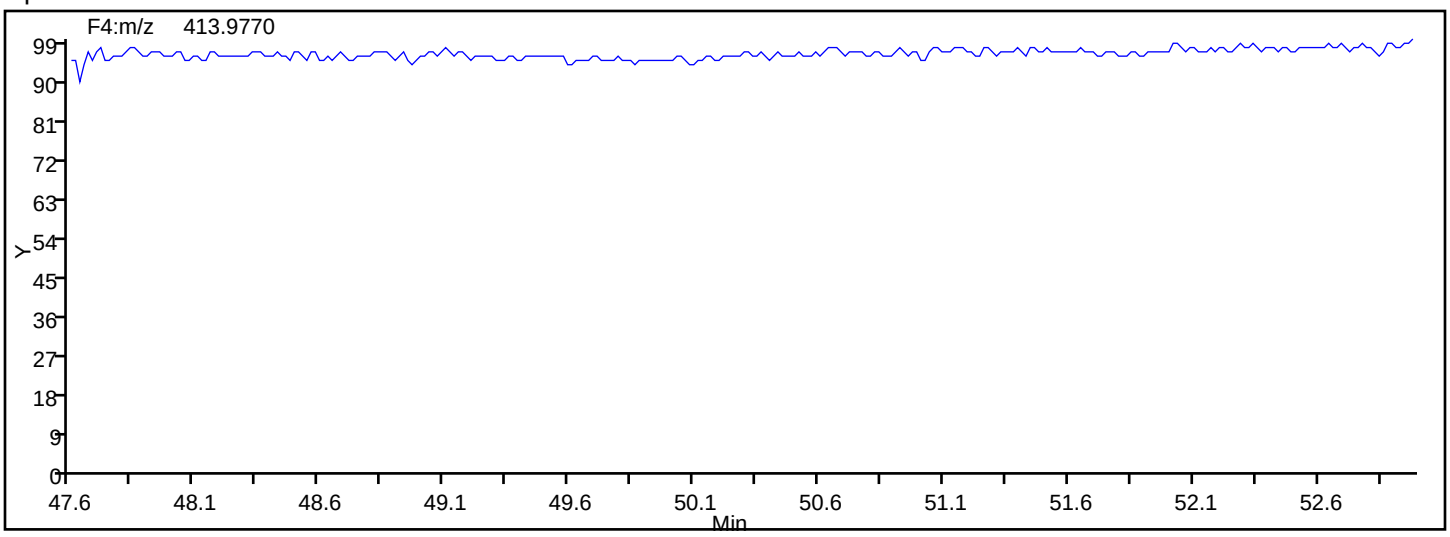
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HpCDD




HpCDD Lock Mass



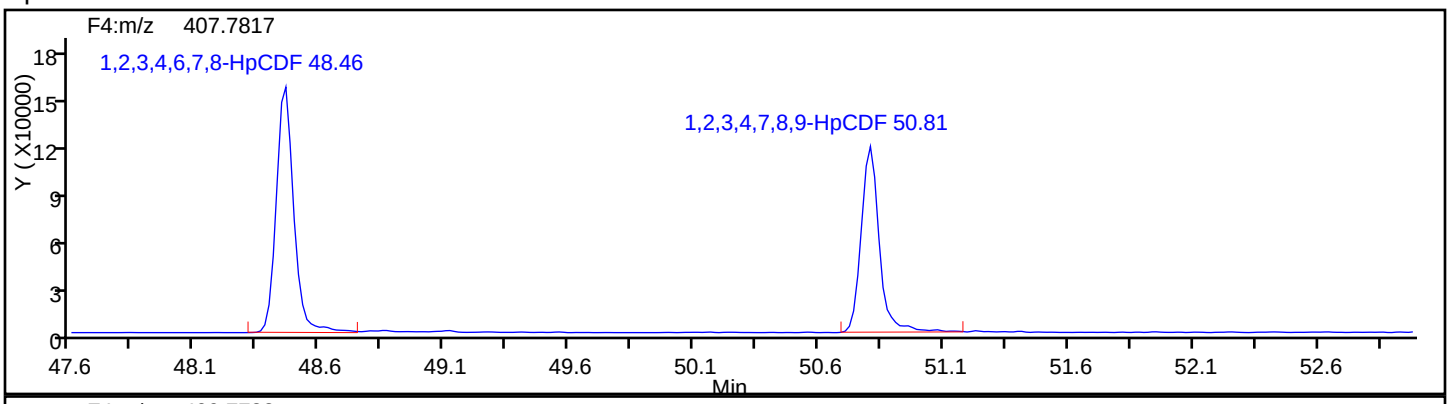
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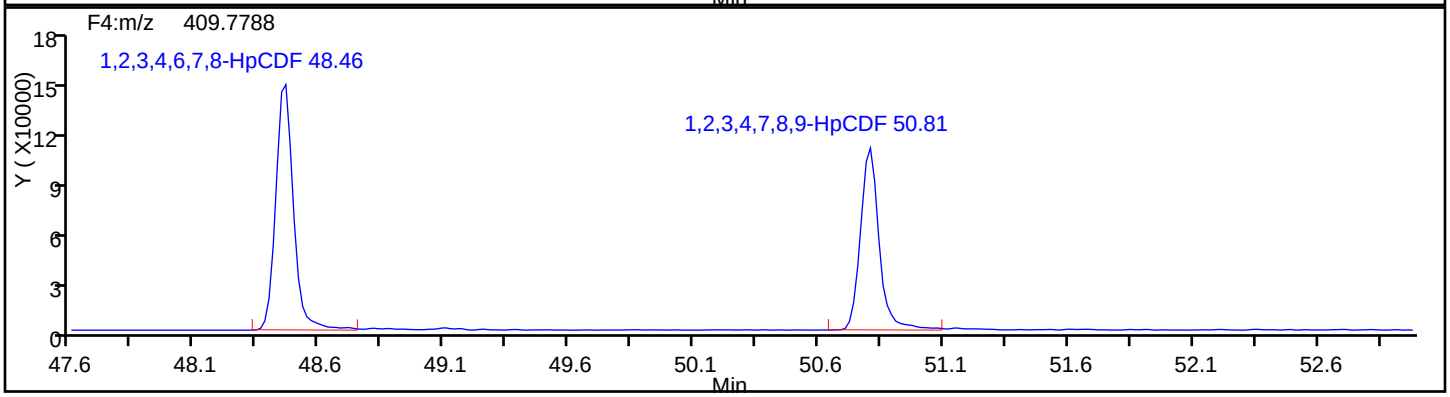
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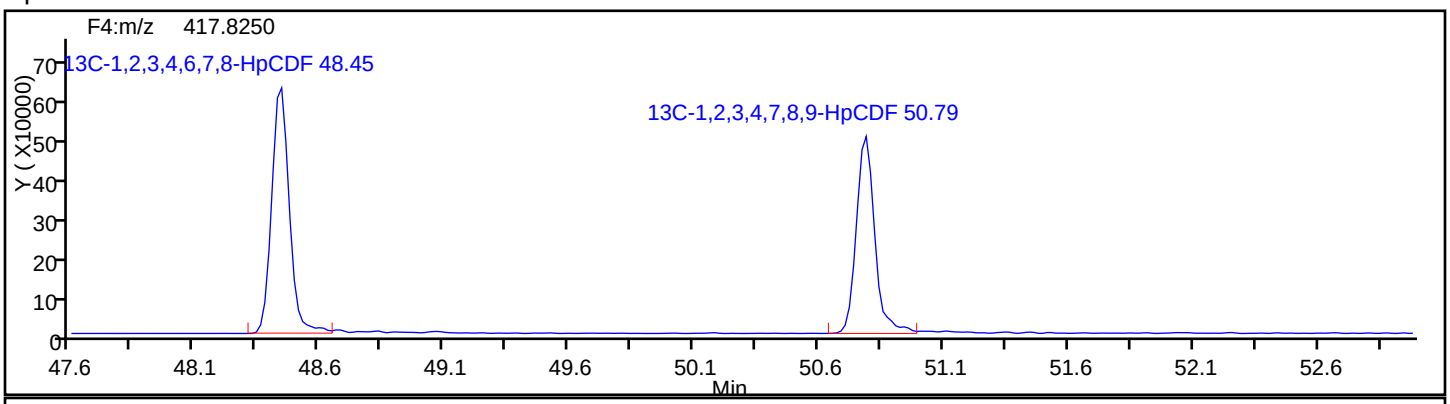
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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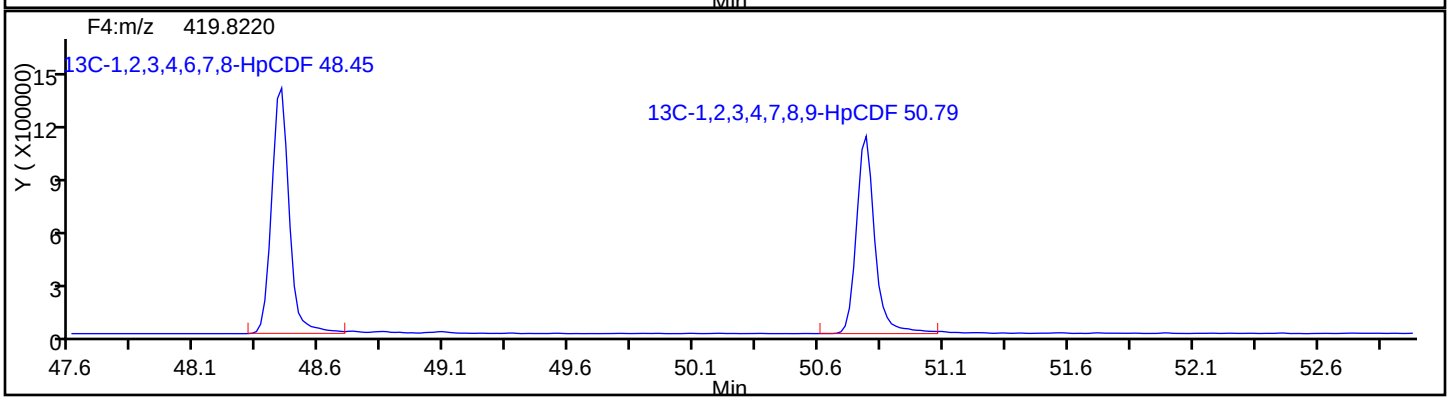
HpCDF




HpCDF Standards



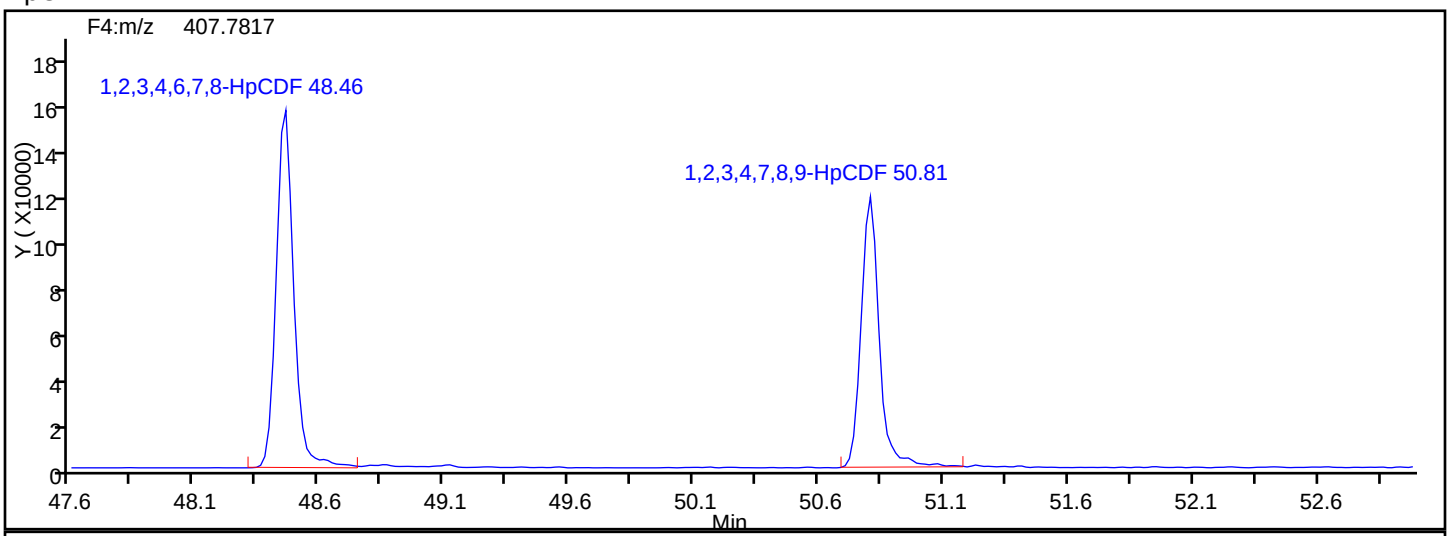
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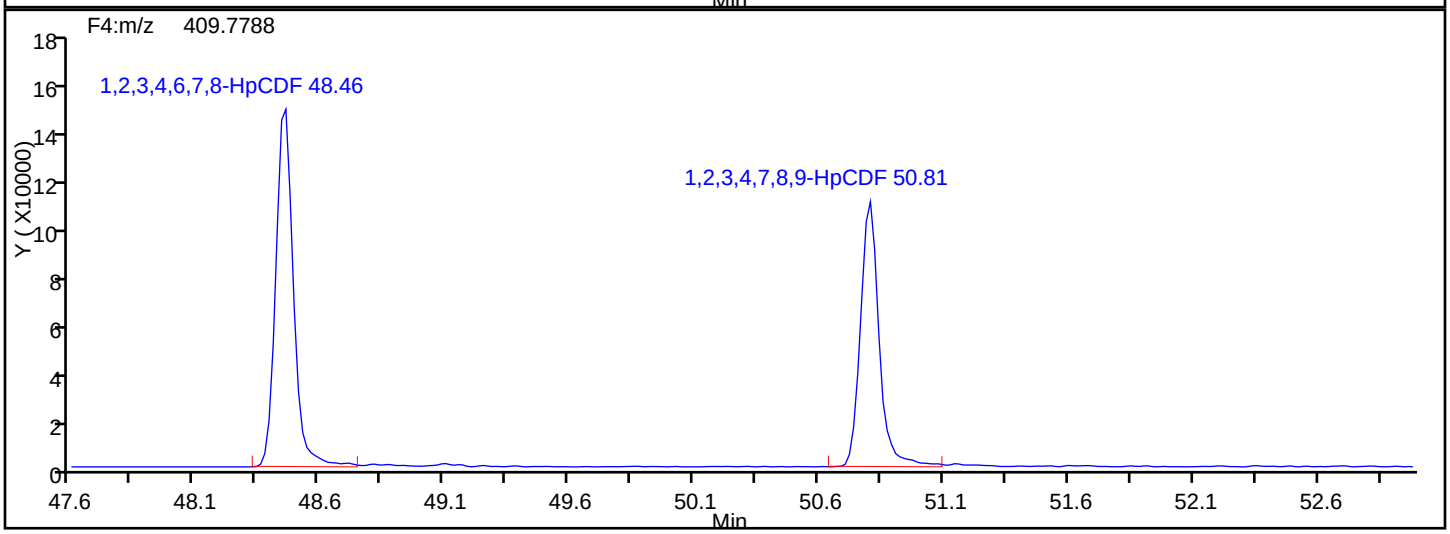
TestAmerica Knoxville

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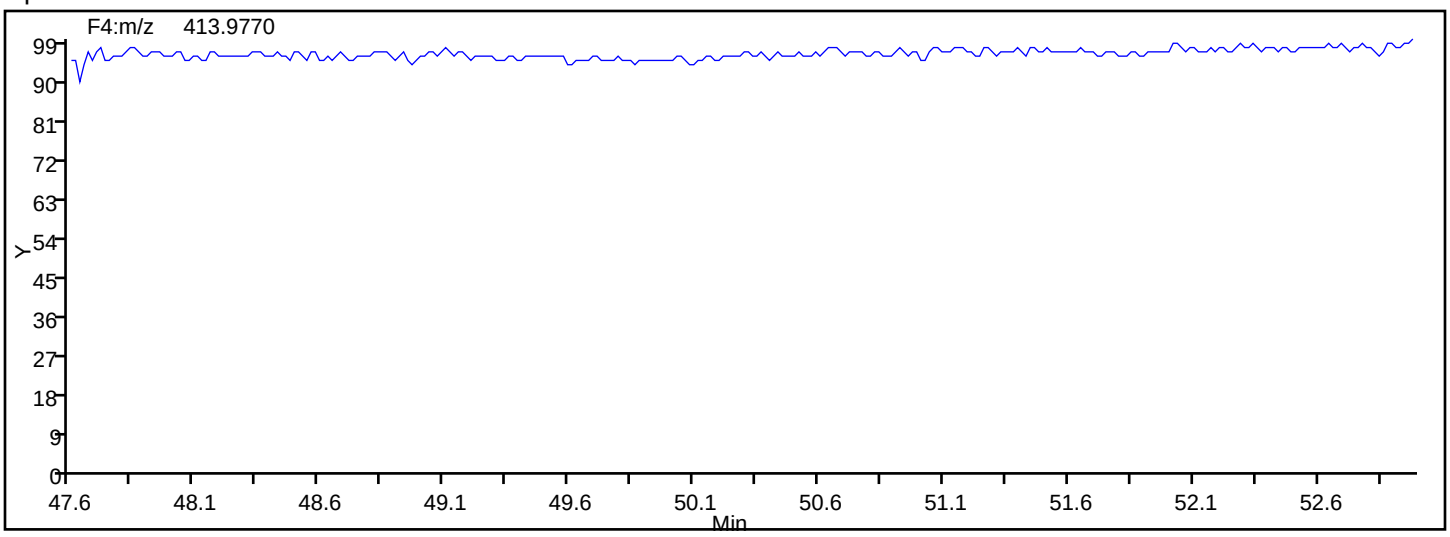
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| Column Type: | | Column Dia: | |

HpCDF




HpCDF Lock Mass



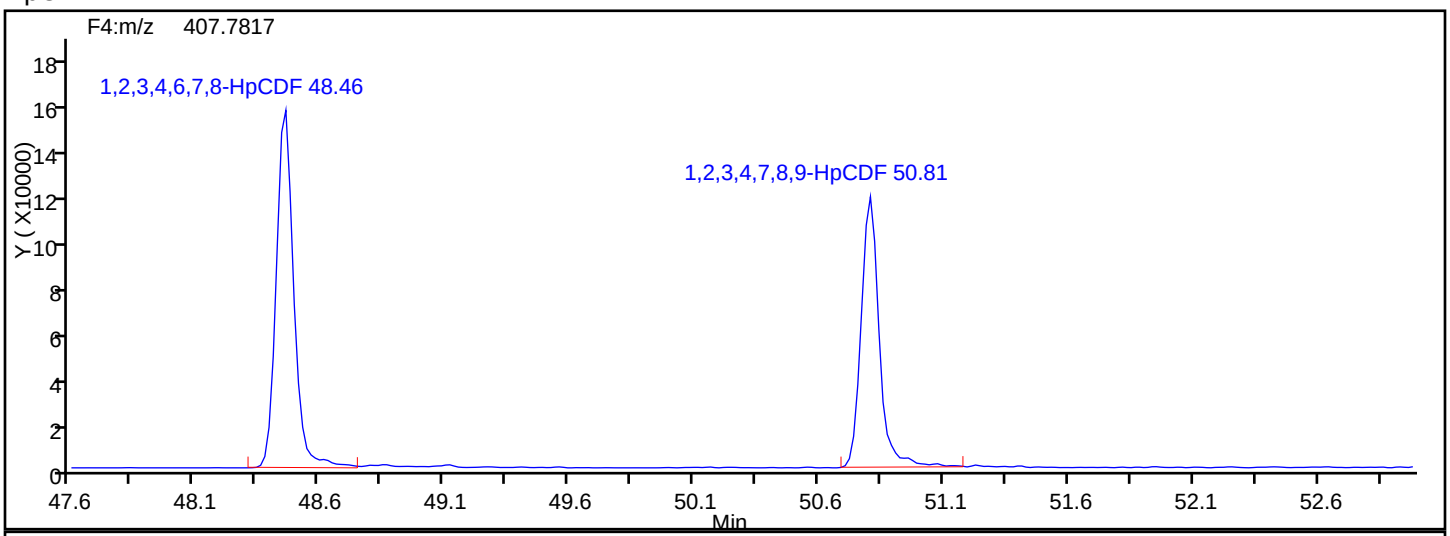
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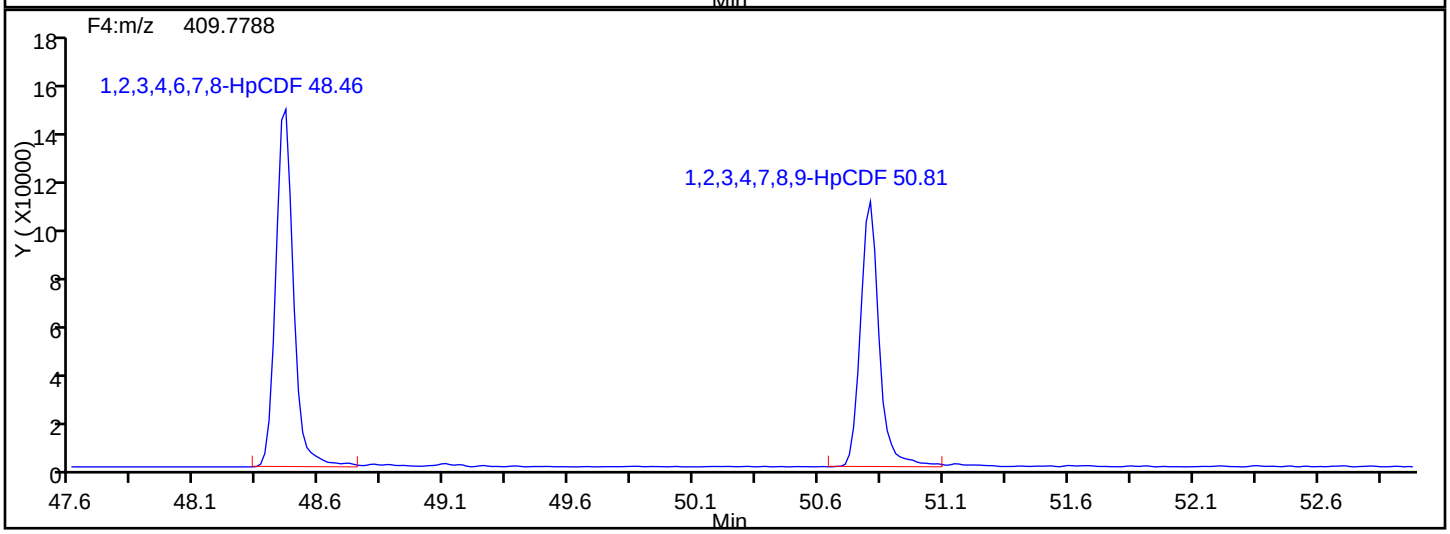
TestAmerica Knoxville

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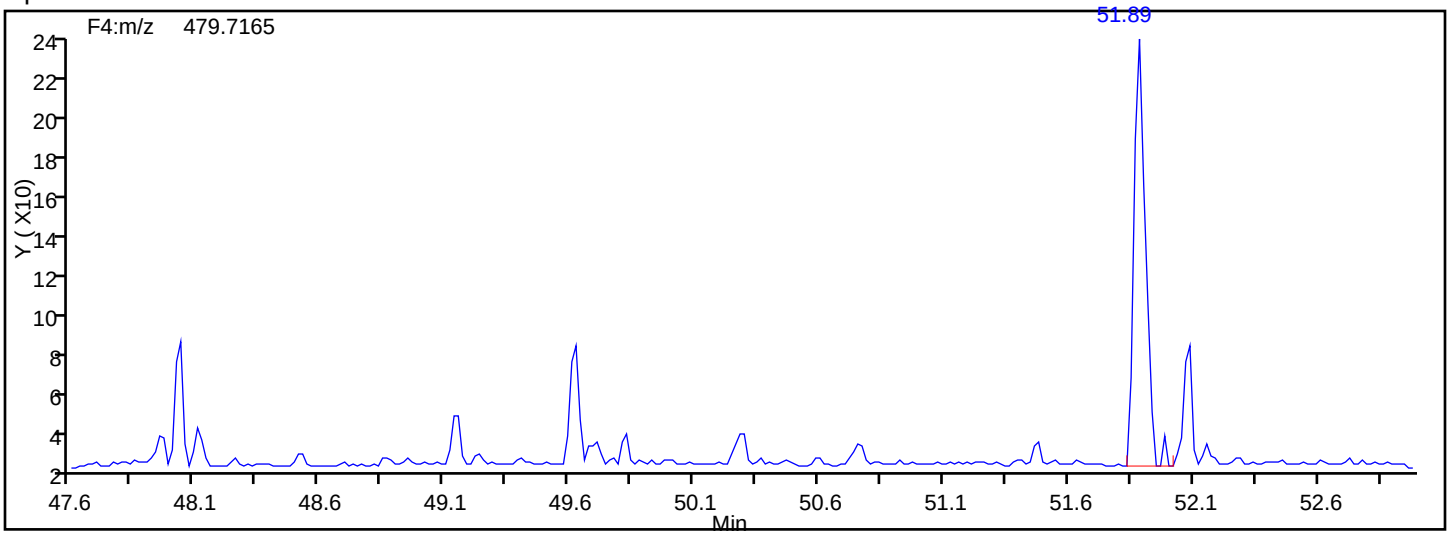
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| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

HpCDF




HpCDF Interference Mass



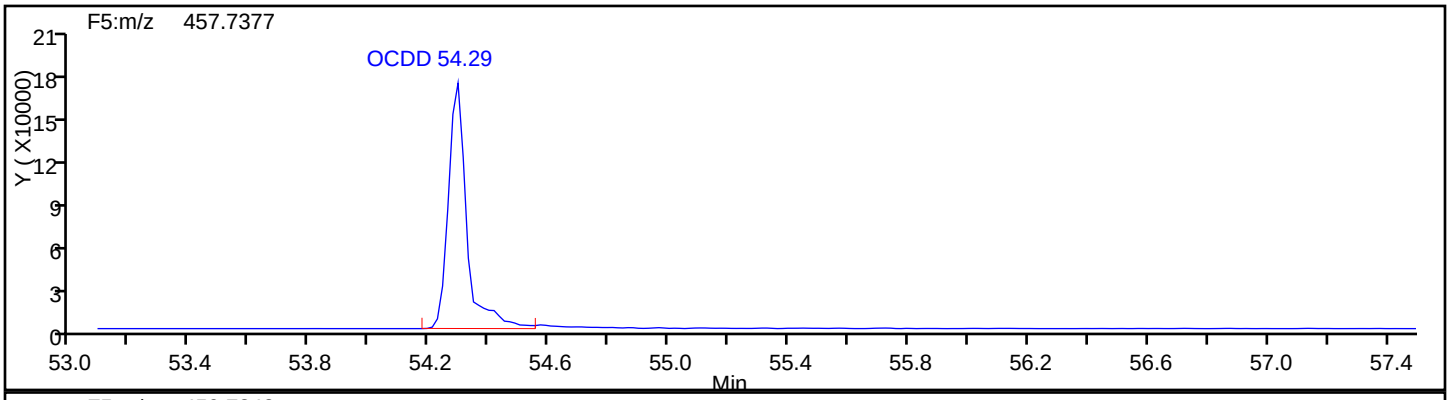
Report Date: 12-Jan-2017 08:09:22 Chrom Revision: 2.2 10-Jan-2017 11:26:10

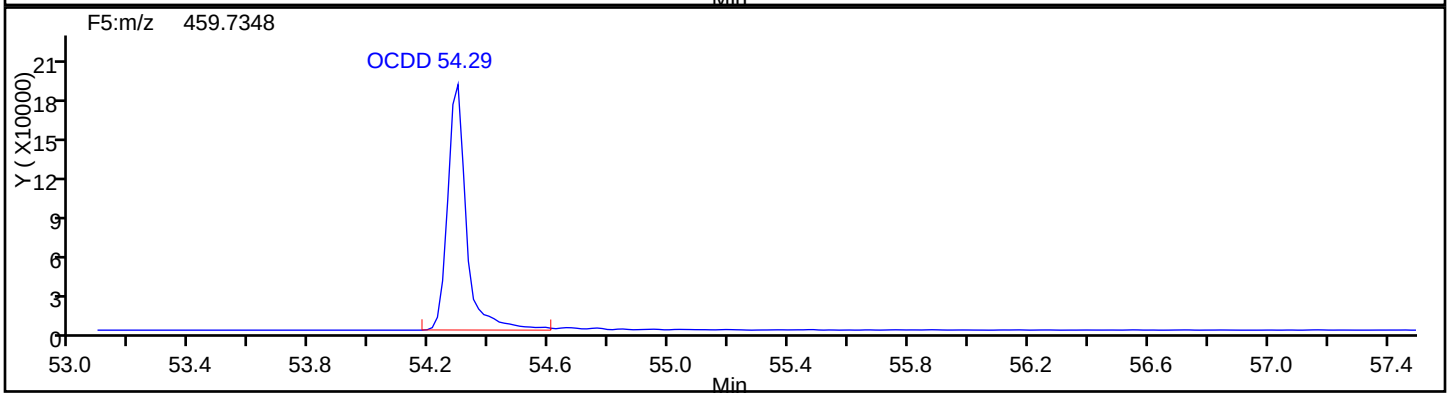
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i2.d

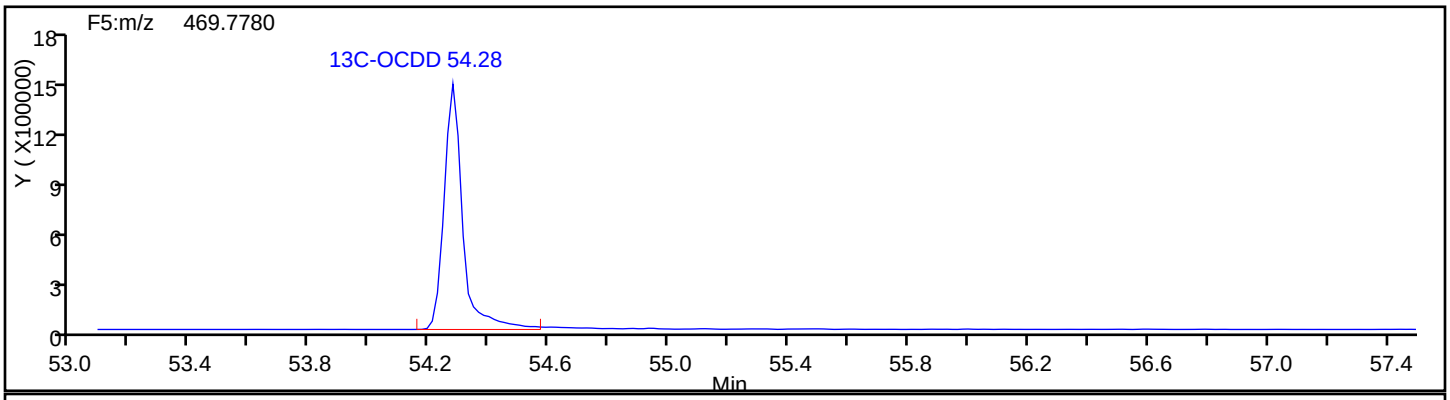
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

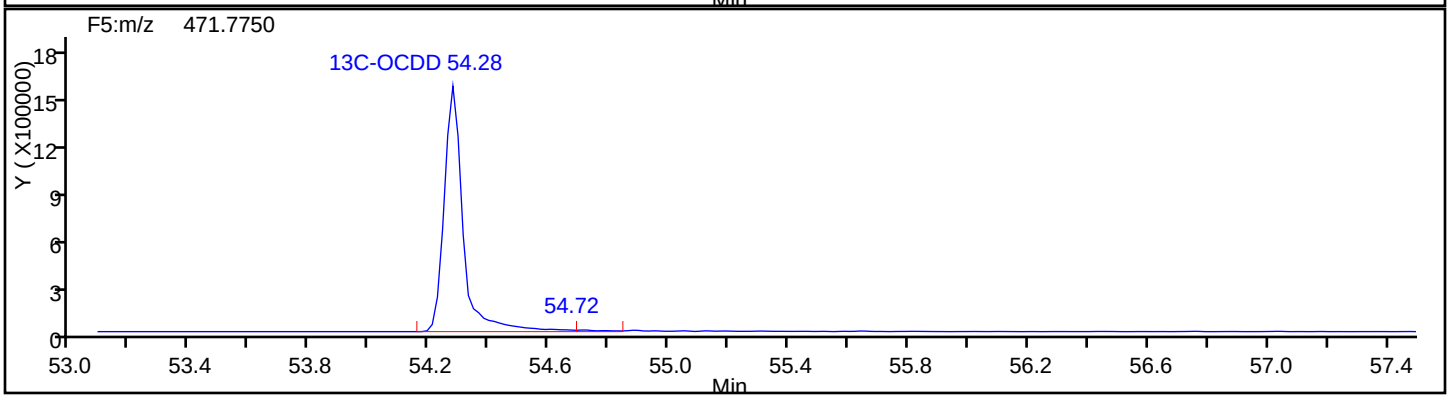
OCDD




OCDD Standards



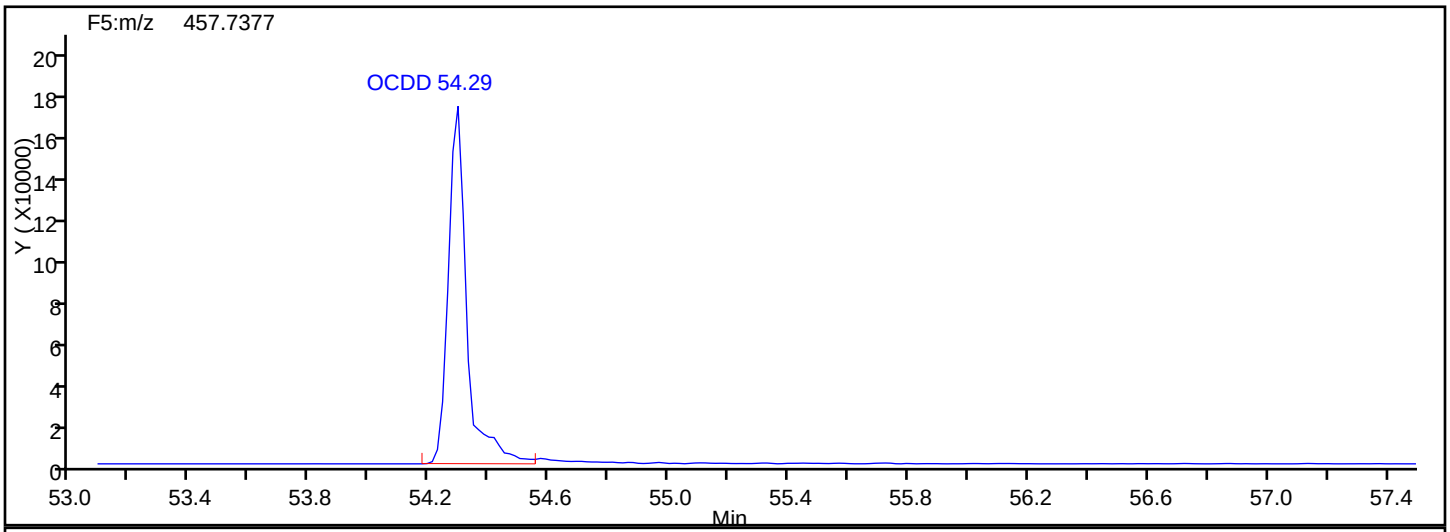
Report Date: 12-Jan-2017 08:09:22 Chrom Revision: 2.2 10-Jan-2017 11:26:10

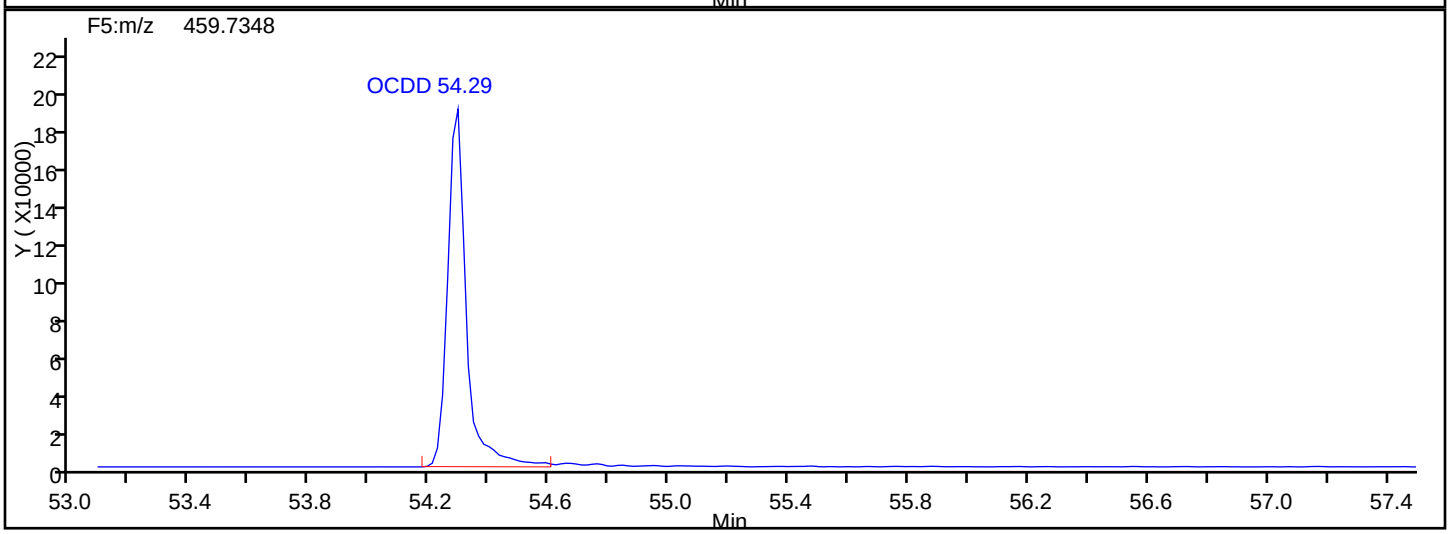
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i2.d

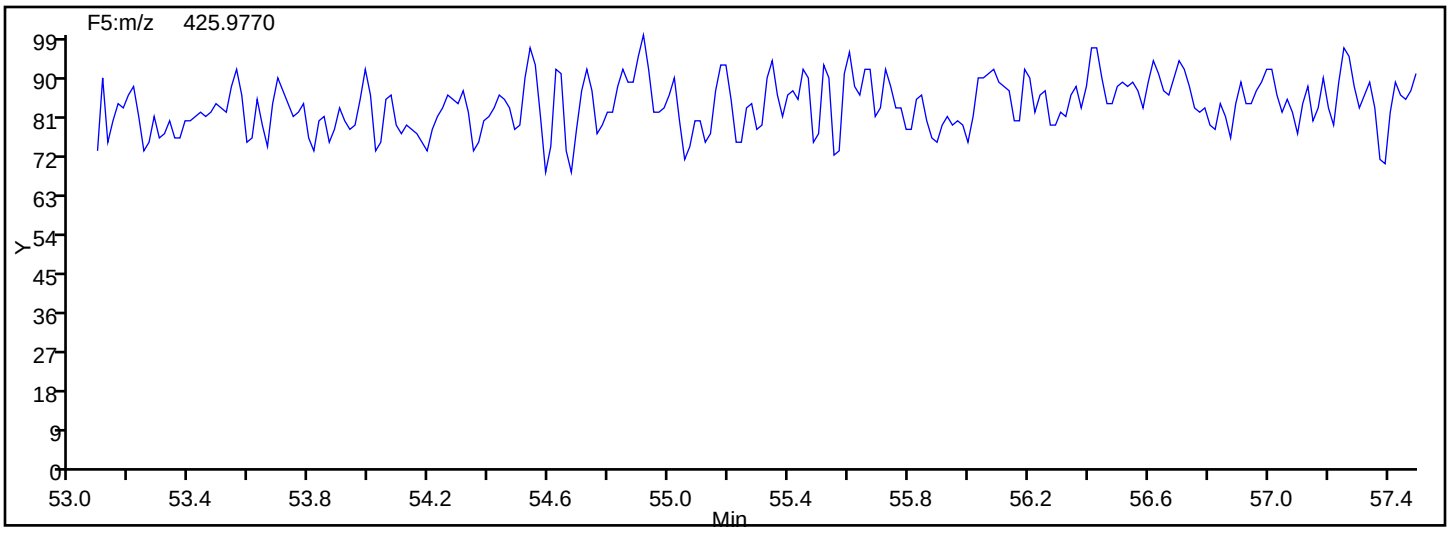
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

OCDD




OCDD Lock Mass



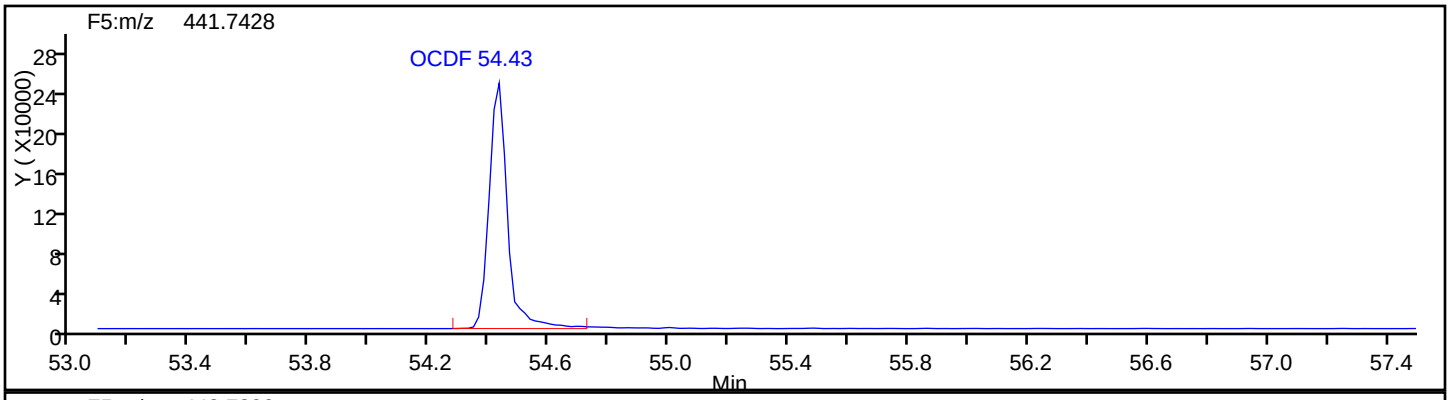
Report Date: 12-Jan-2017 08:09:22 Chrom Revision: 2.2 10-Jan-2017 11:26:10

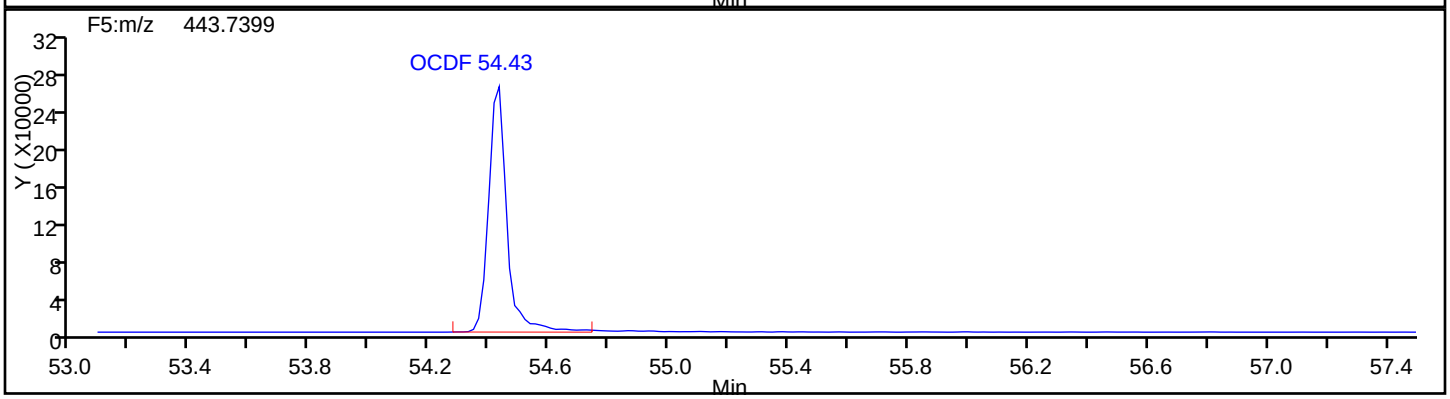
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i2.d

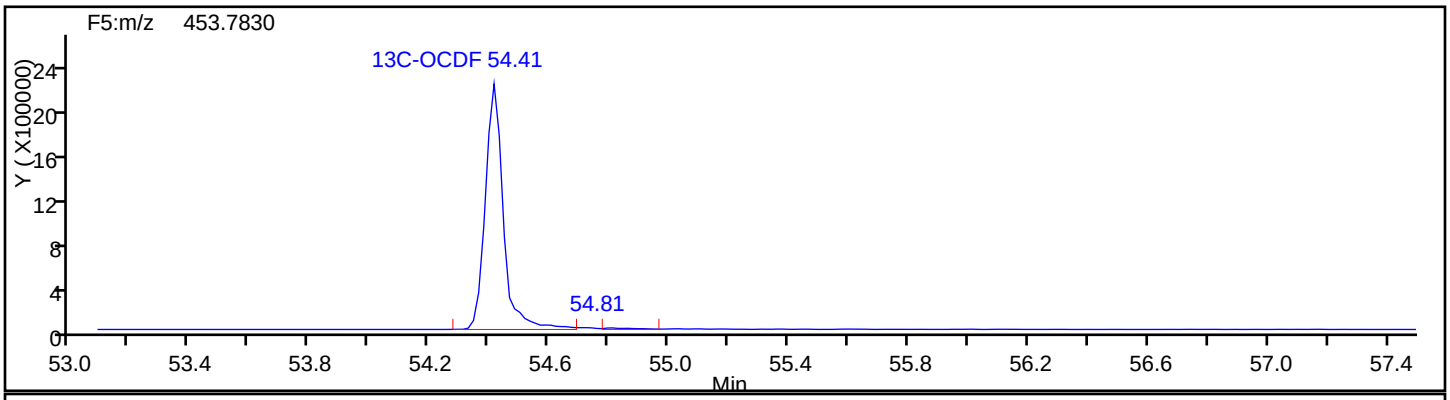
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

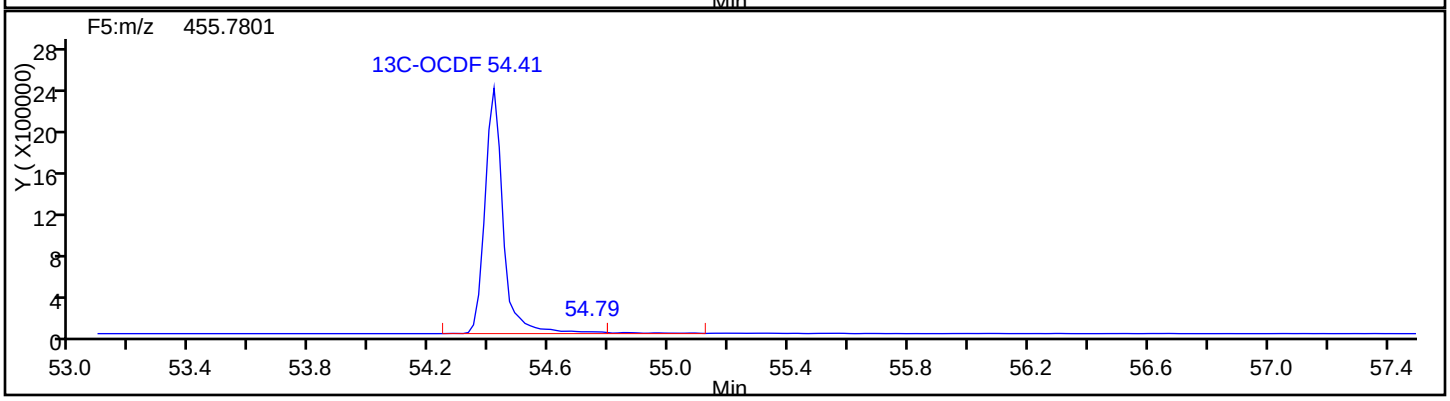
OCDF




OCDF Standards



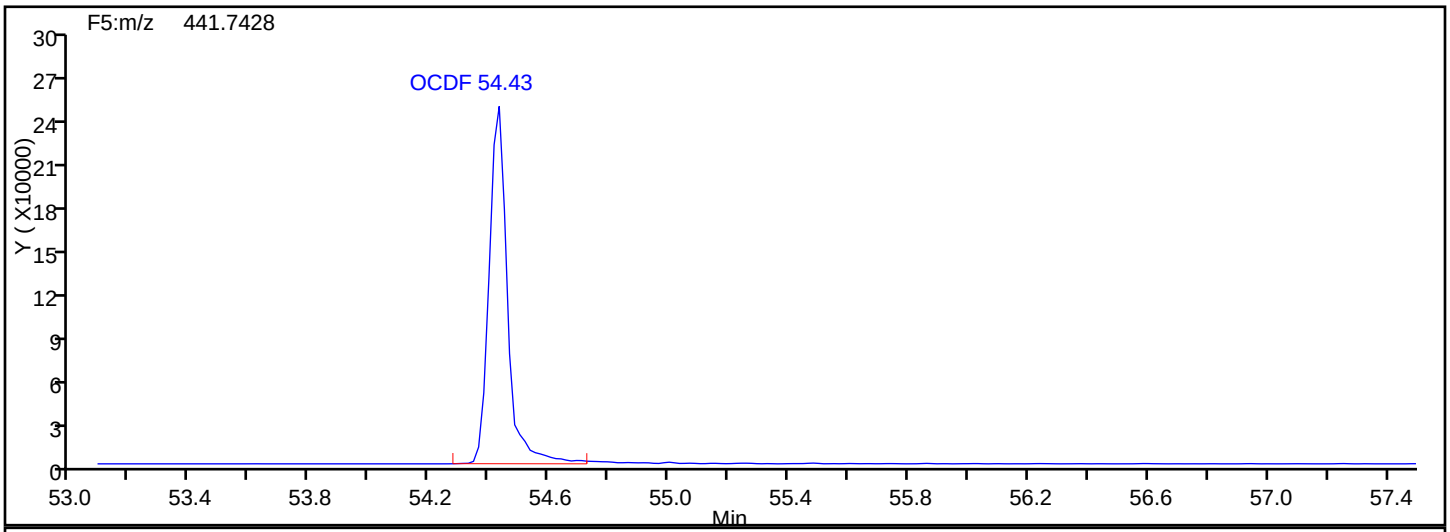
Report Date: 12-Jan-2017 08:09:22 Chrom Revision: 2.2 10-Jan-2017 11:26:10

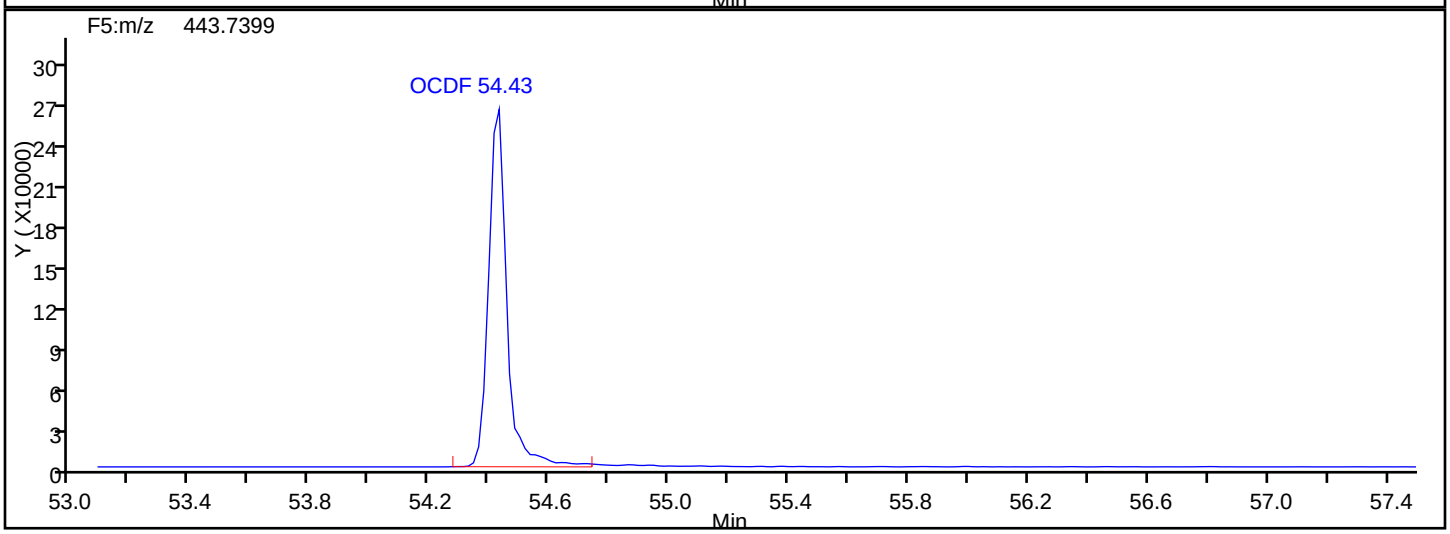
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i2.d

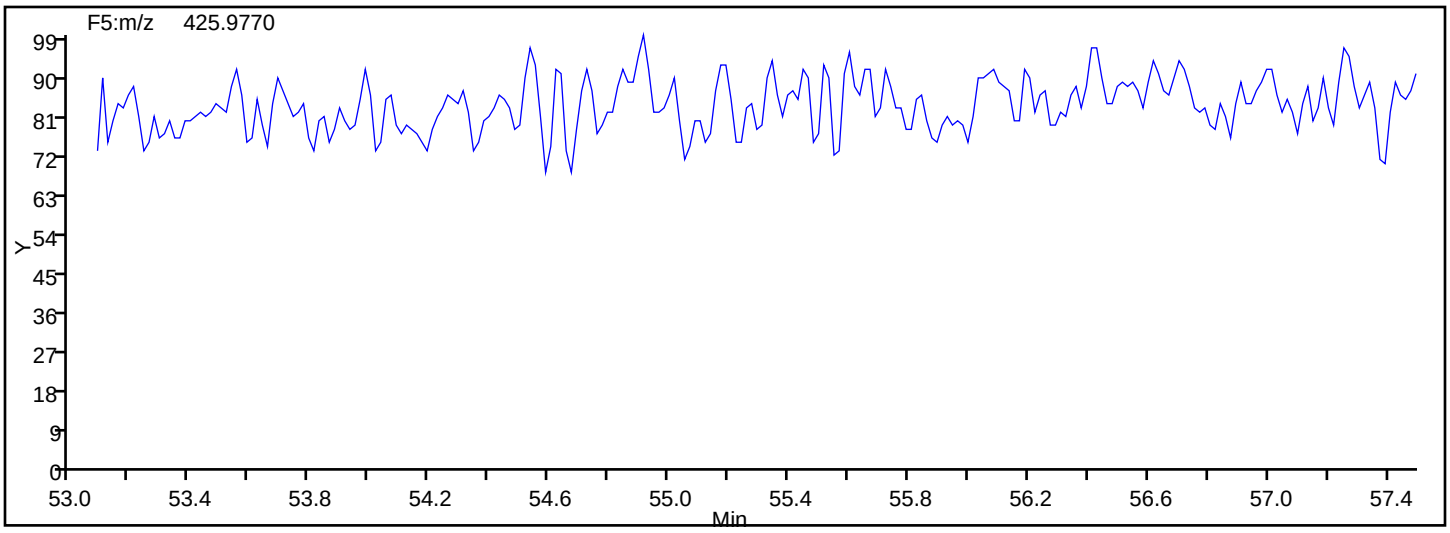
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Lock Mass



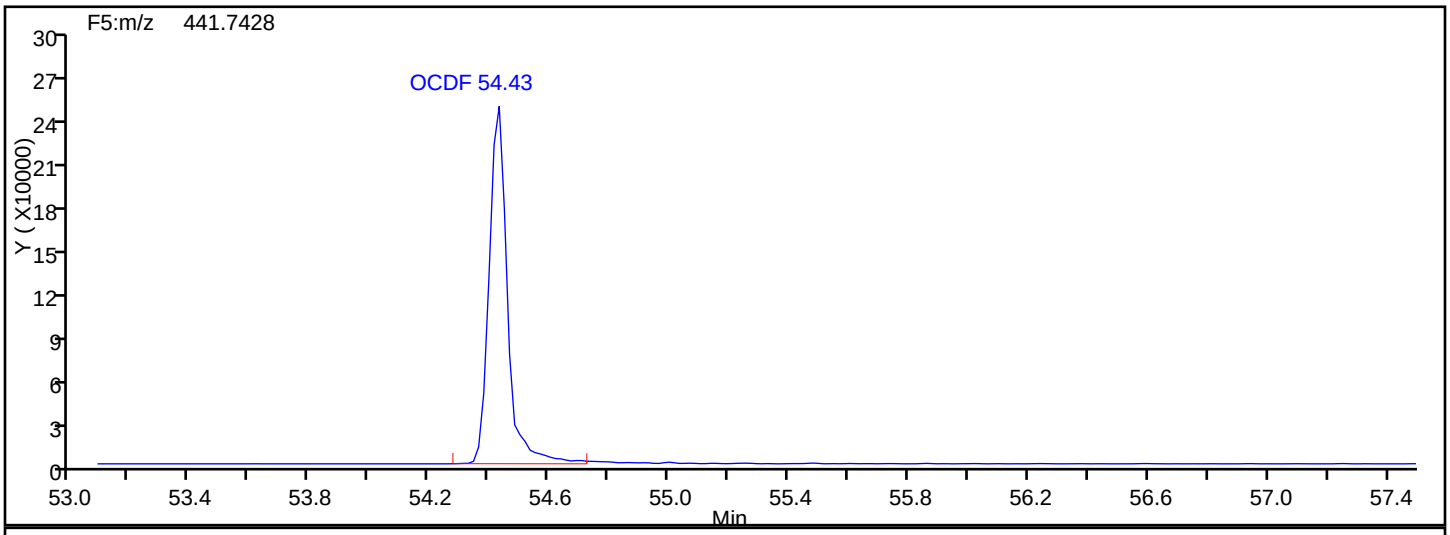
Report Date: 12-Jan-2017 08:09:22 Chrom Revision: 2.2 10-Jan-2017 11:26:10

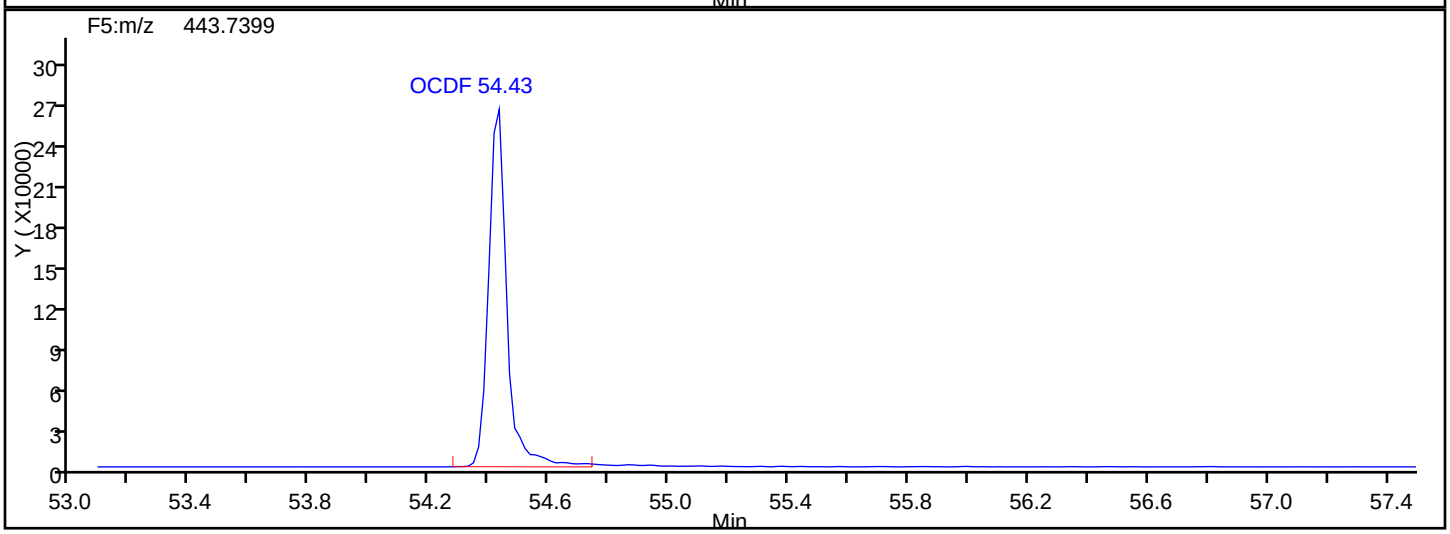
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i2.d

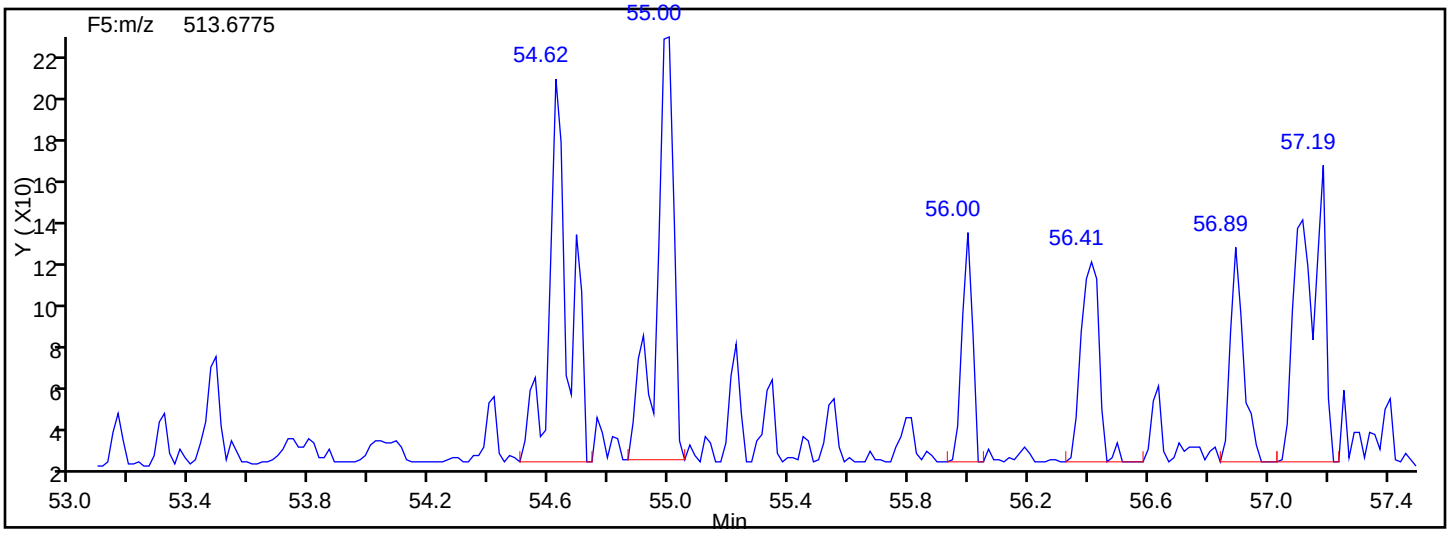
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 15:26:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Interference Mass



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i3.d
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 16-May-2014 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:74cs3 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 12-Jan-2017 08:10:05 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK029

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:14:19

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 31.838 | 1103093 | 0.77 | 1.1733 | 9.782 | 9.782 | 0.0261 | 0.0261 | 97.82 | |
| A Non-2,3,7,8-sub-TCDD | 30.308 | 4111 | 0.77 | 0.0000 | | | | | | RQ |
| S Total TCDD | | | | | 9.782 | 9.782 | 0.0261 | 0.0261 | | RQ |
| 2,3,7,8-TCDF | 29.760 | 1699244 | 0.79 | 1.0881 | 9.890 | 9.890 | 0.0284 | 0.0284 | 98.90 | |
| A Non-2,3,7,8-sub-TCDF | 28.995 | 15857 | 0.77 | 0.0000 | | | | | | |
| S Total TCDF | | | | | 9.890 | 9.890 | 0.0284 | 0.0284 | | |
| 1,2,3,7,8-PeCDD | 41.015 | 3815716 | 1.56 | 1.0434 | 48.5 | 48.5 | 0.0582 | 0.0582 | 96.92 | |
| A Non-2,3,7,8-sub-PeCDD | 39.915 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDD | | | | | 48.5 | 48.5 | 0.0582 | 0.0582 | | |
| 1,2,3,7,8-PeCDF | 39.293 | 6951995 | 1.58 | 1.1898 | 48.1 | 48.1 | 0.1888 | 0.1888 | 96.21 | |
| 2,3,4,7,8-PeCDF | 40.499 | 6512875 | 1.58 | 1.1095 | 48.5 | 48.5 | 0.1814 | 0.1814 | 97.01 | |
| A Non-2,3,7,8-sub-PeCDF | 38.623 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDF | | | | | 96.6 | 96.6 | 0.1851 | 0.1851 | | |
| 1,2,3,4,7,8-HxCDD | 45.248 | 4731492 | 1.27 | 1.1409 | 49.1 | 49.1 | 0.1073 | 0.1073 | 98.27 | |
| 1,2,3,6,7,8-HxCDD | 45.366 | 5069185 | 1.26 | 1.1481 | 49.6 | 49.6 | 0.1128 | 0.1128 | 99.12 | |
| 1,2,3,7,8,9-HxCDD | 45.754 | 5184383 | 1.28 | 1.2212 | 48.9 | 48.9 | 0.1031 | 0.1031 | 97.88 | |
| A Non-2,3,7,8-sub-HxCDD | 44.687 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDD | | | | | 147.6 | 147.6 | 0.1078 | 0.1078 | | |
| 1,2,3,4,7,8-HxCDF | 44.202 | 7655800 | 1.25 | 1.3629 | 48.6 | 48.6 | 0.1512 | 0.1512 | 97.14 | |
| 1,2,3,6,7,8-HxCDF | 44.337 | 8864531 | 1.21 | 1.2762 | 48.4 | 48.4 | 0.1440 | 0.1440 | 96.74 | |
| 2,3,4,6,7,8-HxCDF | 45.063 | 7899628 | 1.25 | 1.2654 | 48.4 | 48.4 | 0.1570 | 0.1570 | 96.75 | |
| 1,2,3,7,8,9-HxCDF | 46.024 | 7126497 | 1.26 | 1.2573 | 49.0 | 49.0 | 0.2044 | 0.2044 | 98.07 | |
| A Non-2,3,7,8-sub-HxCDF | 44.552 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDF | | | | | 194.3 | 194.3 | 0.1642 | 0.1642 | | |
| 1,2,3,4,6,7,8-HpCDD | 50.178 | 4285504 | 1.05 | 1.1204 | 49.5 | 49.5 | 0.1647 | 0.1647 | 99.02 | |
| A Non-2,3,7,8-sub-HpCDD | 49.566 | | | | | | 0.0 | 0.0 | | |
| S Total HpCDD | | | | | 49.5 | 49.5 | 0.1647 | 0.1647 | | |
| 1,2,3,4,6,7,8-HpCDF | 48.458 | 7340131 | 1.05 | 1.4984 | 48.5 | 48.5 | 0.1652 | 0.1652 | 97.00 | |
| 1,2,3,4,7,8,9-HpCDF | 50.819 | 5736971 | 1.07 | 1.3807 | 48.6 | 48.6 | 0.2252 | 0.2252 | 97.15 | |

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HpCDF | 49.625 | | | | | | 0.0 | 0.0 | | |
| S Total HpCDF | | | | | 97.1 | 97.1 | 0.1952 | 0.1952 | | |
| OCDD | 54.290 | 7672456 | 0.90 | 1.2073 | 99.1 | 99.1 | 0.1333 | 0.1333 | 99.09 | |
| OCDF | 54.428 | 10665891 | 0.91 | 1.1162 | 98.2 | 98.2 | 0.1095 | 0.1095 | 98.17 | |
| D 13C-2,3,7,8-TCDD | 31.788 | 9611208 | 0.81 | 1.0709 | 98.8 | 98.8 | 0.2864 | 0.2864 | 98.79 | |
| D 13C-2,3,7,8-TCDF | 29.727 | 15790178 | 0.81 | 1.7545 | 99.1 | 99.1 | 0.1594 | 0.1594 | 99.07 | |
| D 13C-1,2,3,7,8-PeCDD | 40.998 | 7546076 | 1.58 | 0.8743 | 95.0 | 95.0 | 0.3704 | 0.3704 | 95.01 | |
| D 13C-1,2,3,7,8-PeCDF | 39.276 | 12146075 | 1.57 | 1.3704 | 97.6 | 97.6 | 0.3207 | 0.3207 | 97.56 | |
| D 13C-2,3,4,7,8-PeCDF | 40.481 | 12102314 | 1.58 | 1.3837 | 96.3 | 96.3 | 0.3176 | 0.3176 | 96.28 | |
| D 13C-1,2,3,4,7,8-HxCDD | 45.231 | 8441043 | 1.24 | 0.8772 | 100.1 | 100.1 | 0.2048 | 0.2048 | 100 | |
| D 13C-1,2,3,6,7,8-HxCDD | 45.350 | 8908892 | 1.26 | 0.9171 | 101.0 | 101.0 | 0.1959 | 0.1959 | 101 | |
| D 13C-1,2,3,4,7,8-HxCDF | 44.185 | 11565241 | 0.52 | 1.1892 | 101.1 | 101.1 | 0.1596 | 0.1596 | 101 | |
| D 13C-1,2,3,6,7,8-HxCDF | 44.320 | 14360417 | 0.53 | 1.4625 | 102.1 | 102.1 | 0.1298 | 0.1298 | 102 | |
| D 13C-2,3,4,6,7,8-HxCDF | 45.046 | 12905207 | 0.55 | 1.3197 | 101.7 | 101.7 | 0.1438 | 0.1438 | 102 | |
| D 13C-1,2,3,7,8,9-HxCDF | 46.007 | 11559055 | 0.54 | 1.2001 | 100.2 | 100.2 | 0.1581 | 0.1581 | 100 | |
| D 13C-1,2,3,4,6,7,8-HpCDD | 50.161 | 7725803 | 1.10 | 0.8155 | 98.5 | 98.5 | 0.3117 | 0.3117 | 98.52 | |
| D 13C-1,2,3,4,6,7,8-HpCDF | 48.441 | 10100696 | 0.44 | 1.0496 | 100.1 | 100.1 | 0.1758 | 0.1758 | 100 | |
| D 13C-1,2,3,4,7,8,9-HpCDF | 50.786 | 8553669 | 0.45 | 0.8947 | 99.4 | 99.4 | 0.2063 | 0.2063 | 99.41 | |
| D 13C-OCDD | 54.290 | 12827376 | 0.92 | 0.7044 | 189.4 | 189.4 | 0.1987 | 0.1987 | 94.68 | |
| D 13C-OCDF | 54.428 | 19467909 | 0.91 | 1.0615 | 190.7 | 190.7 | 0.0917 | 0.0917 | 95.36 | |
| $ 37Cl4-2,3,7,8-TCDD | 31.838 | 1078771 | | 1.2266 | 9.682 | 9.682 | 0.0207 | 0.0207 | 96.82 | |
| * 13C-1,2,3,4-TCDD | 31.273 | 9084255 | 0.81 | 9.1E+04 | 100.0 | 100.0 | | | | |
| * 13C-1,2,3,7,8,9-HxCDD | 45.737 | 9616646 | 1.27 | 1E+05 | 100.0 | 100.0 | | | | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

## Reagents:

61L31613OP_00001 Amount Added: 20.00 Units: uL

Report Date: 12-Jan-2017 08:10:06 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i3.d
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 16-May-2014 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:74cs3 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 12-Jan-2017 08:10:05 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK029

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:14:19

| Signal | RT (min.) | Adj RT (min.) | Δ Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | |
| 319.8965 | 31.838 | 31.838 | 0 | 1.002 | 480461 | 49145 | 43 | 107 | 1143 | | |
| 321.8936 | 31.855 | 31.838 | 1 | 1.002 | 622632 | 66067 | 74 | 185 | 893 | 0.77(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | RQ |
| 319.8965 | 29.744 | 30.308 | -34 | | 2139 | 497 | 43 | 107 | 12 | | |
| 321.8936 | 29.727 | 30.308 | -35 | | 2323 | 402 | 74 | 185 | 5 | 0.92(0.65-0.89) | |
| 2,3,7,8-TCDF | | | | | | | | | | | |
| 303.9016 | 29.760 | 29.760 | 0 | 1.001 | 751447 | 84906 | 105 | 262 | 809 | | |
| 305.8987 | 29.777 | 29.760 | 1 | 1.002 | 947797 | 110203 | 112 | 280 | 984 | 0.79(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | |
| 303.9016 | 28.613 | 28.995 | -23 | | 6903 | 985 | 105 | 262 | 9 | | |
| 305.8987 | 28.597 | 28.995 | -24 | | 8954 | 1096 | 112 | 280 | 10 | 0.77(0.65-0.89) | |
| 1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 355.8546 | 41.015 | 41.015 | 0 | 1.000 | 2326577 | 552471 | 233 | 582 | 2371 | | |
| 357.8516 | 41.015 | 41.015 | 0 | 1.000 | 1489139 | 361545 | 206 | 515 | 1755 | 1.56(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | |
| 355.8546 | 39.915 | | | | | | 233 | 582 | | | |
| 357.8516 | 39.915 | | | | | | 206 | 515 | | | |
| 1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 39.293 | 39.293 | 0 | 1.000 | 4258824 | 875314 | 1384 | 3460 | 632 | | |
| 341.8567 | 39.293 | 39.293 | 0 | 1.000 | 2693171 | 549312 | 886 | 2215 | 620 | 1.58(1.32-1.78) | |
| 2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 40.499 | 40.499 | 0 | 1.000 | 3984815 | 919843 | 1384 | 3460 | 665 | | |
| 341.8567 | 40.499 | 40.499 | 0 | 1.000 | 2528060 | 588273 | 886 | 2215 | 664 | 1.58(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | |
| 339.8597 | 38.623 | | | | | | 1384 | 3460 | | | |
| 341.8567 | 38.623 | | | | | | 886 | 2215 | | | |
| 1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.248 | 45.248 | 0 | 1.000 | 2647565 | 694895 | 543 | 1357 | 1280 | | |
| 391.8127 | 45.248 | 45.248 | 0 | 1.000 | 2083927 | 528569 | 537 | 1342 | 984 | 1.27(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.366 | 45.366 | 0 | 1.000 | 2830045 | 671380 | 543 | 1357 | 1236 | | |
| 391.8127 | 45.366 | 45.366 | 0 | 1.000 | 2239140 | 528504 | 537 | 1342 | 984 | 1.26(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.754 | 45.754 | 0 | 1.012 | 2909461 | 665096 | 543 | 1357 | 1225 | | |
| 391.8127 | 45.754 | 45.754 | 0 | 1.012 | 2274922 | 515784 | 537 | 1342 | 960 | 1.28(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | |
| 389.8158 | 44.687 | | | | | | 543 | 1357 | | | |
| 391.8127 | 44.687 | | | | | | 537 | 1342 | | | |
| 1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.202 | 44.202 | 0 | 1.000 | 4252364 | 1152533 | 1361 | 3402 | 847 | | |
| 375.8178 | 44.202 | 44.202 | 0 | 1.000 | 3403436 | 889291 | 1188 | 2970 | 749 | 1.25(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.337 | 44.337 | 0 | 1.000 | 4852548 | 1177511 | 1361 | 3402 | 865 | | |
| 375.8178 | 44.337 | 44.337 | 0 | 1.000 | 4011983 | 951434 | 1188 | 2970 | 801 | 1.21(1.05-1.43) | |
| 2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 45.063 | 45.063 | 0 | 1.000 | 4384591 | 1096858 | 1361 | 3402 | 806 | | |
| 375.8178 | 45.063 | 45.063 | 0 | 1.000 | 3515037 | 885868 | 1188 | 2970 | 746 | 1.25(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 46.024 | 46.024 | 0 | 1.000 | 3973060 | 857029 | 1361 | 3402 | 630 | | |
| 375.8178 | 46.024 | 46.024 | 0 | 1.000 | 3153437 | 697338 | 1188 | 2970 | 587 | 1.26(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.552 | | | | | | 1361 | 3402 | | | |
| 375.8178 | 44.552 | | | | | | 1188 | 2970 | | | |
| 1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 423.7767 | 50.178 | 50.178 | 0 | 1.000 | 2192332 | 417062 | 552 | 1380 | 756 | | |
| 425.7737 | 50.178 | 50.178 | 0 | 1.000 | 2093172 | 396316 | 526 | 1315 | 753 | 1.05(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | |
| 423.7767 | 49.566 | | | | | | 552 | 1380 | | | |
| 425.7737 | 49.566 | | | | | | 526 | 1315 | | | |
| 1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 407.7817 | 48.458 | 48.458 | 0 | 1.000 | 3763417 | 750457 | 1020 | 2550 | 736 | | |
| 409.7788 | 48.458 | 48.458 | 0 | 1.000 | 3576714 | 728511 | 1018 | 2545 | 716 | 1.05(0.88-1.20) | |
| 1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 407.7817 | 50.819 | 50.819 | 0 | 1.001 | 2966508 | 567063 | 1020 | 2550 | 556 | | |
| 409.7788 | 50.802 | 50.819 | -1 | 1.000 | 2770463 | 540488 | 1018 | 2545 | 531 | 1.07(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | |
| 407.7817 | 49.625 | | | | | | 1020 | 2550 | | | |
| 409.7788 | 49.625 | | | | | | 1018 | 2545 | | | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCDD | | | | | | | | | | | |
| 457.7377 | 54.290 | 54.290 | 0 | 1.000 | 3630135 | 798190 | 388 | 970 | 2057 | | |
| 459.7348 | 54.290 | 54.290 | 0 | 1.000 | 4042321 | 922514 | 517 | 1292 | 1784 | 0.90(0.76-1.02) | |
| OCDF | | | | | | | | | | | |
| 441.7428 | 54.428 | 54.428 | 0 | 1.000 | 5087486 | 1187618 | 419 | 1047 | 2834 | | |
| 443.7399 | 54.428 | 54.428 | 0 | 1.000 | 5578405 | 1325319 | 670 | 1675 | 1978 | 0.91(0.76-1.02) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 31.788 | 31.788 | 0 | 1.016 | 4294516 | 424380 | 700 | 1750 | 606 | | |
| 333.9338 | 31.788 | 31.788 | 0 | 1.016 | 5316692 | 529219 | 507 | 1267 | 1044 | 0.81(0.65-0.89) | |
| 13C-2,3,7,8-TCDF | | | | | | | | | | | |
| 315.9419 | 29.727 | 29.727 | 0 | 0.951 | 7044515 | 770657 | 604 | 1510 | 1276 | | |
| 317.9389 | 29.727 | 29.727 | 0 | 0.951 | 8745663 | 984510 | 496 | 1240 | 1985 | 0.81(0.65-0.89) | |
| 13C-1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 367.8949 | 40.998 | 40.998 | 0 | 1.311 | 4626247 | 1112265 | 908 | 2270 | 1225 | | |
| 369.8919 | 40.998 | 40.998 | 0 | 1.311 | 2919829 | 692726 | 366 | 915 | 1893 | 1.58(1.32-1.78) | |
| 13C-1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 39.276 | 39.276 | 0 | 1.256 | 7420185 | 1556852 | 666 | 1665 | 2338 | | |
| 353.8970 | 39.276 | 39.276 | 0 | 1.256 | 4725890 | 969806 | 1063 | 2657 | 912 | 1.57(1.32-1.78) | |
| 13C-2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 40.481 | 40.481 | 0 | 1.294 | 7402612 | 1733324 | 666 | 1665 | 2603 | | |
| 353.8970 | 40.481 | 40.481 | 0 | 1.294 | 4699702 | 1085674 | 1063 | 2657 | 1021 | 1.58(1.32-1.78) | |
| 13C-1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.231 | 45.231 | 0 | 0.989 | 4677745 | 1212495 | 788 | 1970 | 1539 | | |
| 403.8529 | 45.231 | 45.231 | 0 | 0.989 | 3763298 | 992262 | 766 | 1915 | 1295 | 1.24(1.05-1.43) | |
| 13C-1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.350 | 45.350 | 0 | 0.992 | 4971028 | 1147081 | 788 | 1970 | 1456 | | |
| 403.8529 | 45.350 | 45.350 | 0 | 0.992 | 3937864 | 936939 | 766 | 1915 | 1223 | 1.26(1.05-1.43) | |
| 13C-1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44.185 | 44.185 | 0 | 0.966 | 3971124 | 1055768 | 658 | 1645 | 1605 | | |
| 385.8610 | 44.185 | 44.185 | 0 | 0.966 | 7594117 | 2035527 | 984 | 2460 | 2069 | 0.52(0.43-0.59) | |
| 13C-1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44.320 | 44.320 | 0 | 0.969 | 4988721 | 1221360 | 658 | 1645 | 1856 | | |
| 385.8610 | 44.320 | 44.320 | 0 | 0.969 | 9371696 | 2246658 | 984 | 2460 | 2283 | 0.53(0.43-0.59) | |
| 13C-2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 45.046 | 45.046 | 0 | 0.985 | 4567426 | 1141229 | 658 | 1645 | 1734 | | |
| 385.8610 | 45.046 | 45.046 | 0 | 0.985 | 8337781 | 2065196 | 984 | 2460 | 2099 | 0.55(0.43-0.59) | |
| 13C-1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 383.8639 | 46.007 | 46.007 | 0 | 1.006 | 4038510 | 860411 | 658 | 1645 | 1308 | | |
| 385.8610 | 46.007 | 46.007 | 0 | 1.006 | 7520545 | 1619371 | 984 | 2460 | 1646 | 0.54(0.43-0.59) | |
| 13C-1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 435.8169 | 50.161 | 50.161 | 0 | 1.097 | 4048454 | 764293 | 960 | 2400 | 796 | | |
| 437.8140 | 50.161 | 50.161 | 0 | 1.097 | 3677349 | 696523 | 1239 | 3097 | 562 | 1.10(0.88-1.20) | |
| 13C-1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 417.8250 | 48.441 | 48.441 | 0 | 1.059 | 3071353 | 632983 | 814 | 2035 | 778 | | |
| 419.8220 | 48.441 | 48.441 | 0 | 1.059 | 7029343 | 1424811 | 783 | 1957 | 1820 | 0.44(0.51-0.37) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 417.8250 | 50.786 | 50.786 | 0 | 1.110 | 2665351 | 503859 | 814 | 2035 | 619 | | |
| 419.8220 | 50.786 | 50.786 | 0 | 1.110 | 5888318 | 1134602 | 783 | 1957 | 1449 | 0.45(0.37-0.51) | |
| 13C-OCDD | | | | | | | | | | | |
| 469.7780 | 54.290 | 54.290 | 0 | 1.187 | 6153472 | 1344000 | 630 | 1575 | 2133 | | |
| 471.7750 | 54.290 | 54.290 | 0 | 1.187 | 6673904 | 1466401 | 581 | 1452 | 2524 | 0.92(0.76-1.02) | |
| 13C-OCDF | | | | | | | | | | | |
| 453.7830 | 54.428 | 54.428 | 0 | 1.190 | 9258160 | 2101172 | 434 | 1085 | 4841 | | |
| 455.7801 | 54.428 | 54.428 | 0 | 1.190 | 10209749 | 2351742 | 408 | 1020 | 5764 | 0.91(0.76-1.02) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31.838 | 31.838 | 0 | 1.018 | 1078771 | 110043 | 100 | 250 | 1100 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 31.273 | 31.273 | 0 | | 4054750 | 419797 | 700 | 1750 | 600 | | |
| 333.9338 | 31.273 | 31.273 | 0 | | 5029505 | 563740 | 507 | 1267 | 1112 | 0.81(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.737 | 45.737 | 0 | | 5389374 | 1212839 | 788 | 1970 | 1539 | | |
| 403.8529 | 45.737 | 45.737 | 0 | | 4227272 | 949970 | 766 | 1915 | 1240 | 1.27(1.05-1.43) | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

## Reagents:

61L31613OP_00001 Amount Added: 20.00 Units: uL

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i3.d
Lims ID: IC L3
Client ID:
Inject. Date: 16-May-2014 16:27:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 3
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 4
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDD, RT: 30.308

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 319.8965 Area | 319.8965 Height | 321.8936 Area | 321.8936 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 29.744 | 2139 | 497 | 2323 | 402 | | 0.92 | Rn |
| Signal Totals: | | | | | | | |
| | 2139 | 497 | 2323 | 402 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 4462 | 899 | | | | 0.92 | RQ |
| | 4111 | 711 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4462 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (4111 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 12-Jan-2017 08:10:06 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i3.d
Lims ID: IC L3
Client ID:
Inject. Date: 16-May-2014 16:27:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 3
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 4
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDF, RT: 28.995

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 303.9016 Area | 303.9016 Height | 305.8987 Area | 305.8987 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 28.613 | 6903 | 985 | 8954 | 1096 | | 0.77 | n |
| Signal Totals: | | | | | | | |
| | 6903 | 985 | 8954 | 1096 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 15857 | 2081 | | | | 0.77 | |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (15857 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
n - Failed Sig-To-Noise Test

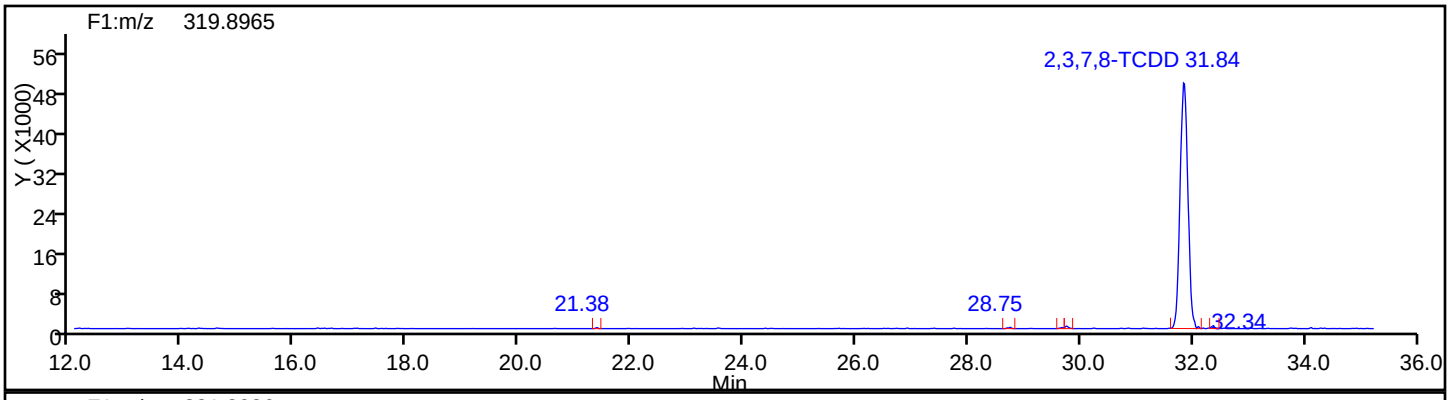
Report Date: 12-Jan-2017 08:10:06 Chrom Revision: 2.2 10-Jan-2017 11:26:10

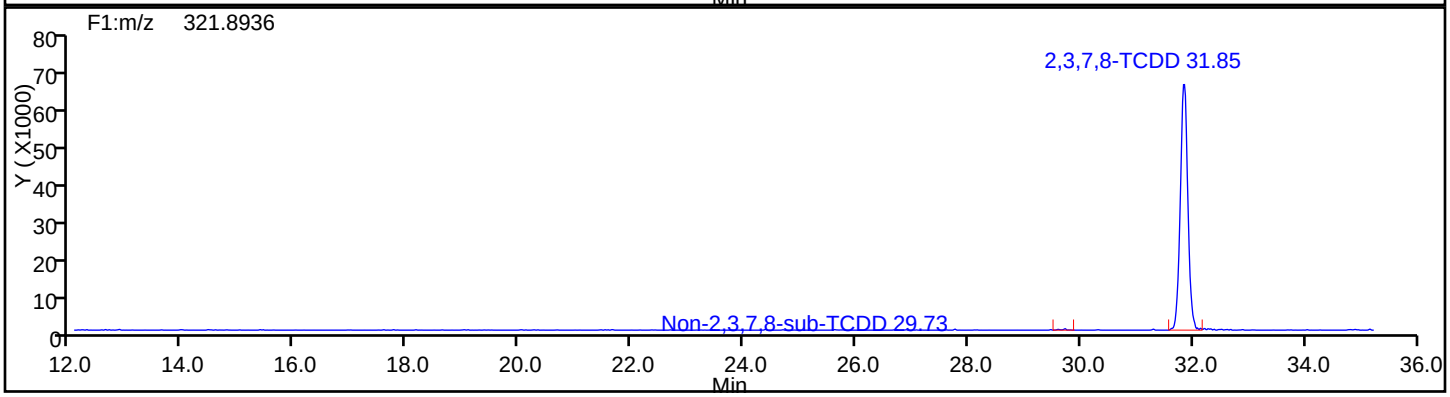
TestAmerica Knoxville

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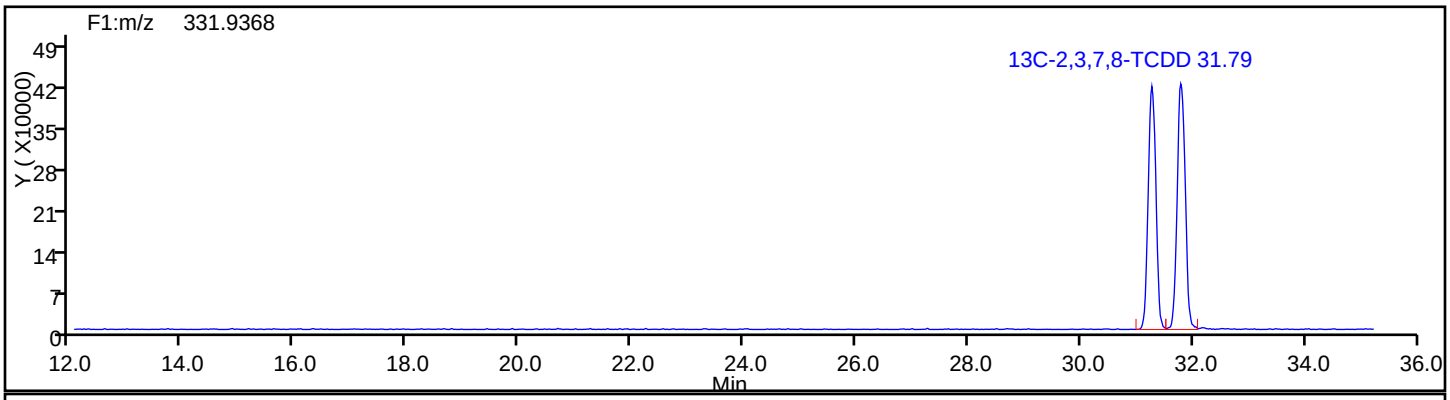
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|---|---|---|---|
| Injection Date: | 16-May-2014 16:27:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 4 |
| Column Type: | | Column Dia: | |

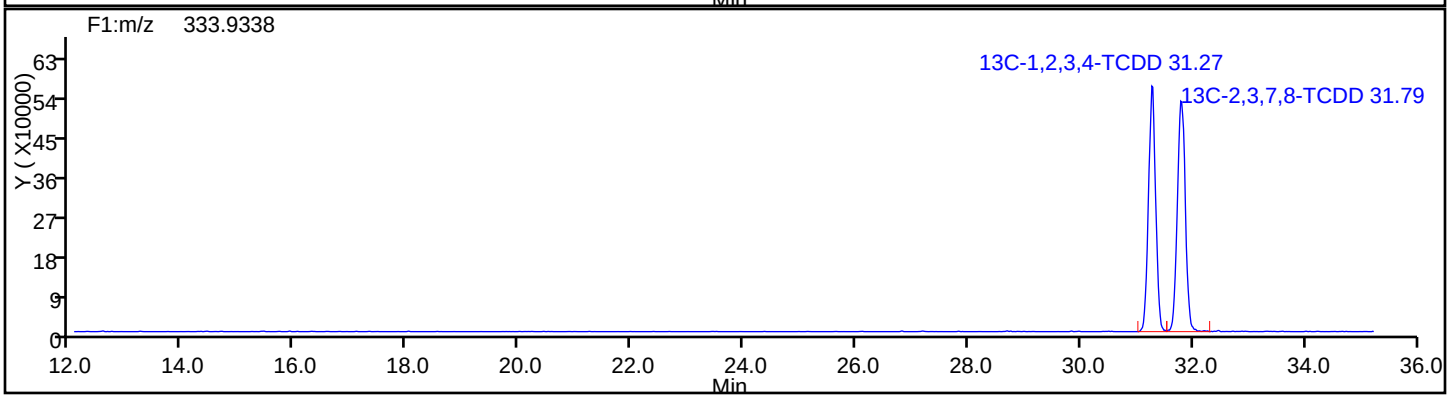
TCDD




TCDD Standards



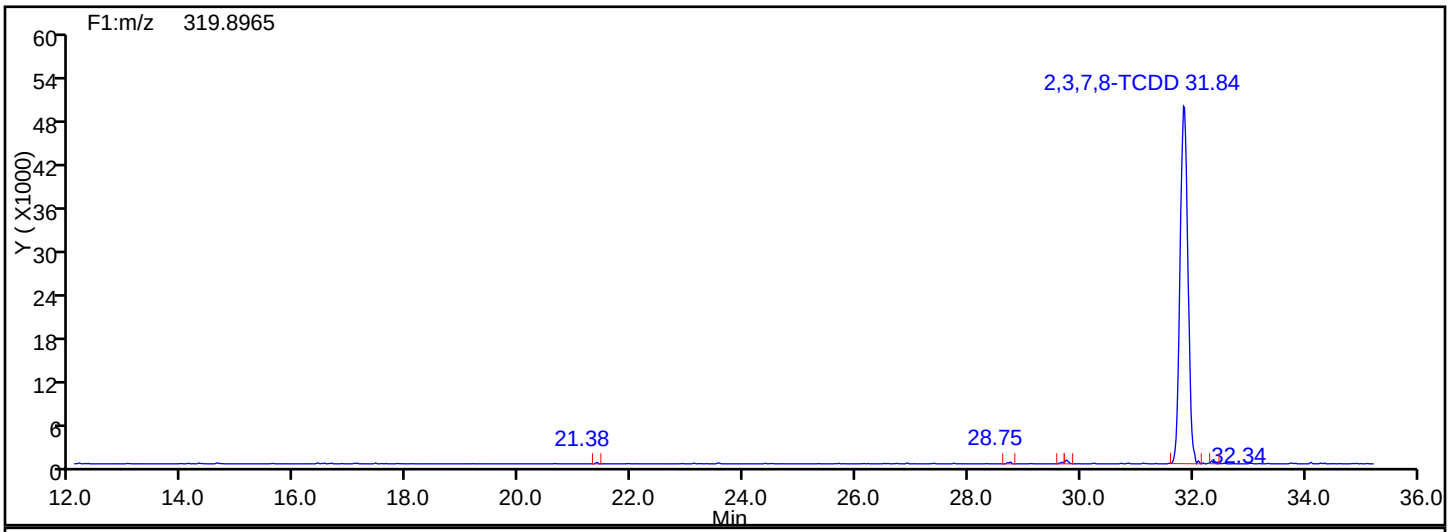
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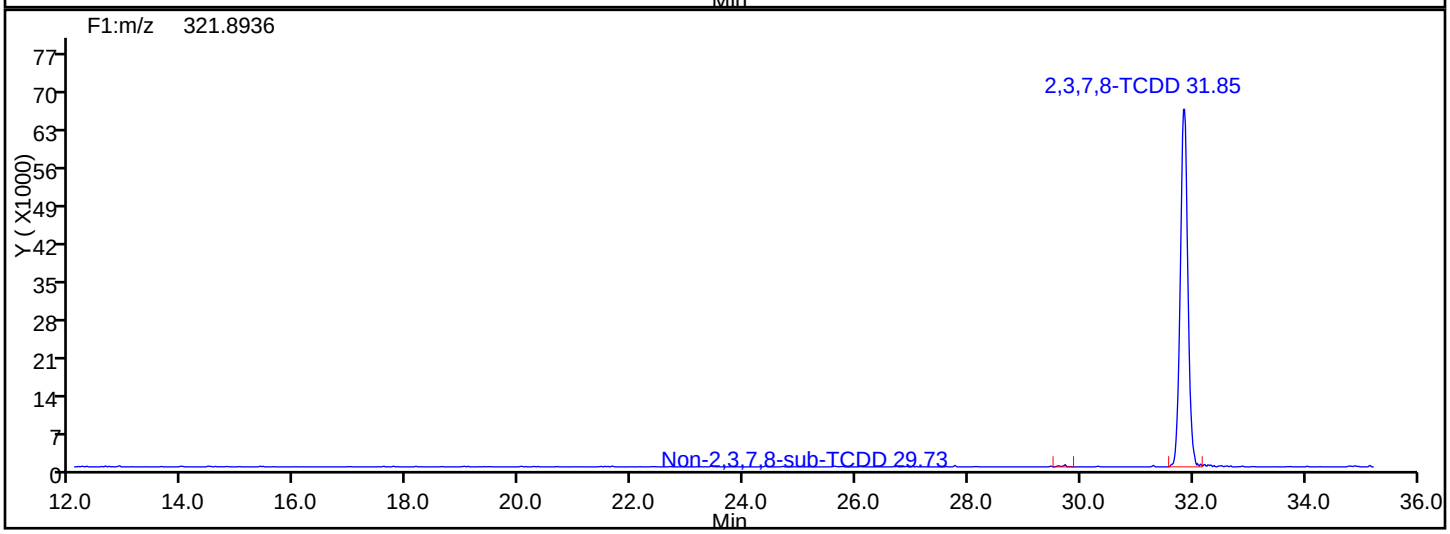
TestAmerica Knoxville

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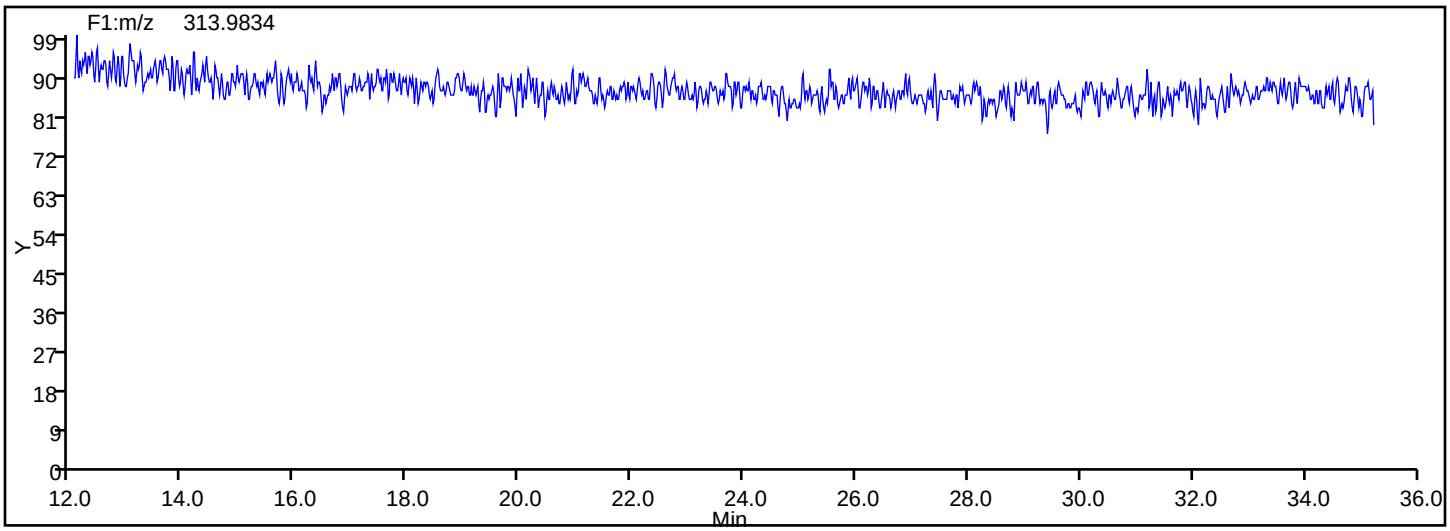
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|---|---|---|---|
| Injection Date: | 16-May-2014 16:27:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 4 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



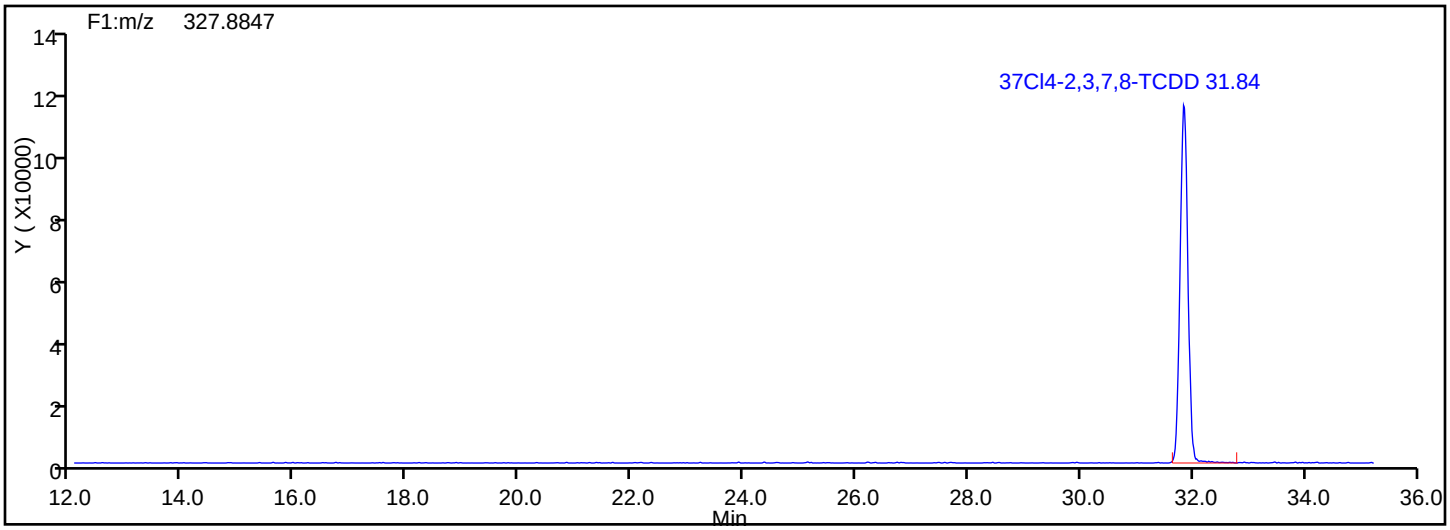
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TestAmerica Knoxville

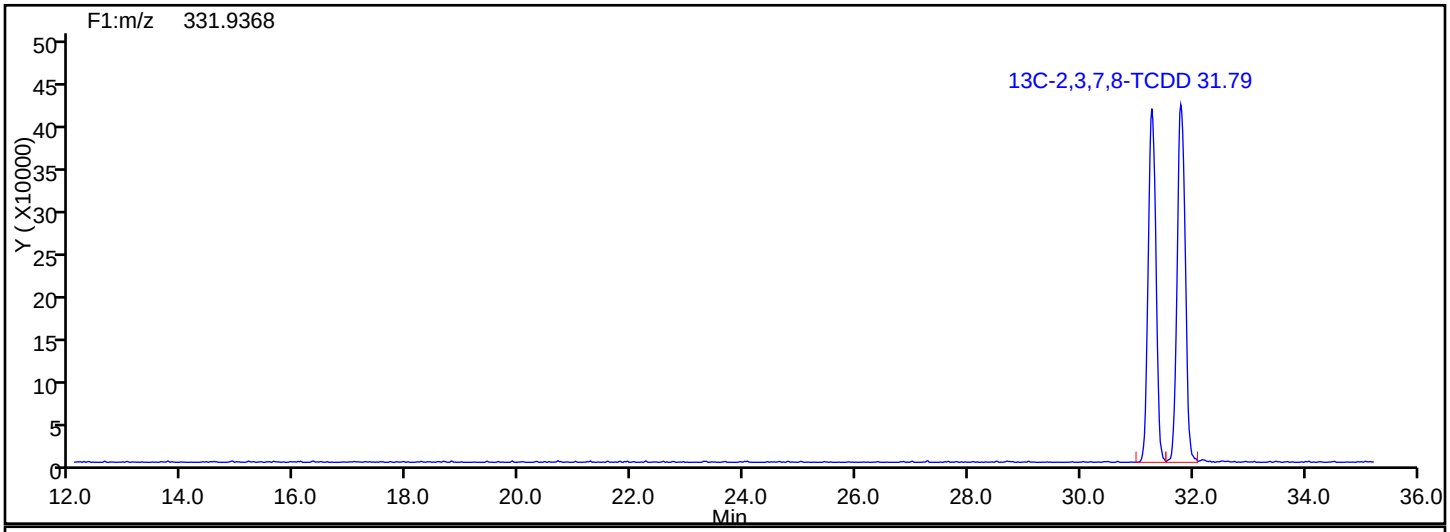
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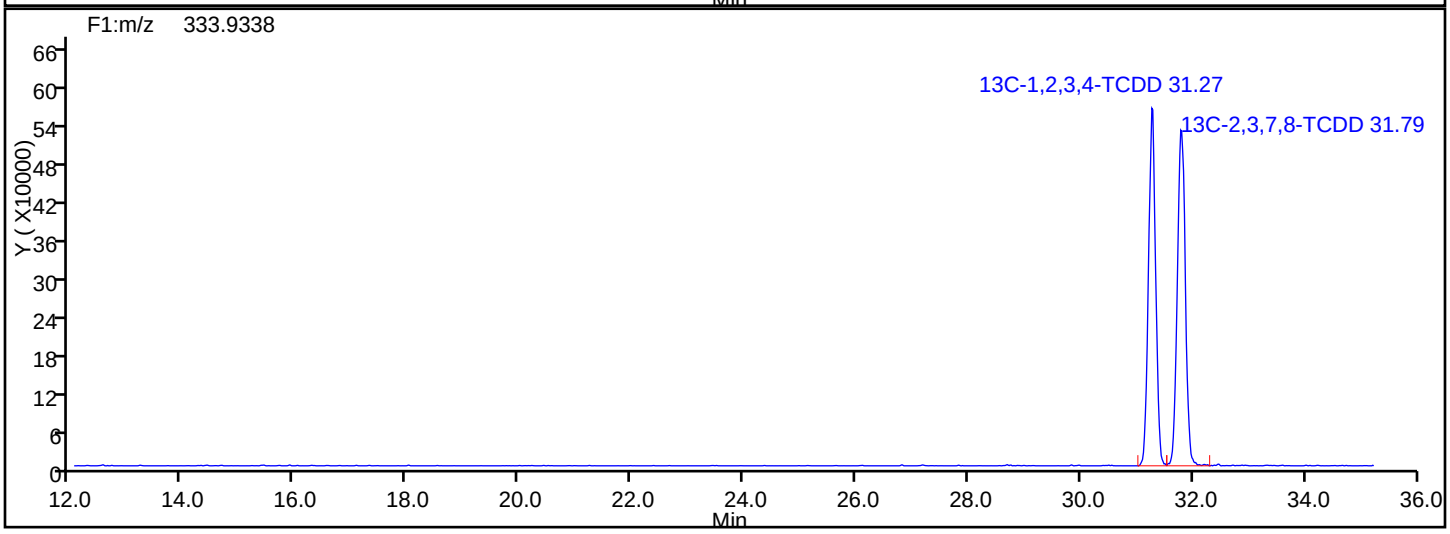
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 16:27:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 4 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



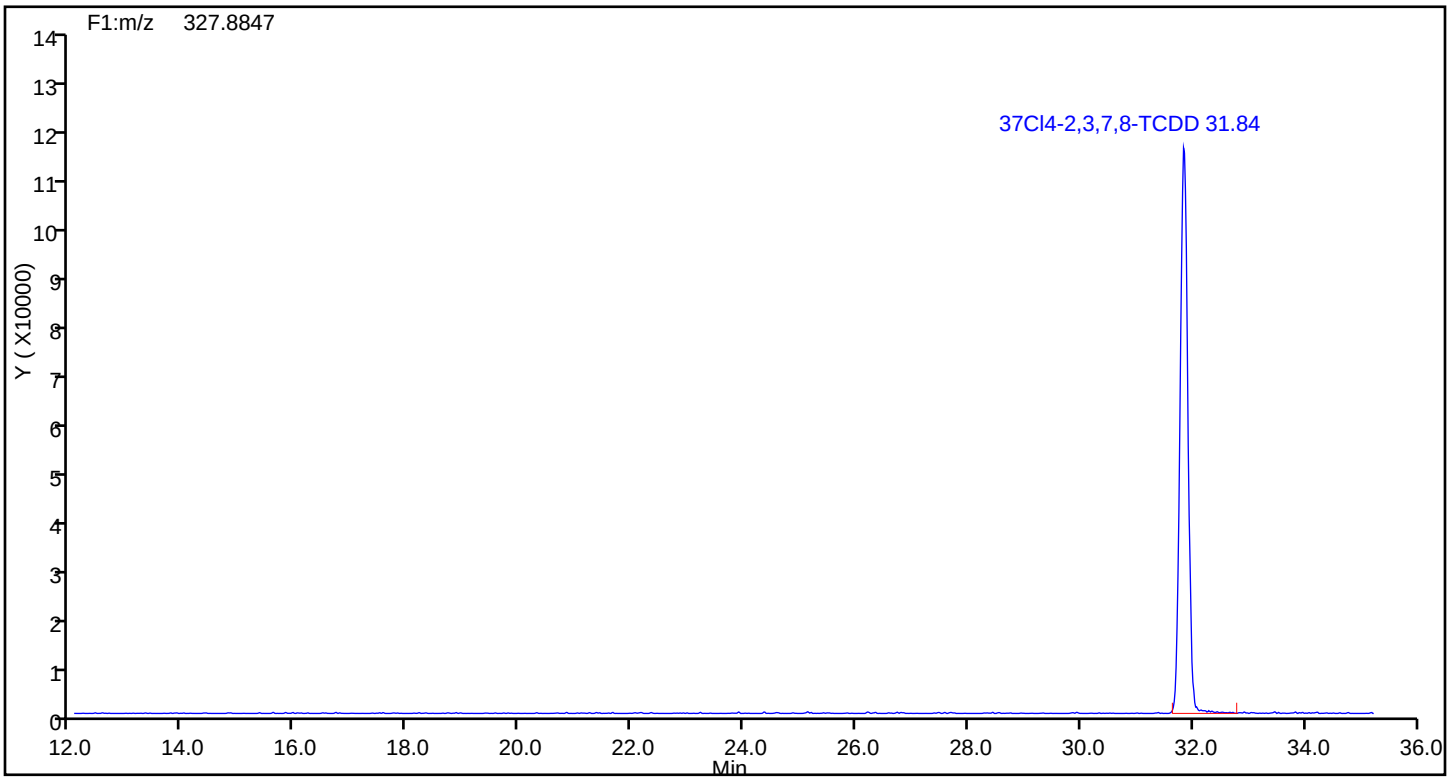
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TestAmerica Knoxville

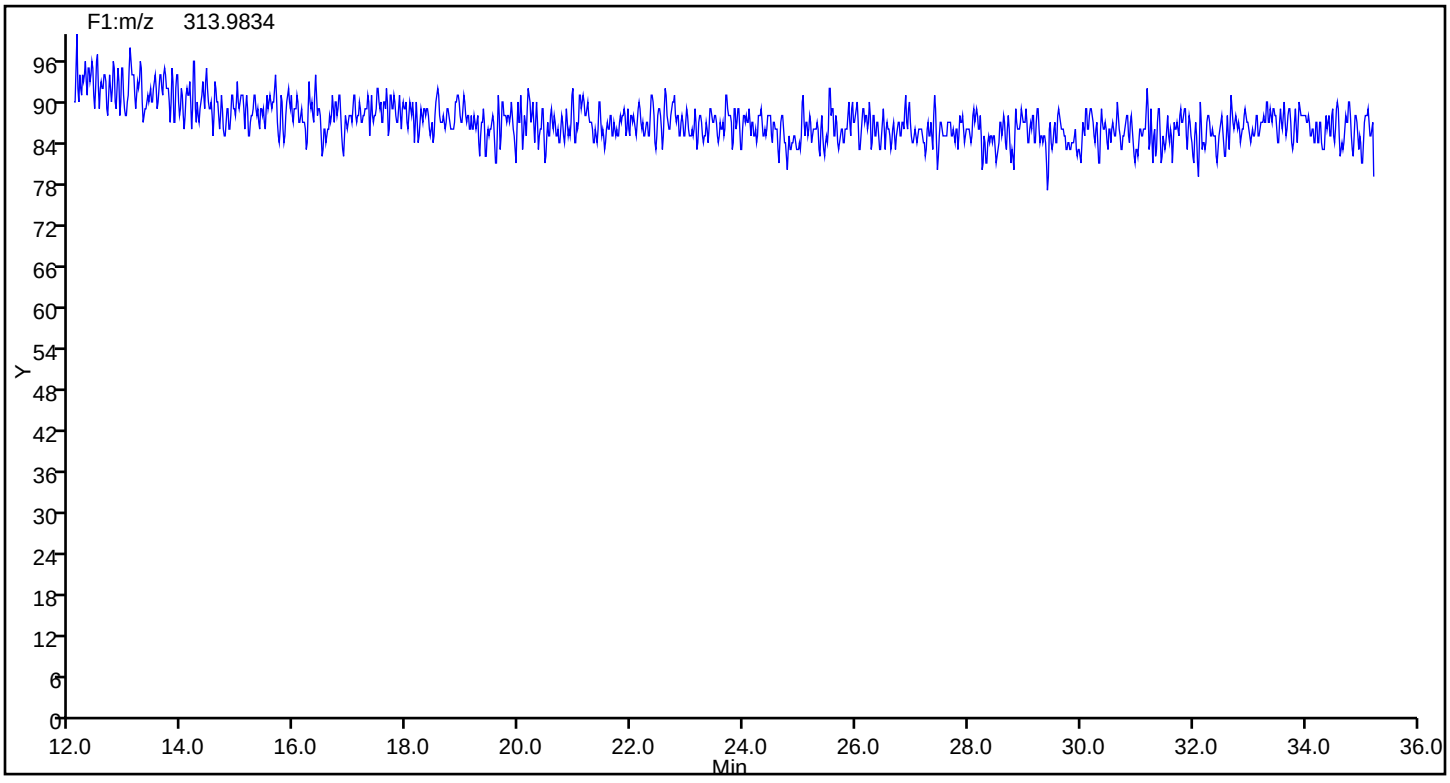
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| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 16:27:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 4 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Lock Mass



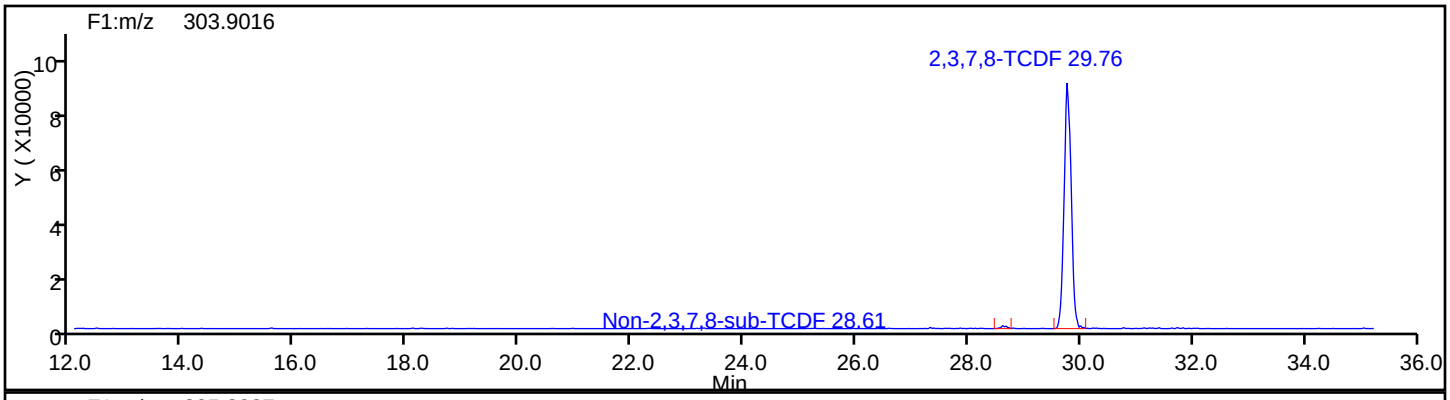
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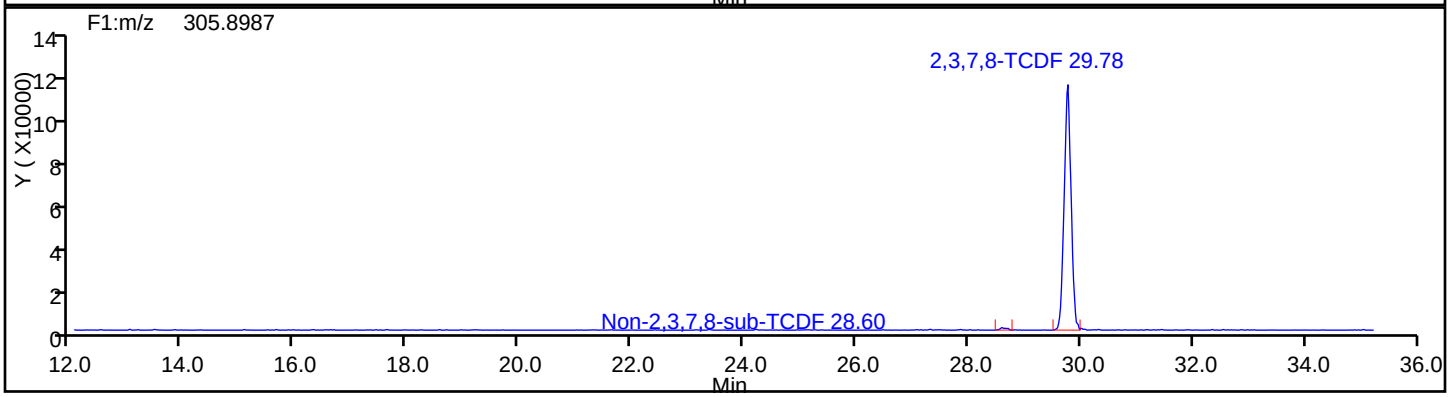
TestAmerica Knoxville

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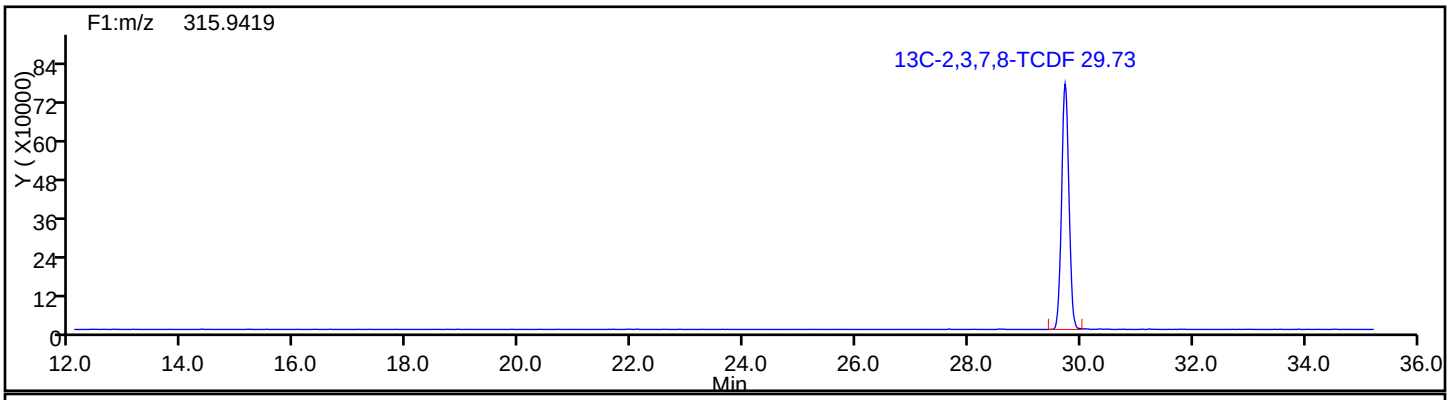
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
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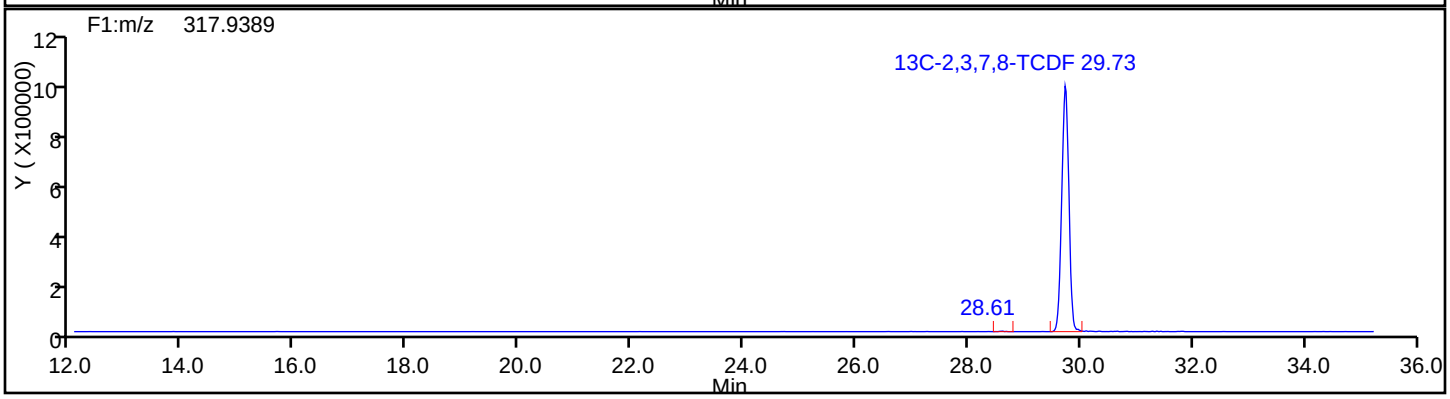
TCDF




TCDF Standards



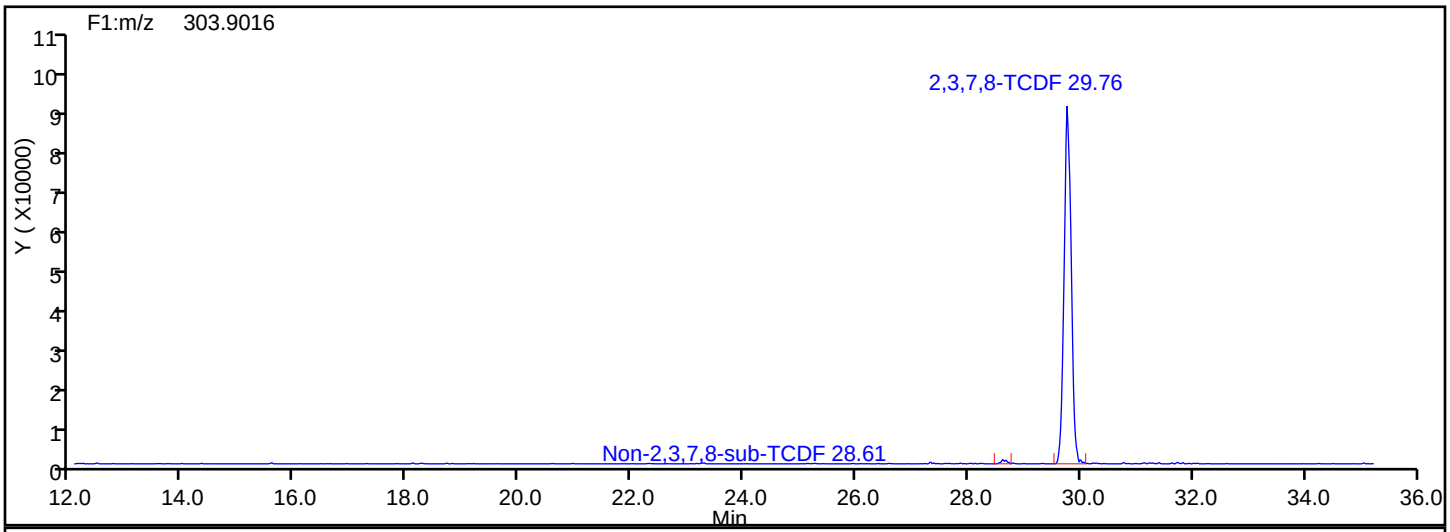
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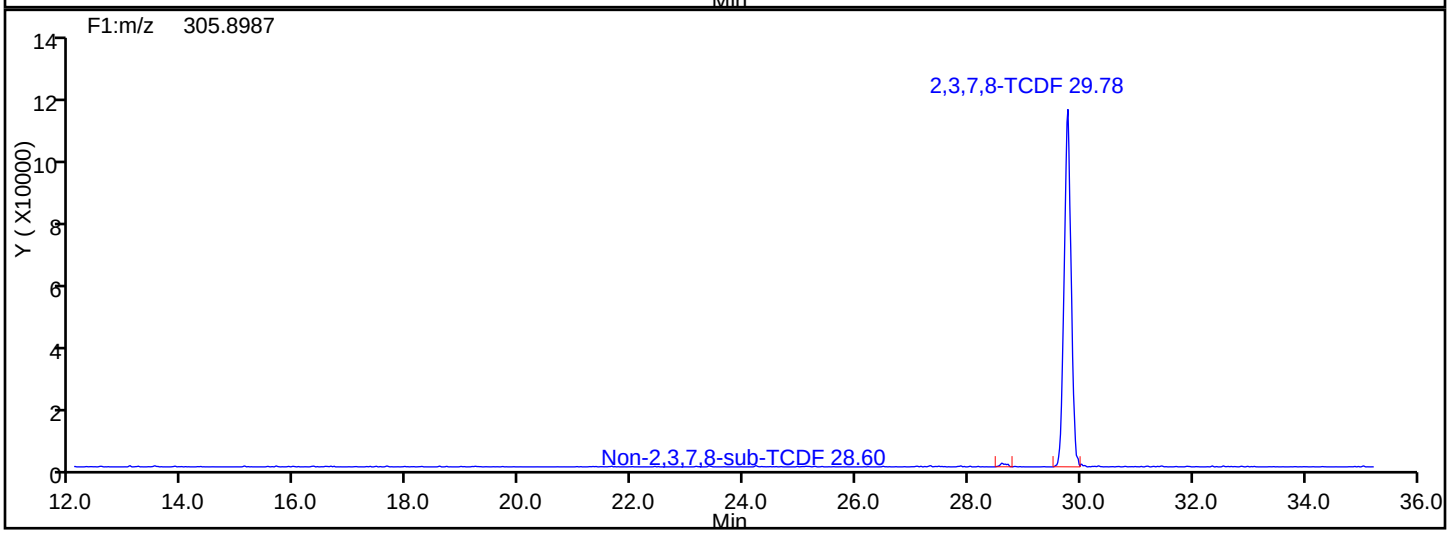
TestAmerica Knoxville

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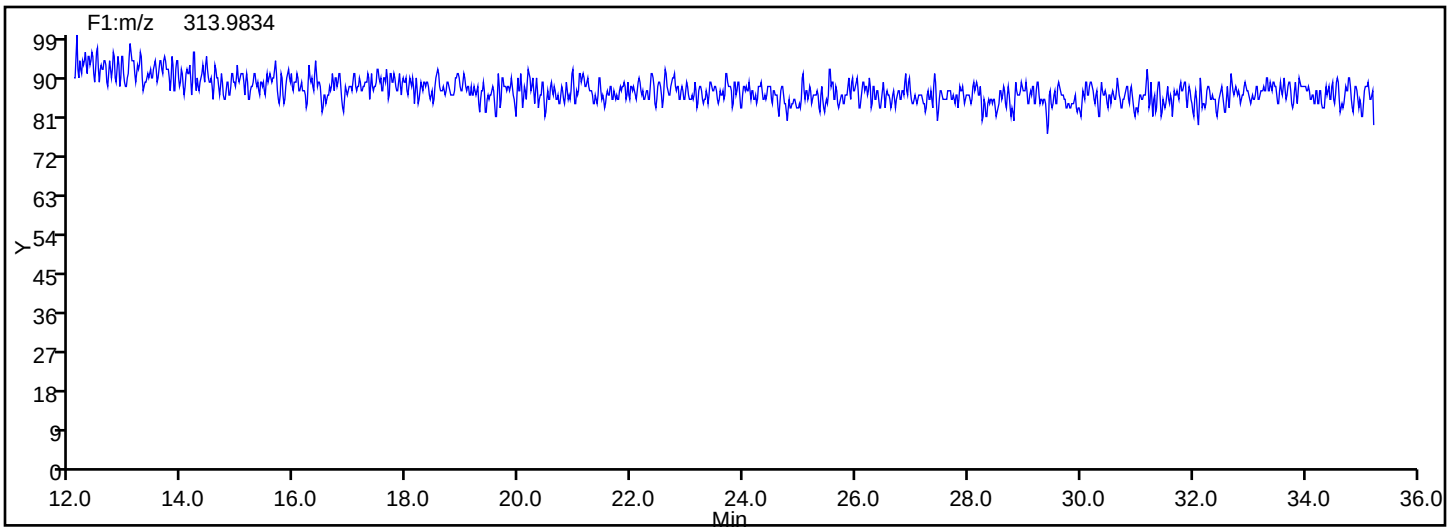
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

TCDF




TCDF Lock Mass



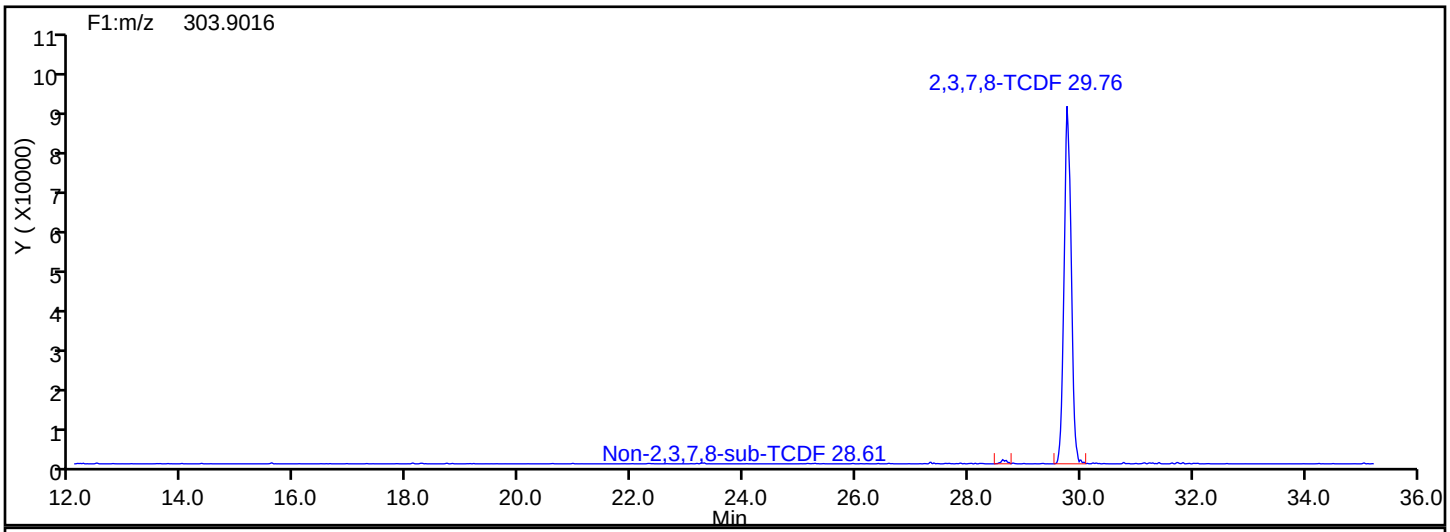
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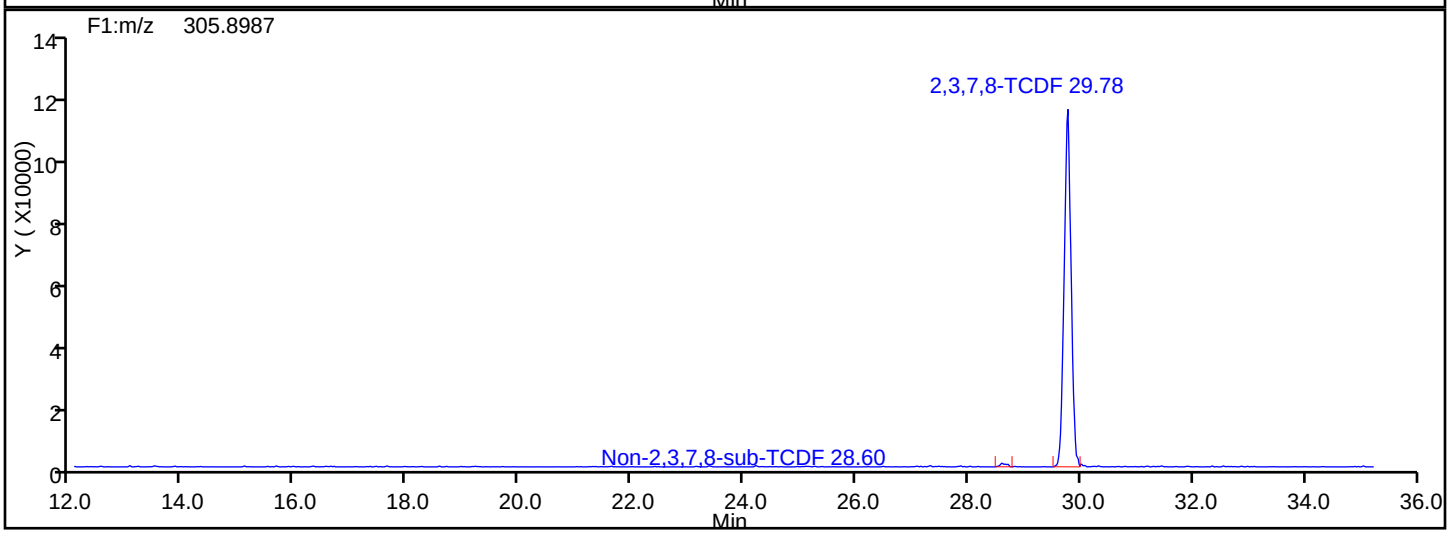
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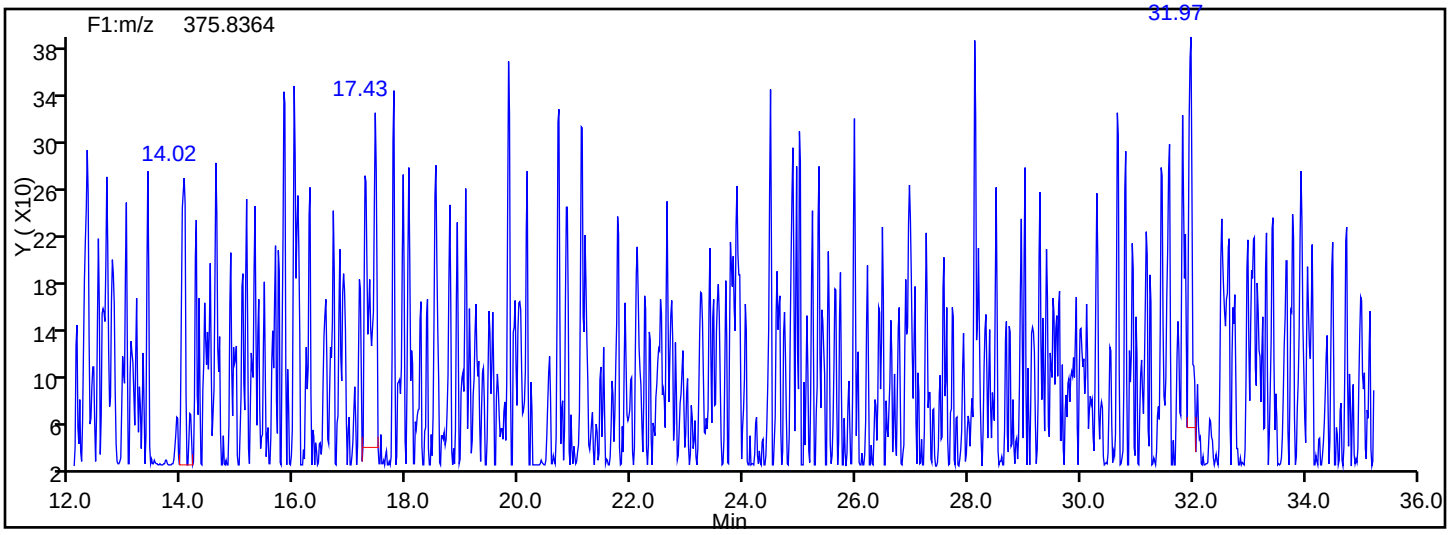
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

TCDF




TCDF Interference Mass



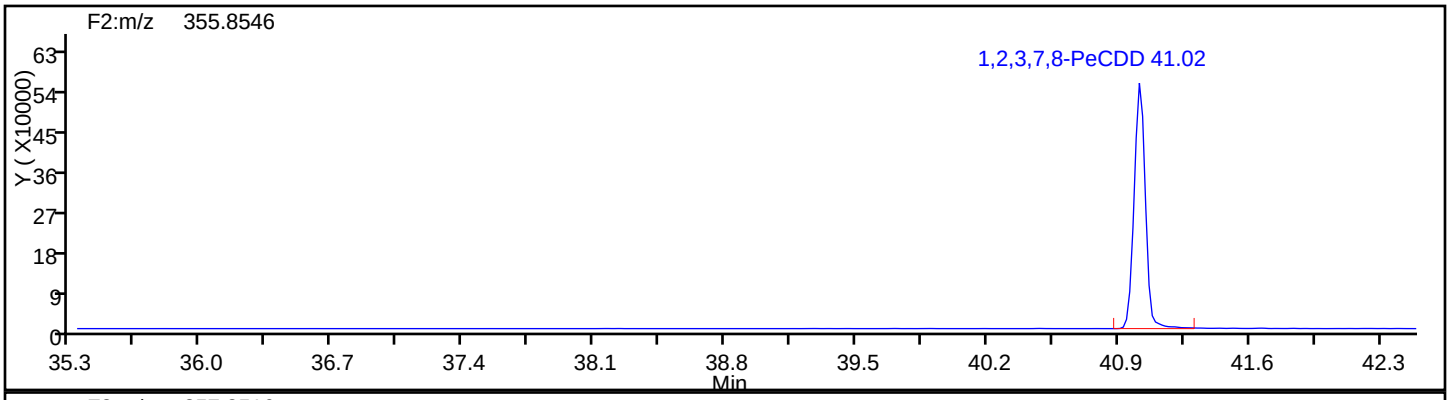
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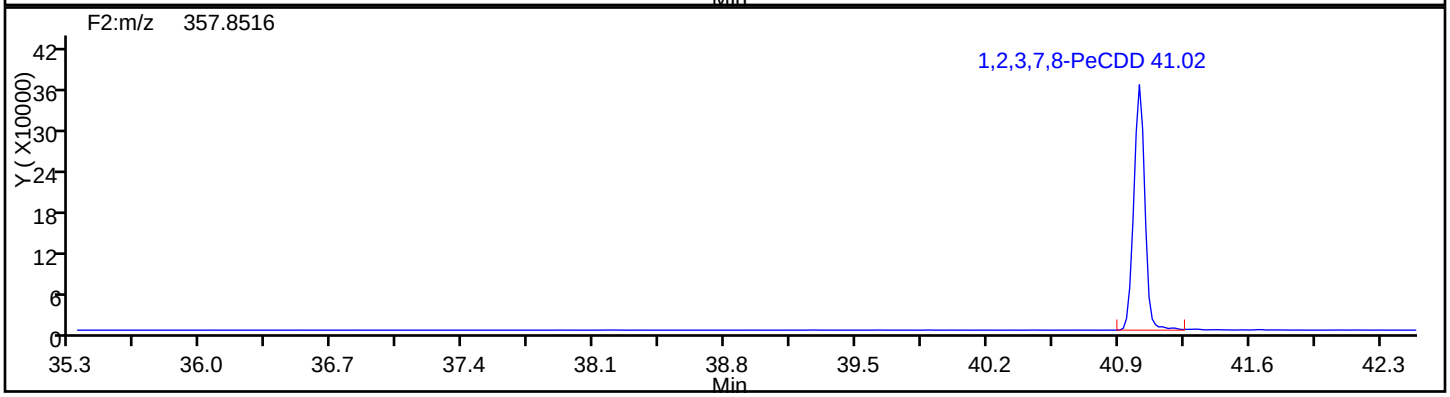
TestAmerica Knoxville

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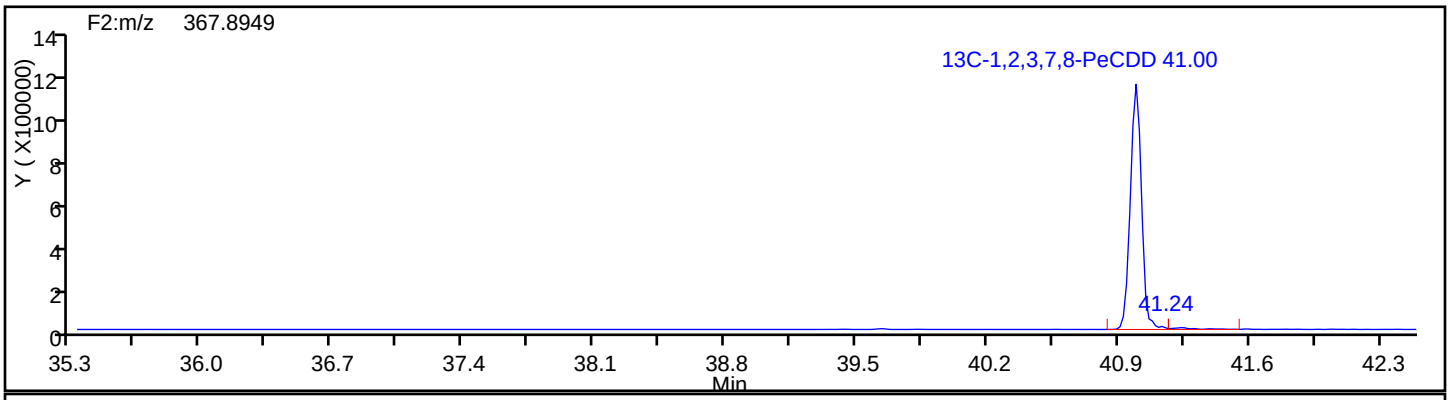
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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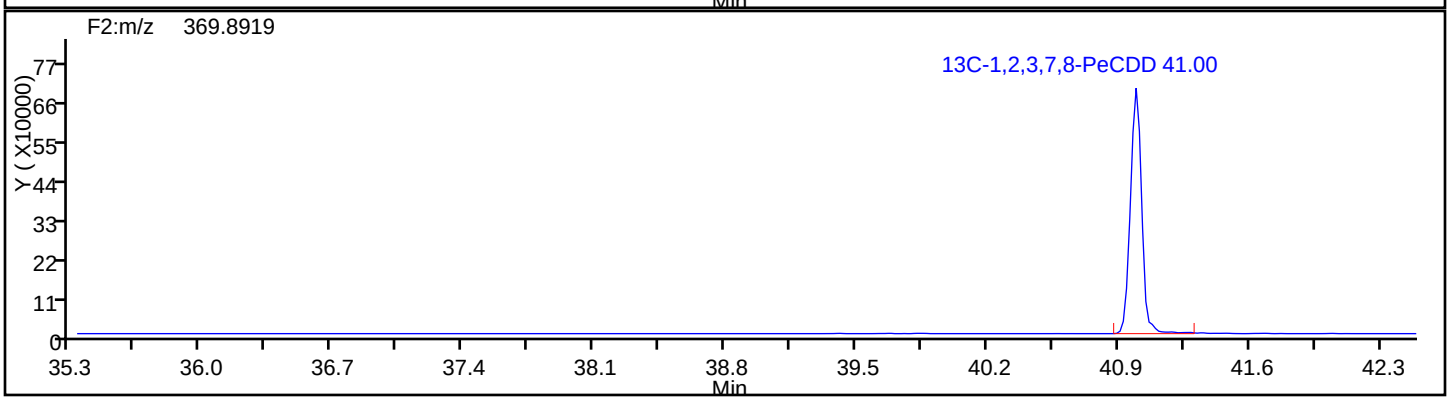
PeCDD




PeCDD Standards



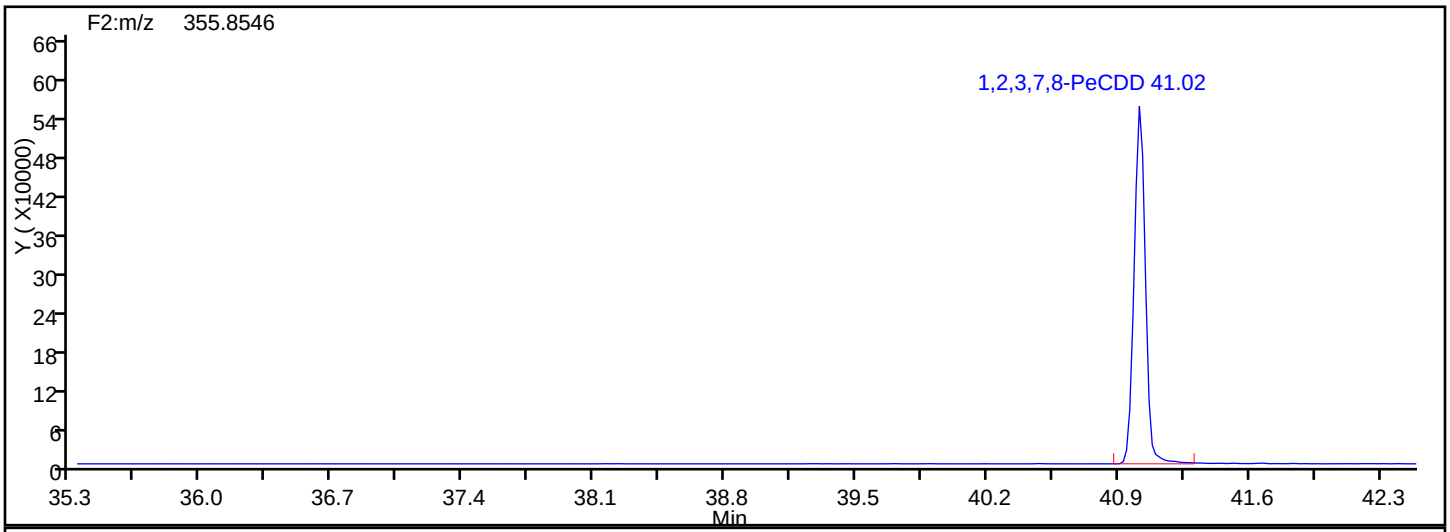
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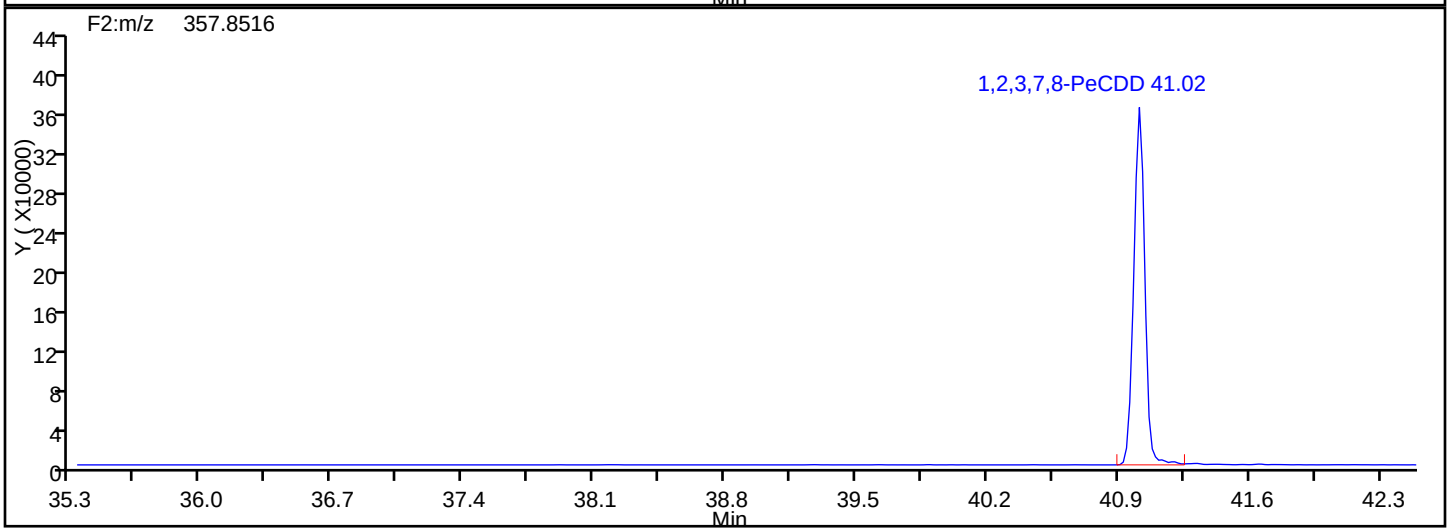
TestAmerica Knoxville

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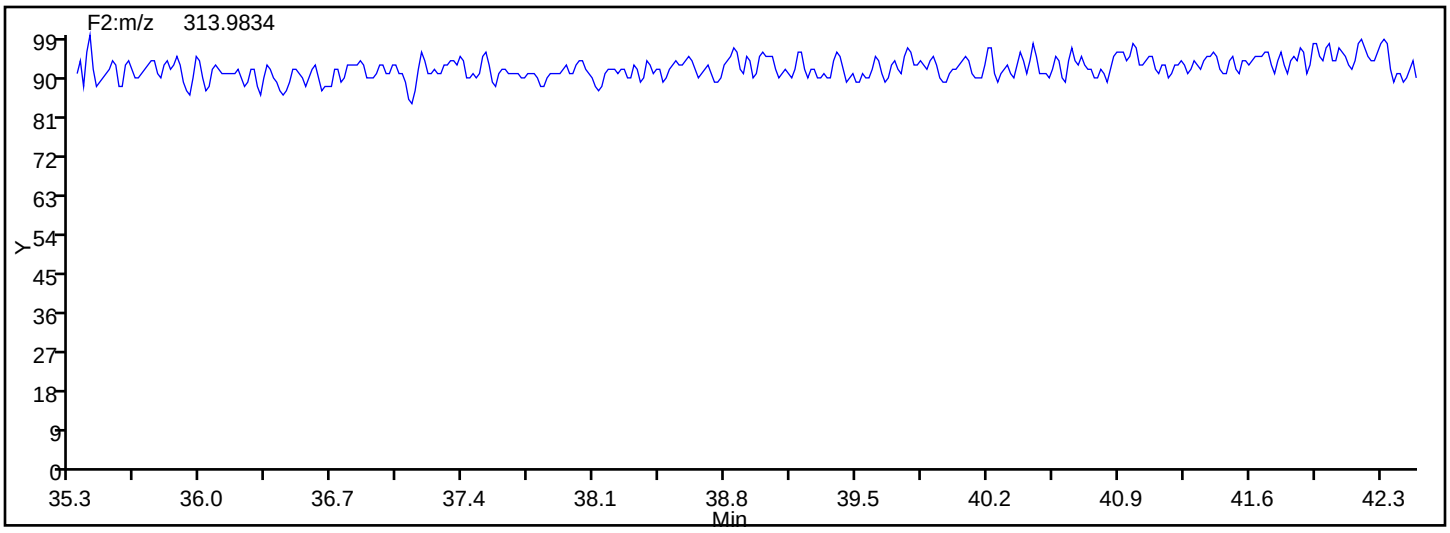
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PeCDD




PeCDD Lock Mass



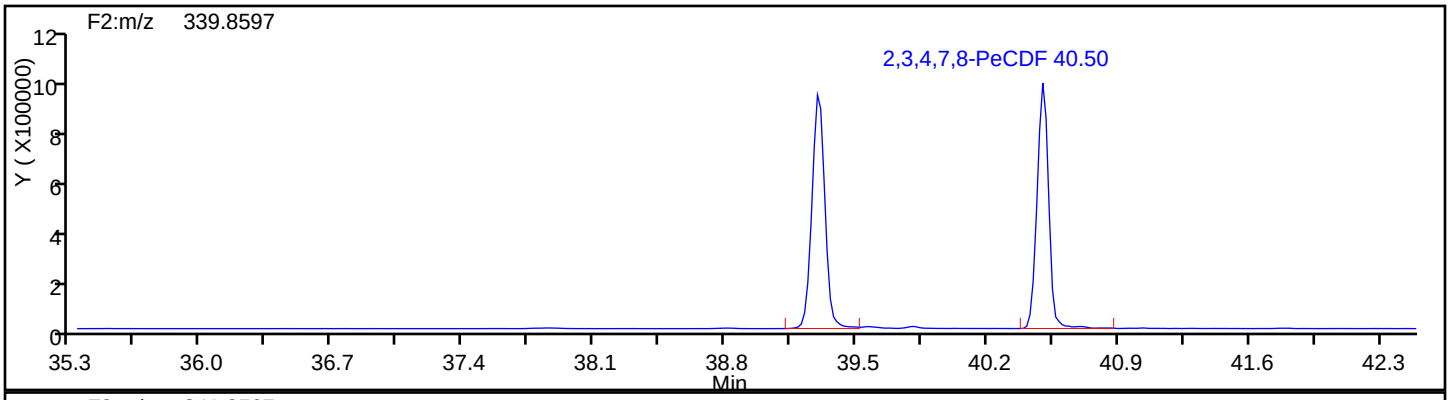
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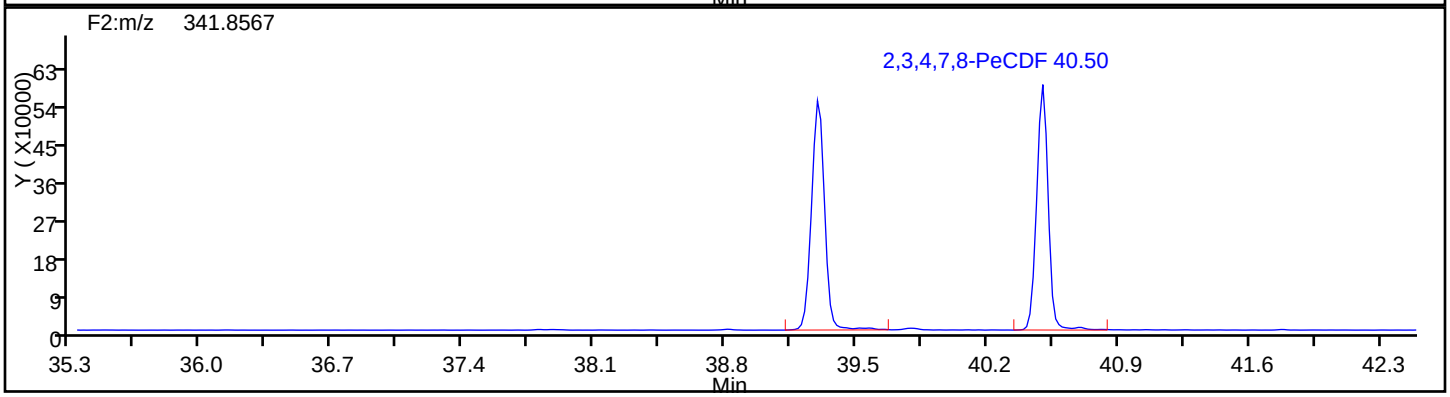
TestAmerica Knoxville

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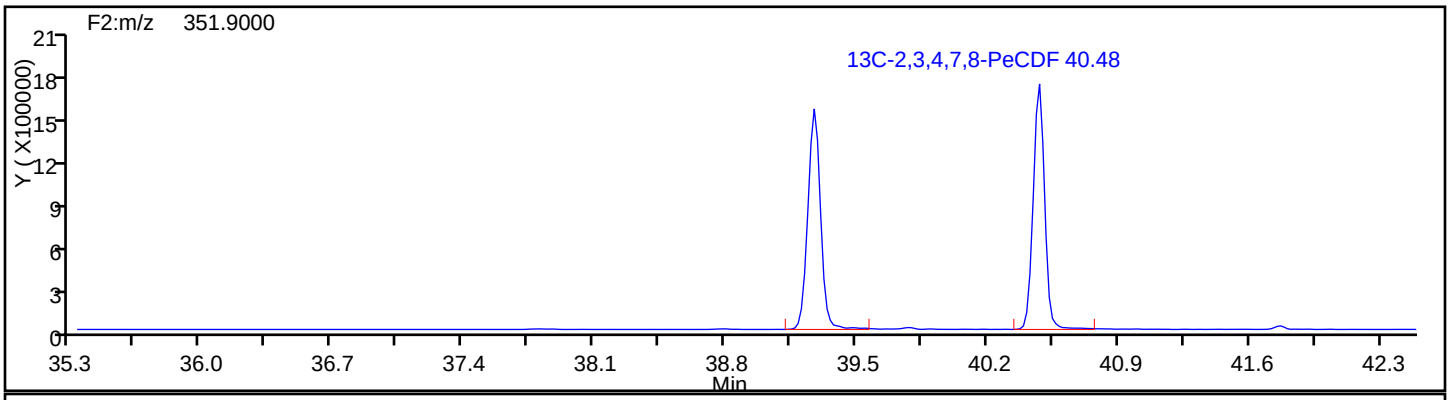
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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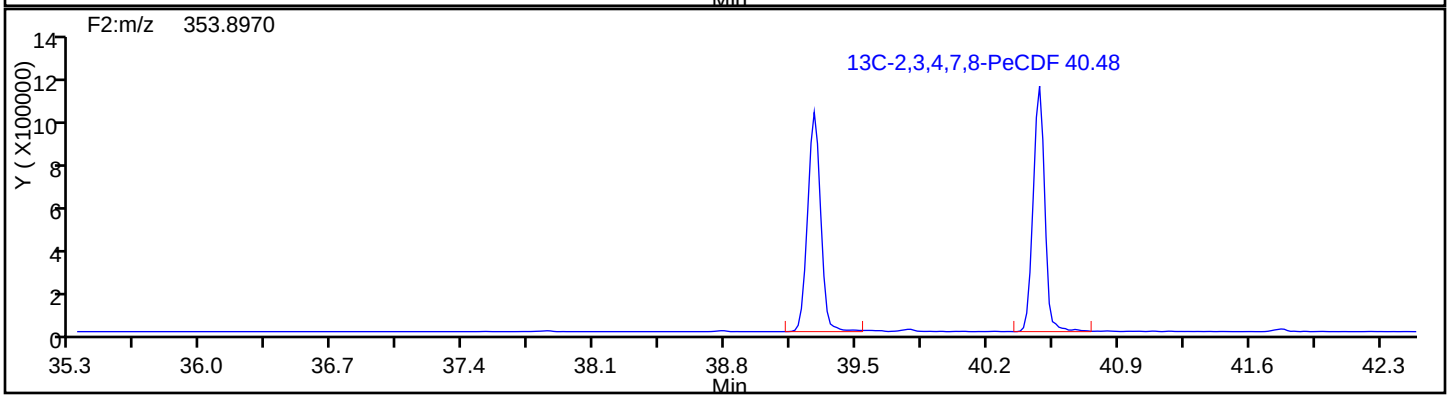
PeCDF




PeCDF Standards



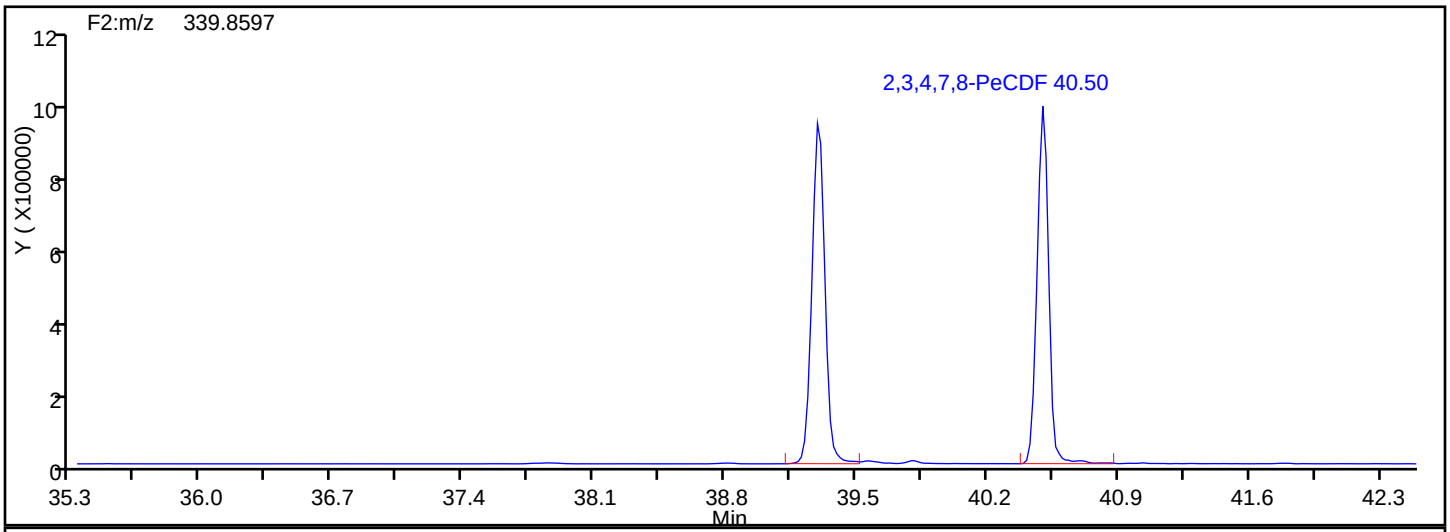
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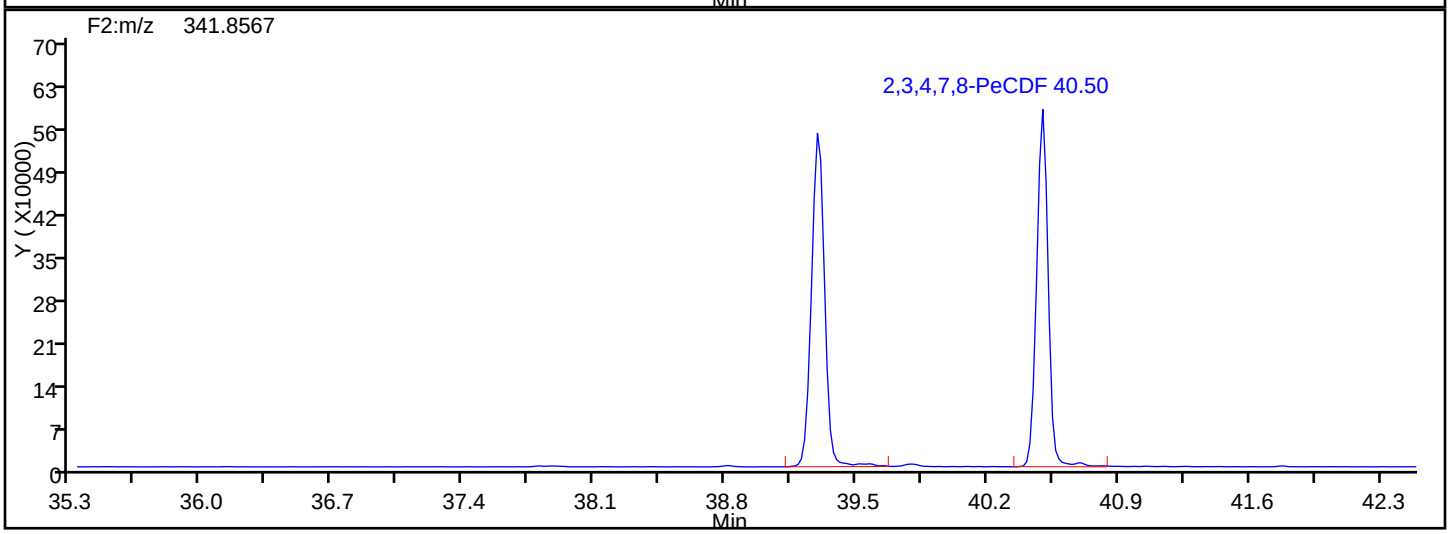
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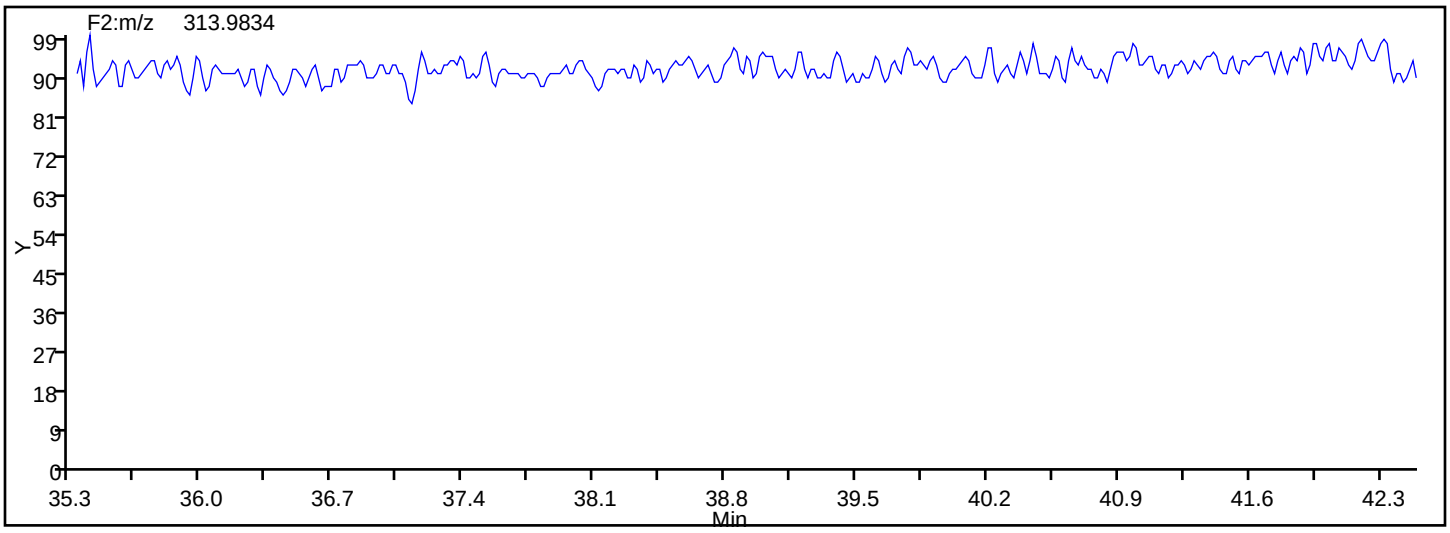
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PeCDF




PeCDF Lock Mass



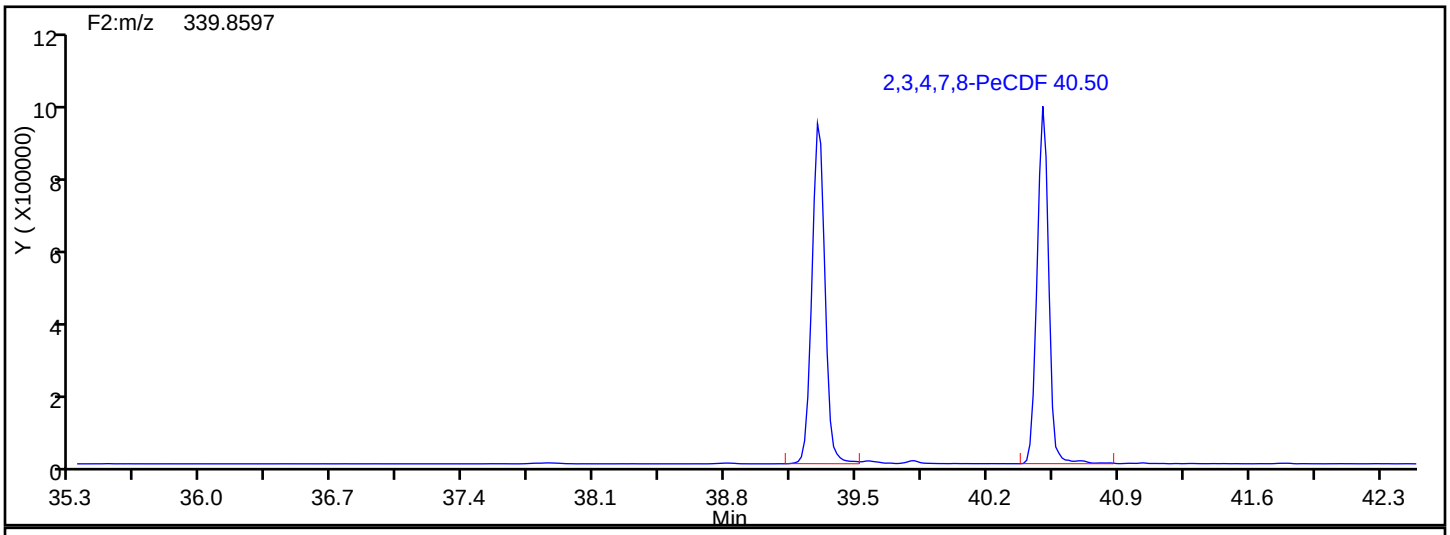
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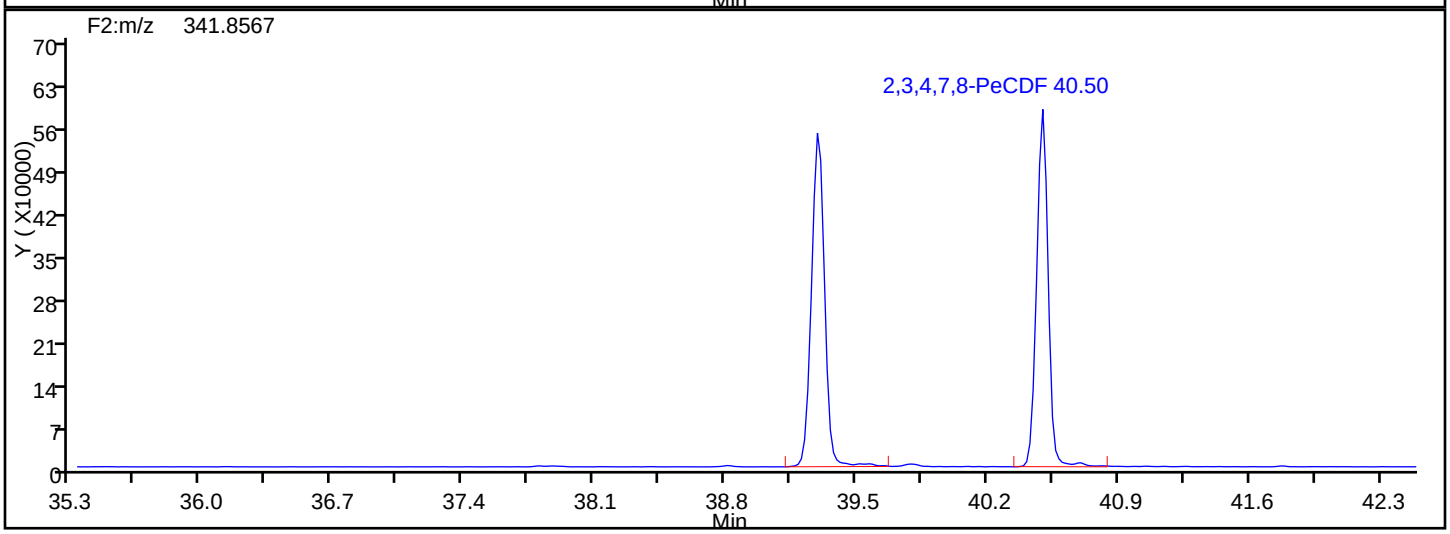
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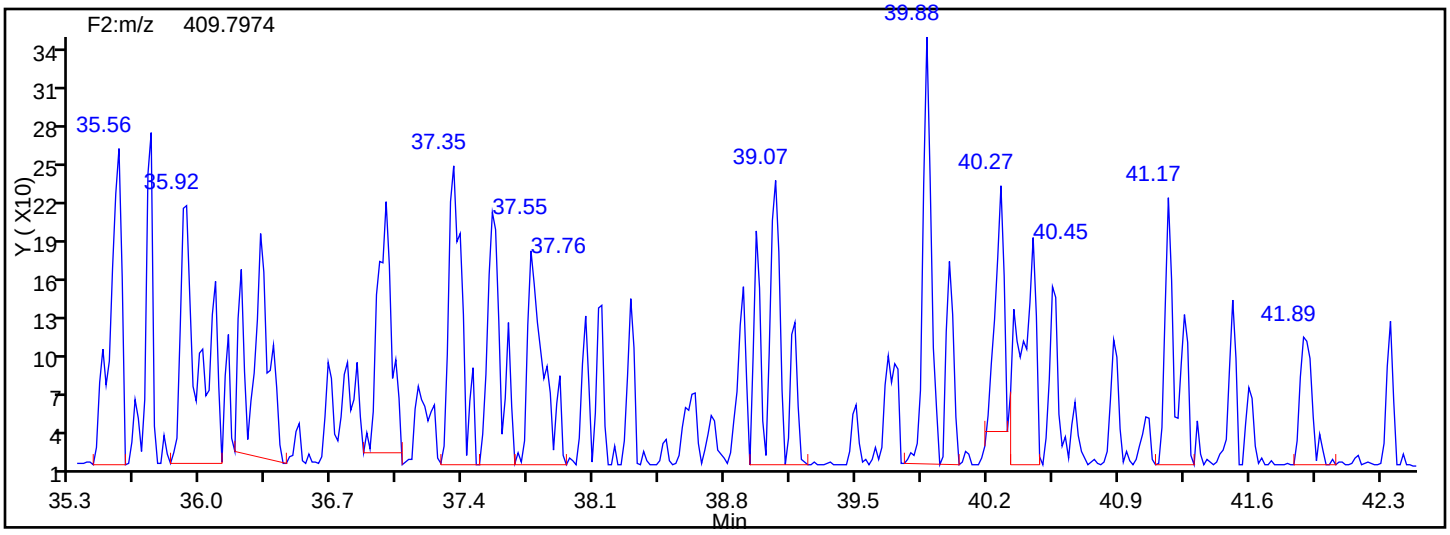
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PeCDF




PeCDF Interference Mass



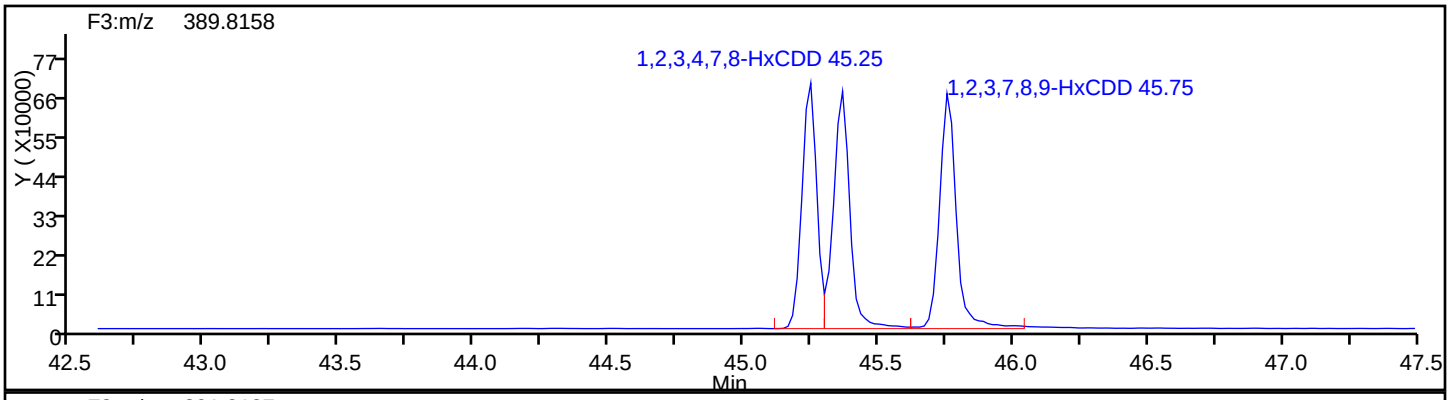
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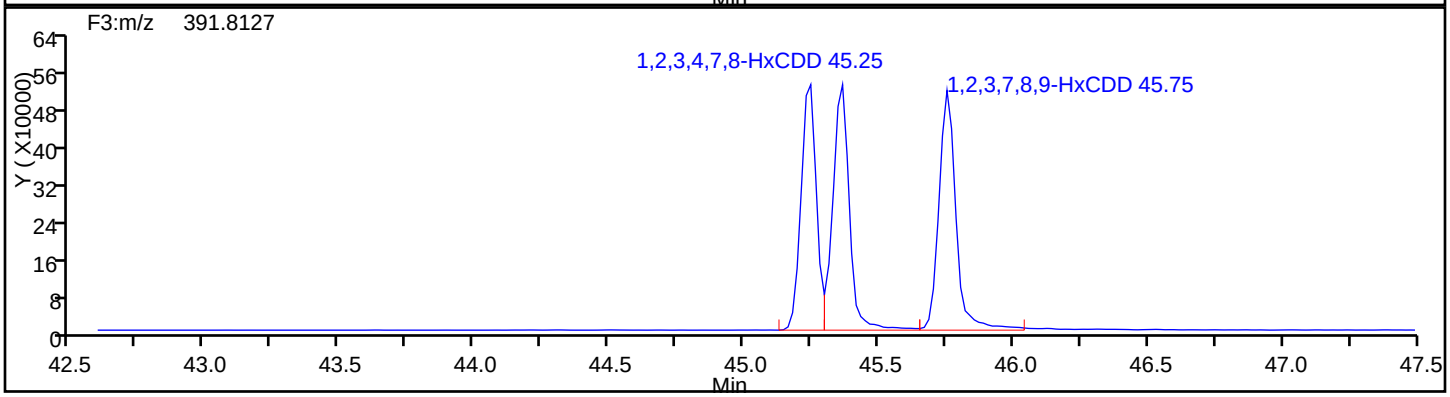
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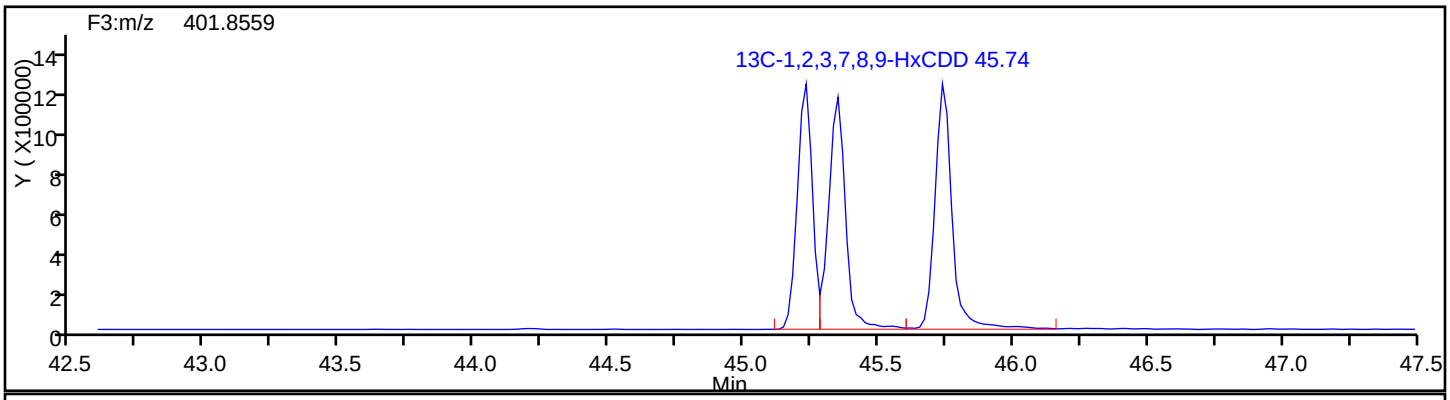
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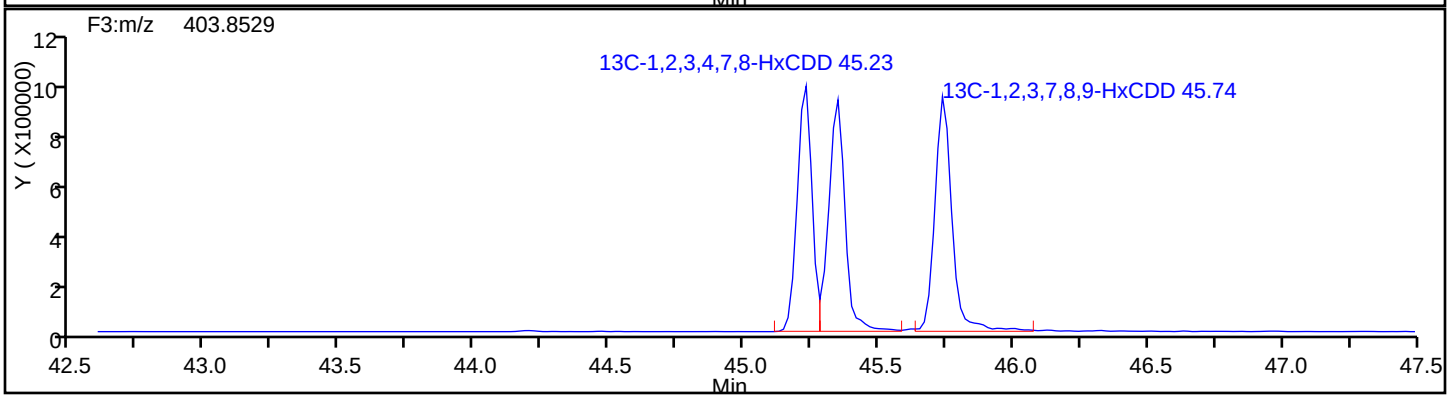
HxCDD




HxCDD Standards



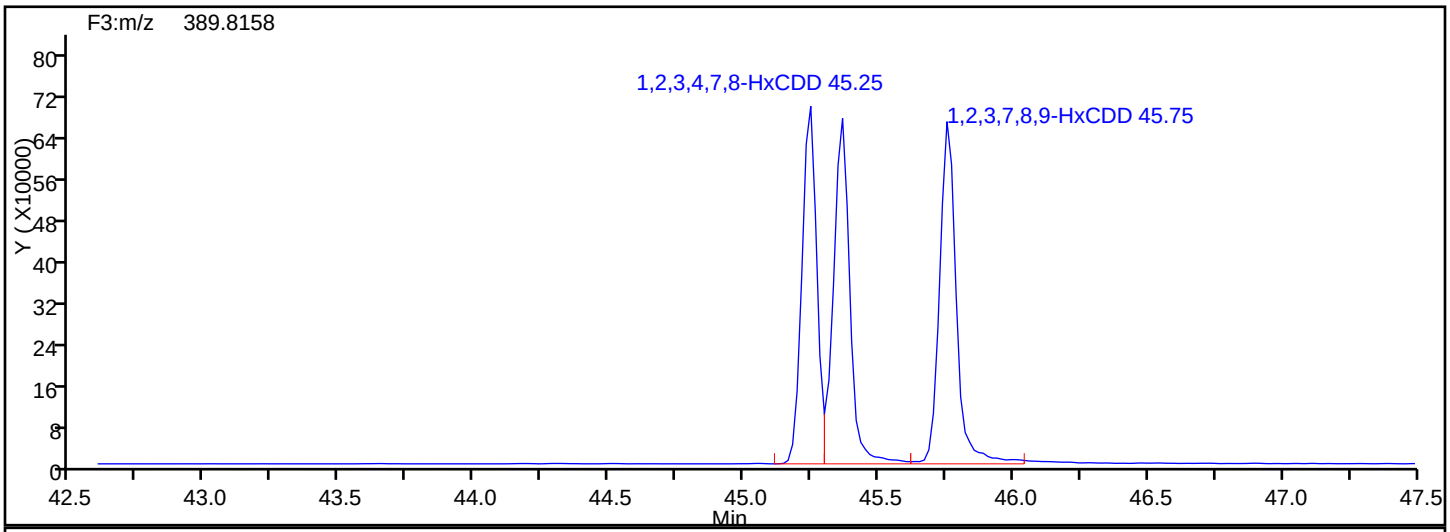
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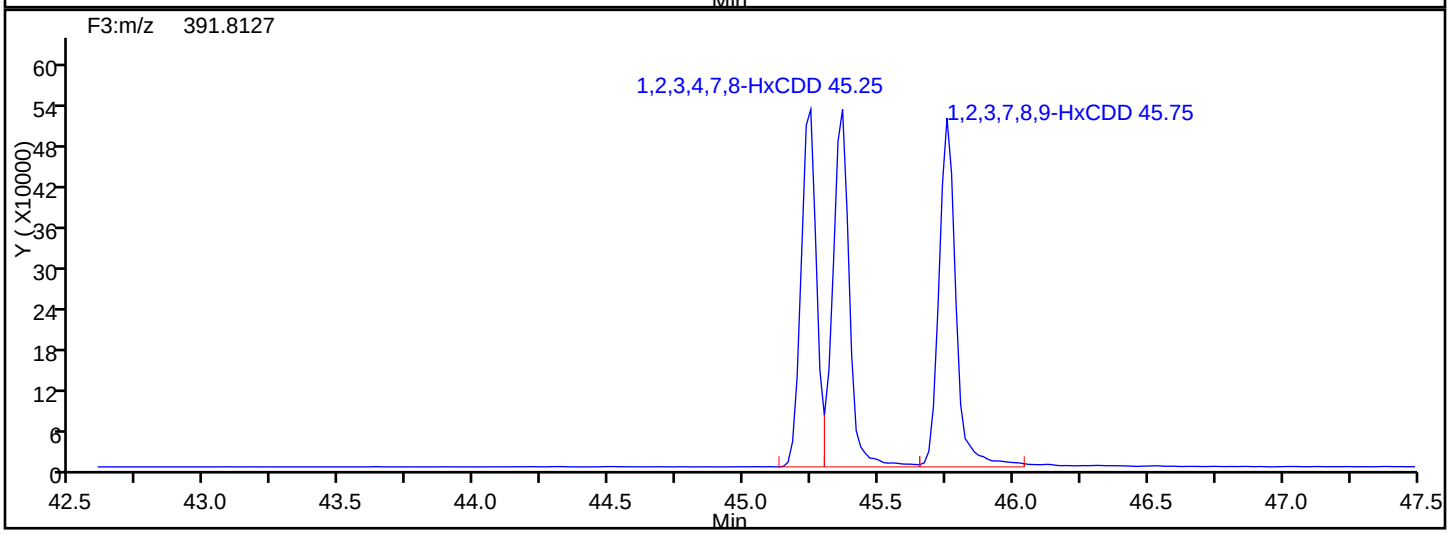
TestAmerica Knoxville

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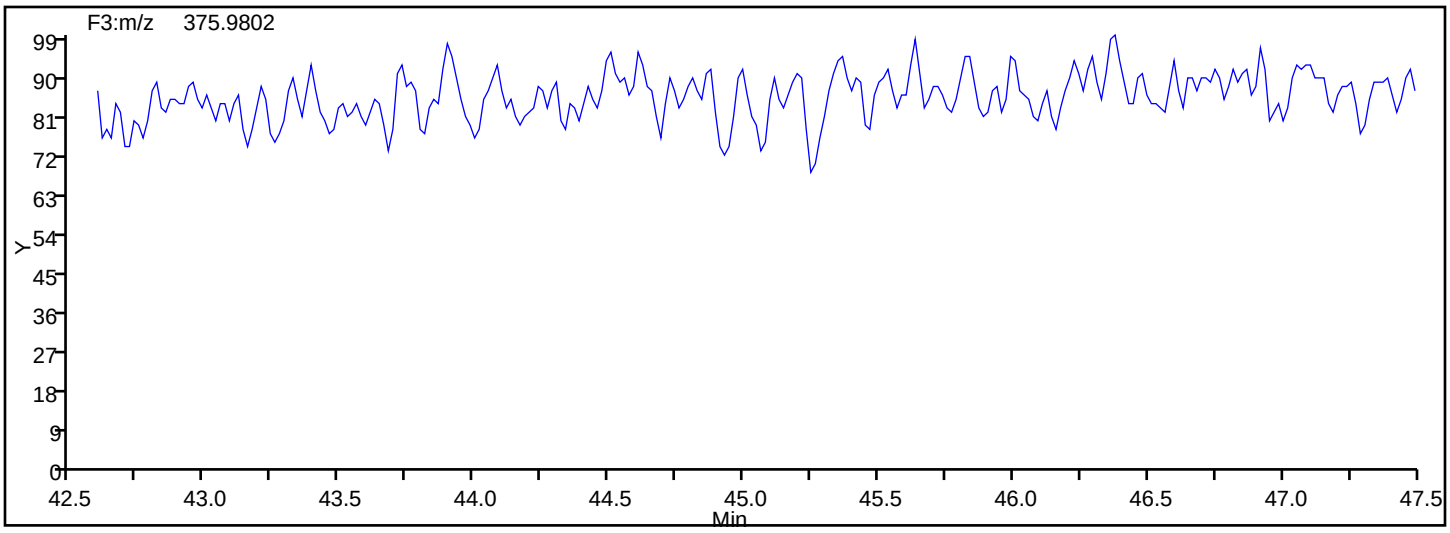
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| Column Type: | | Column Dia: | |

HxCDD




HxCDD Lock Mass



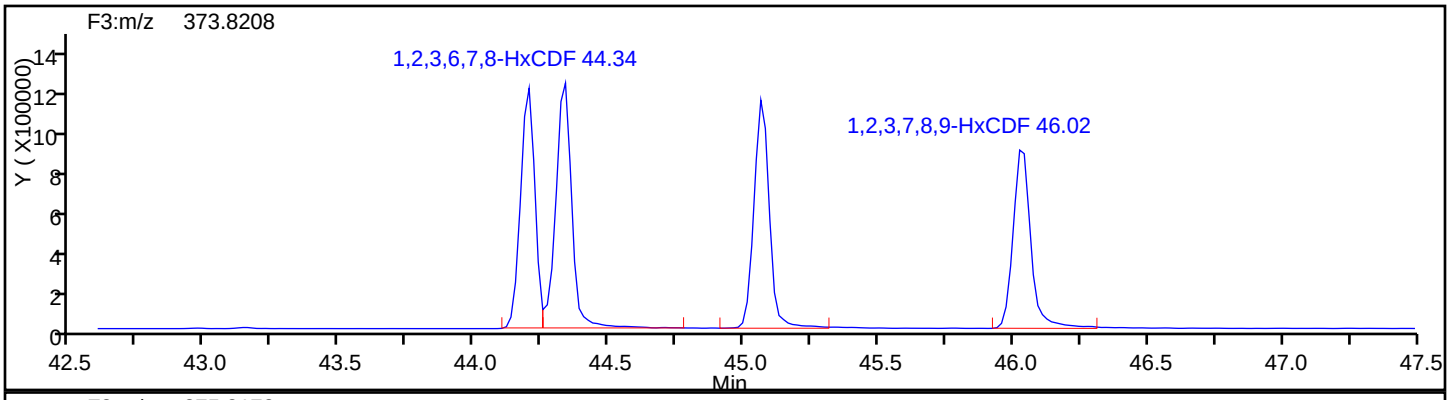
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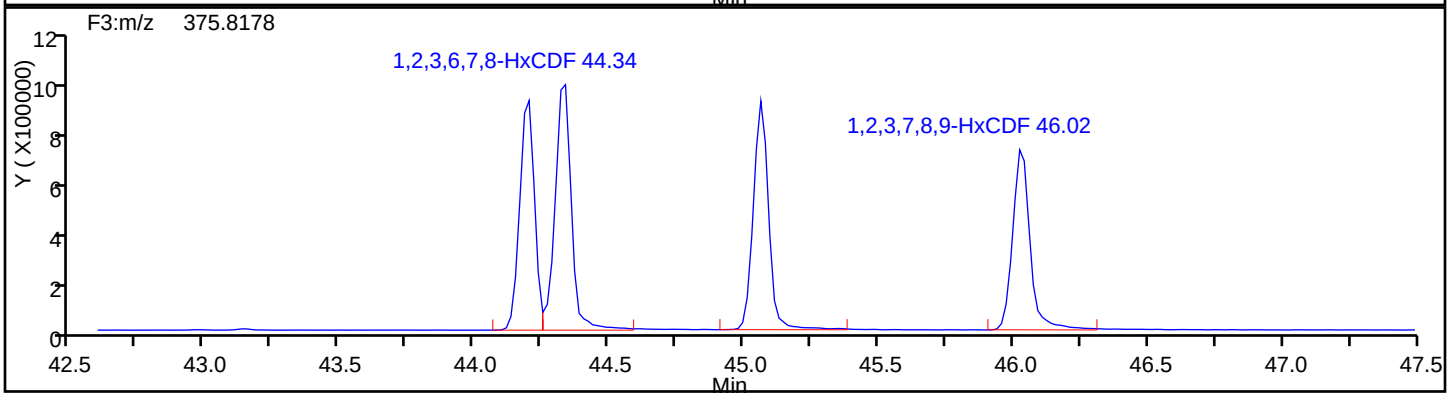
TestAmerica Knoxville

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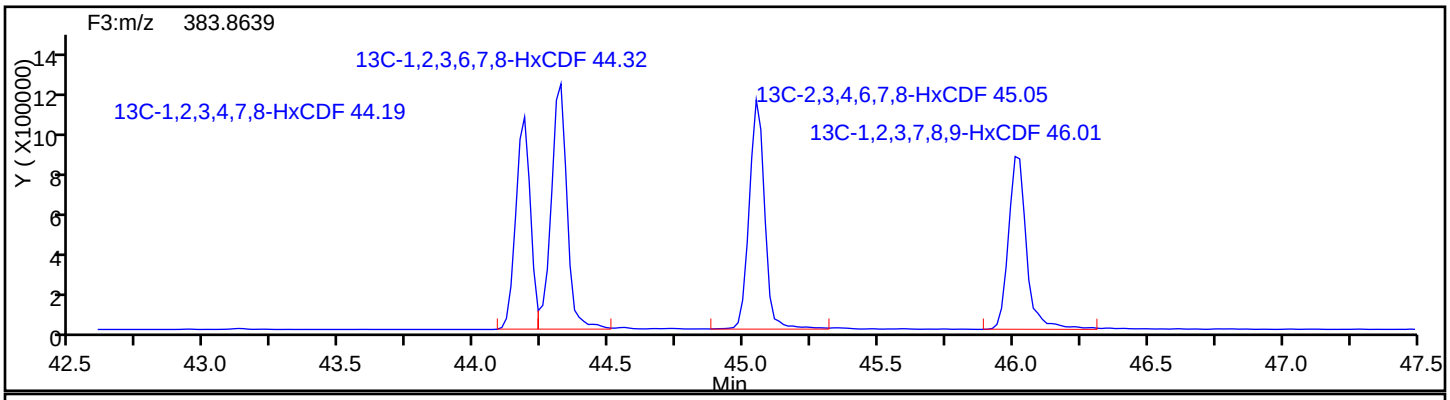
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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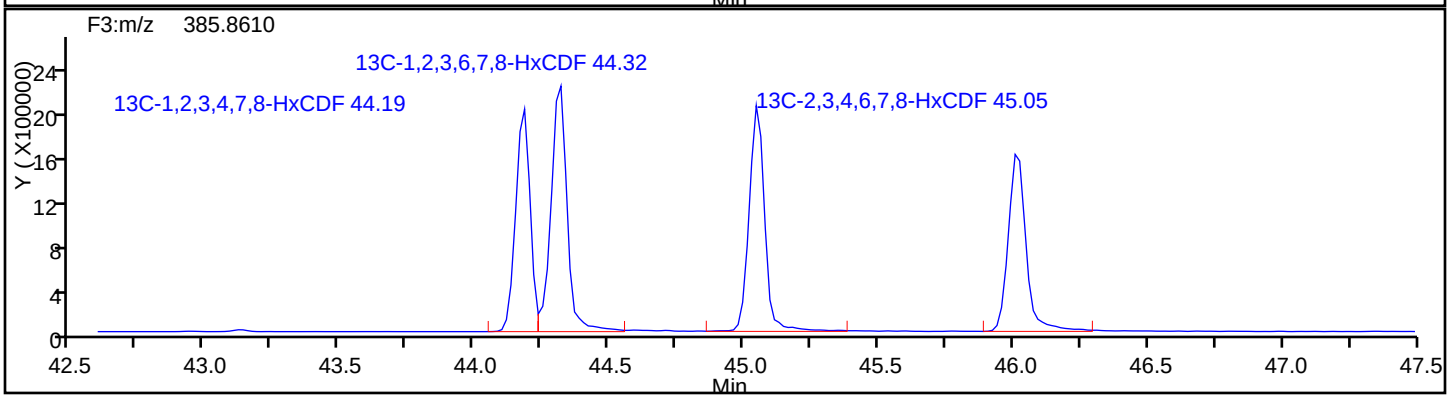
HxCDF




HxCDF Standards



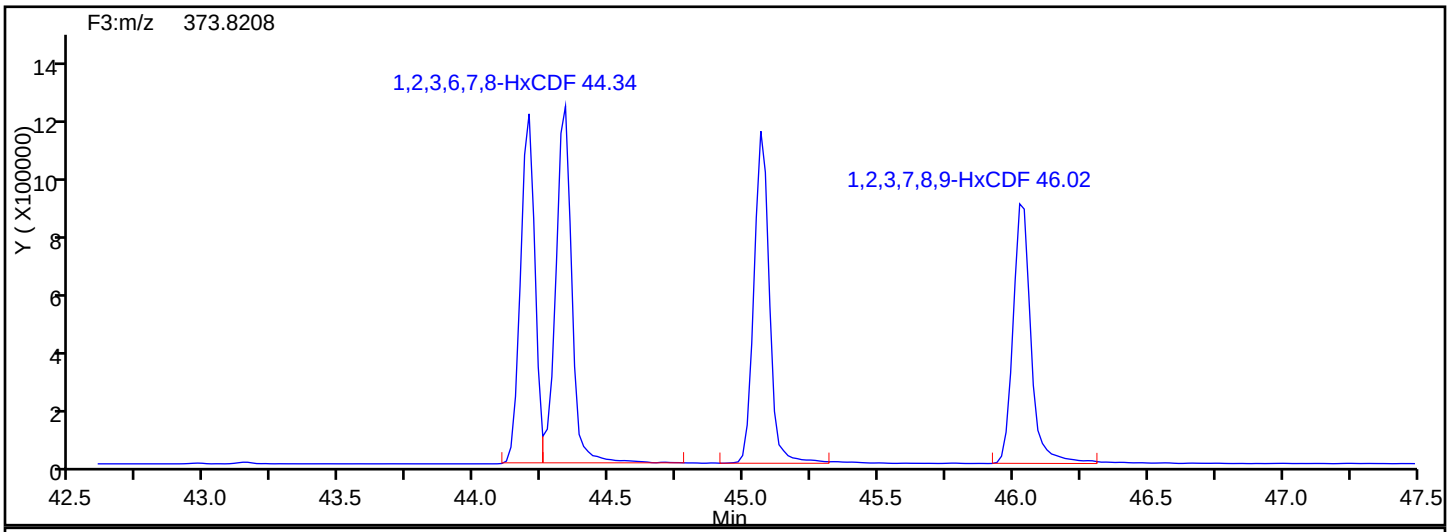
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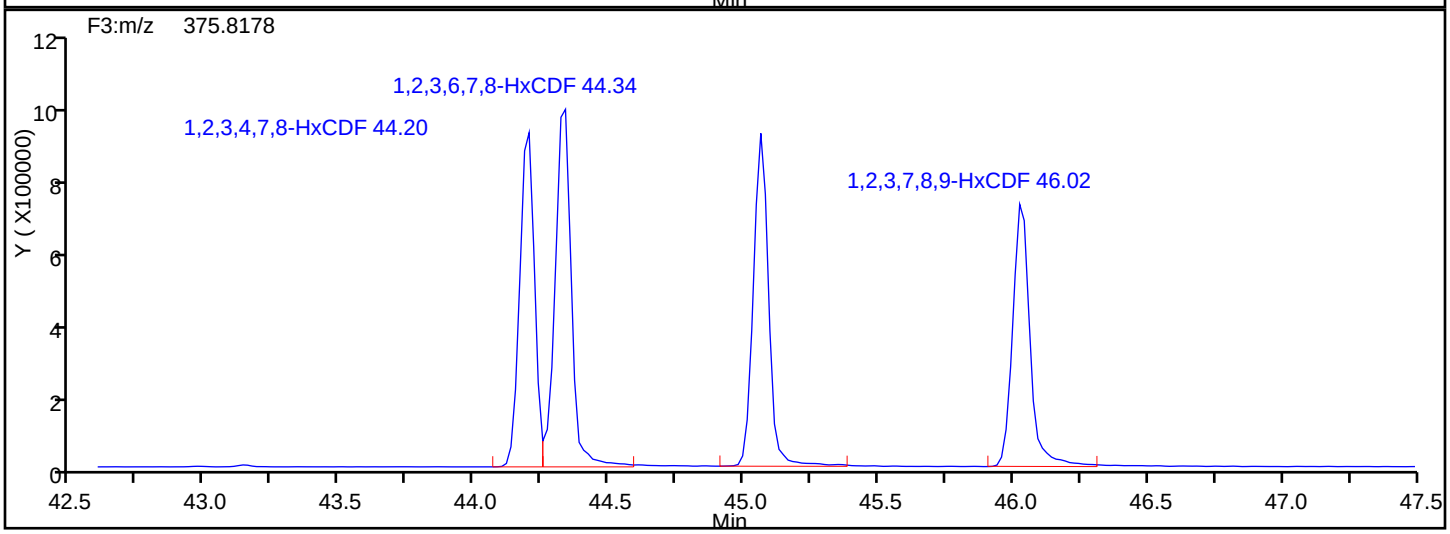
TestAmerica Knoxville

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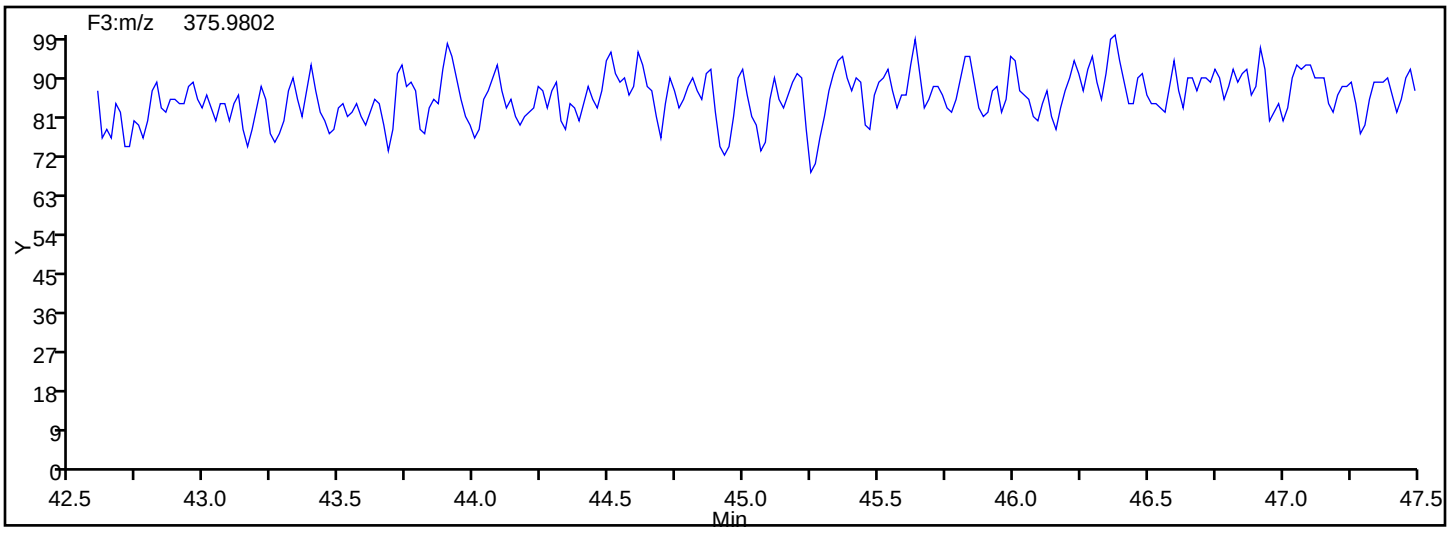
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 4 |
| Column Type: | | Column Dia: | |

HxCDF




HxCDF Lock Mass



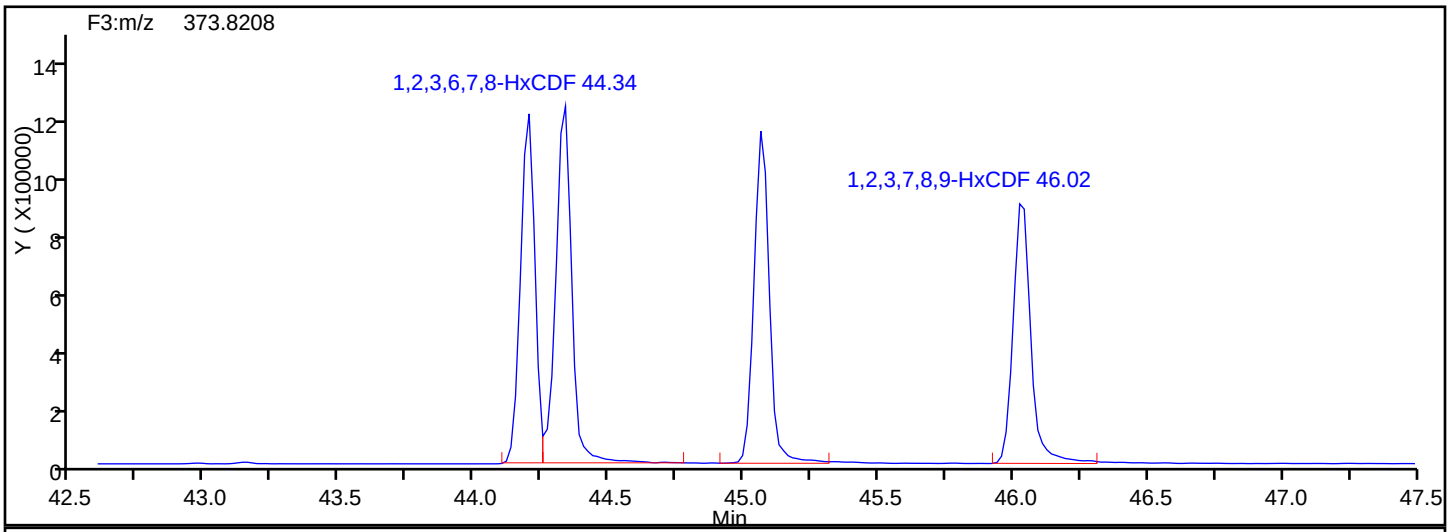
Report Date: 12-Jan-2017 08:10:07 Chrom Revision: 2.2 10-Jan-2017 11:26:10

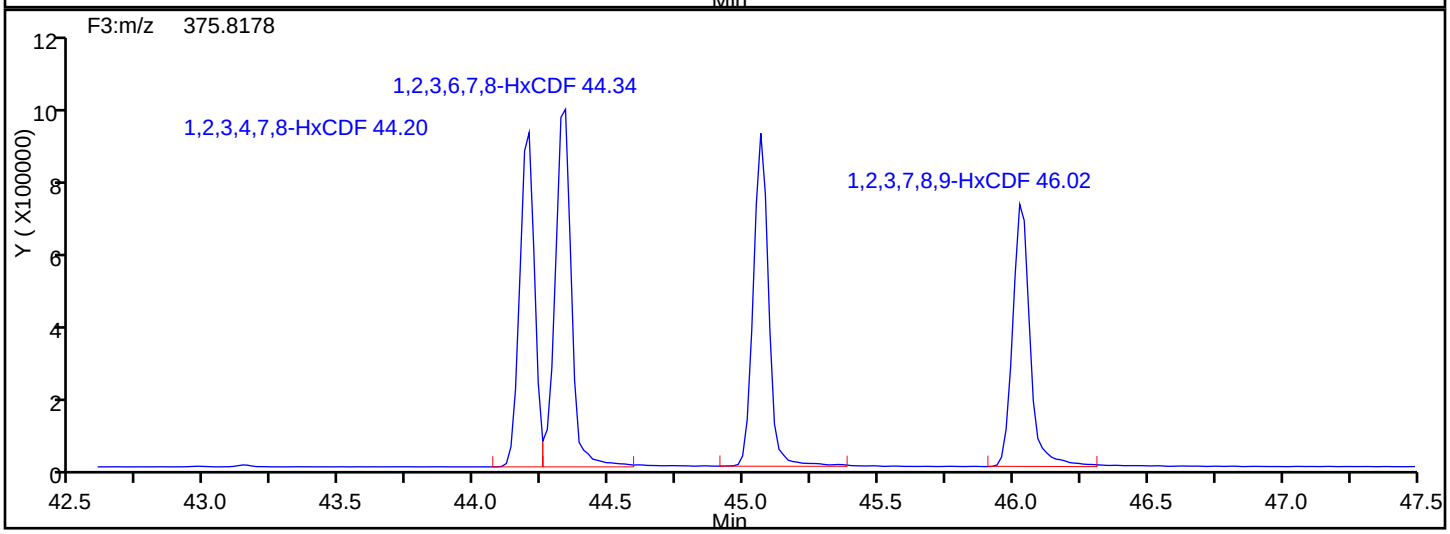
TestAmerica Knoxville

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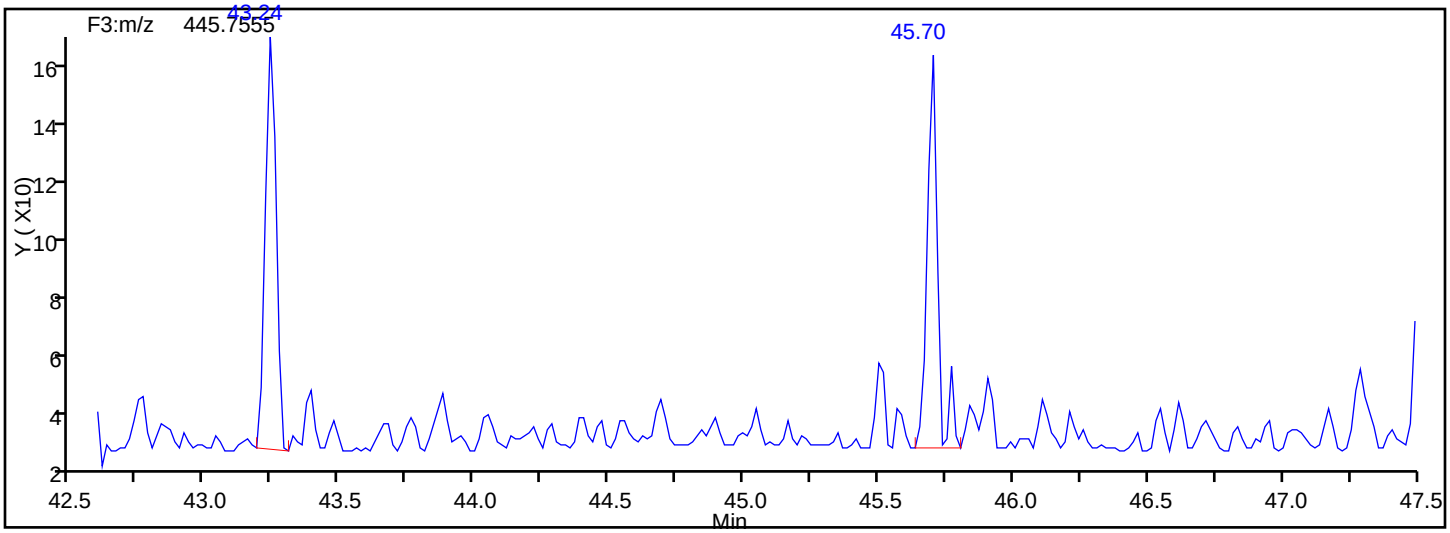
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 4 |
| Column Type: | | Column Dia: | |

HxCDF




HxCDF Interference Mass



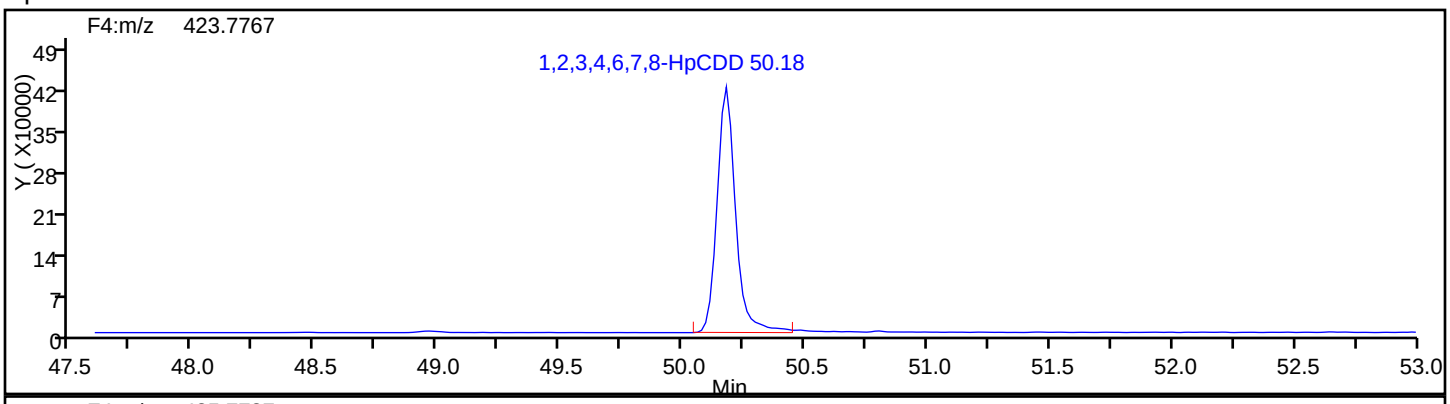
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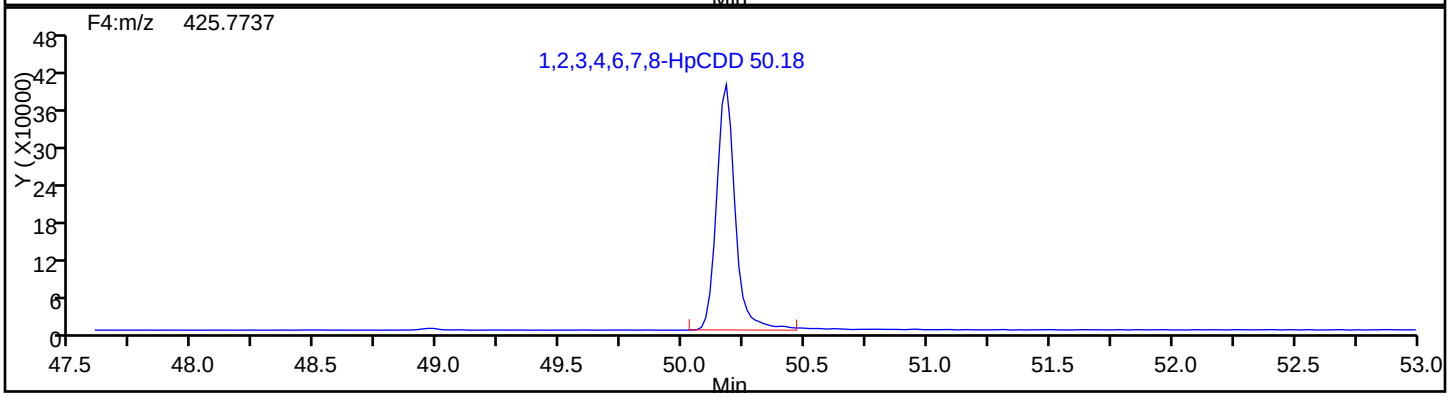
TestAmerica Knoxville

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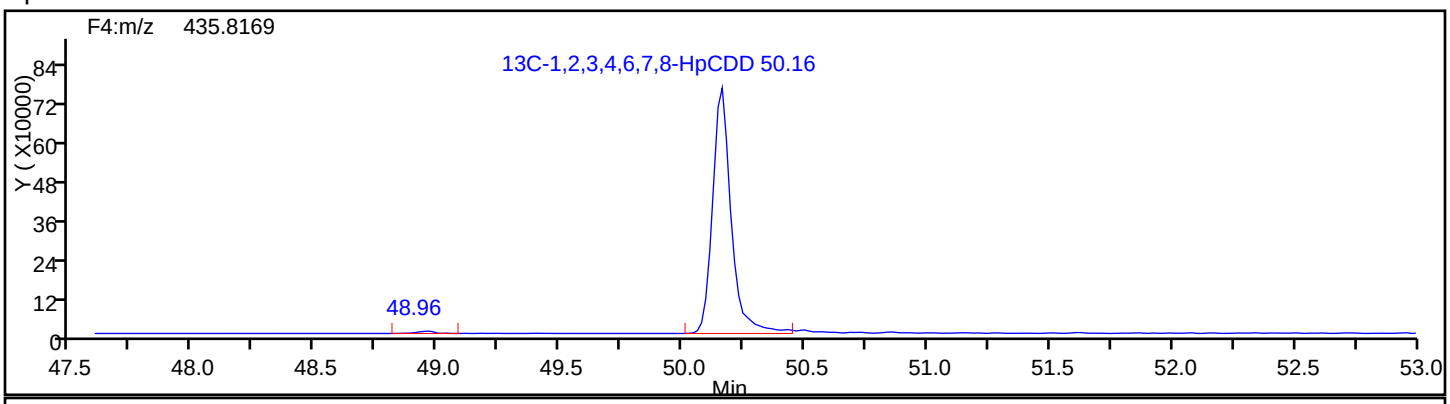
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

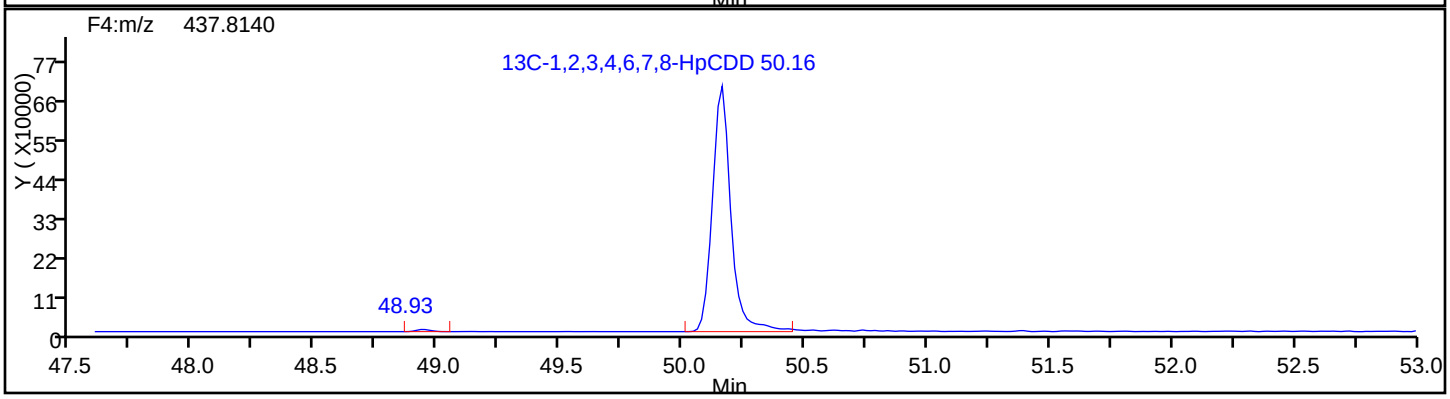
HpCDD




HpCDD Standards



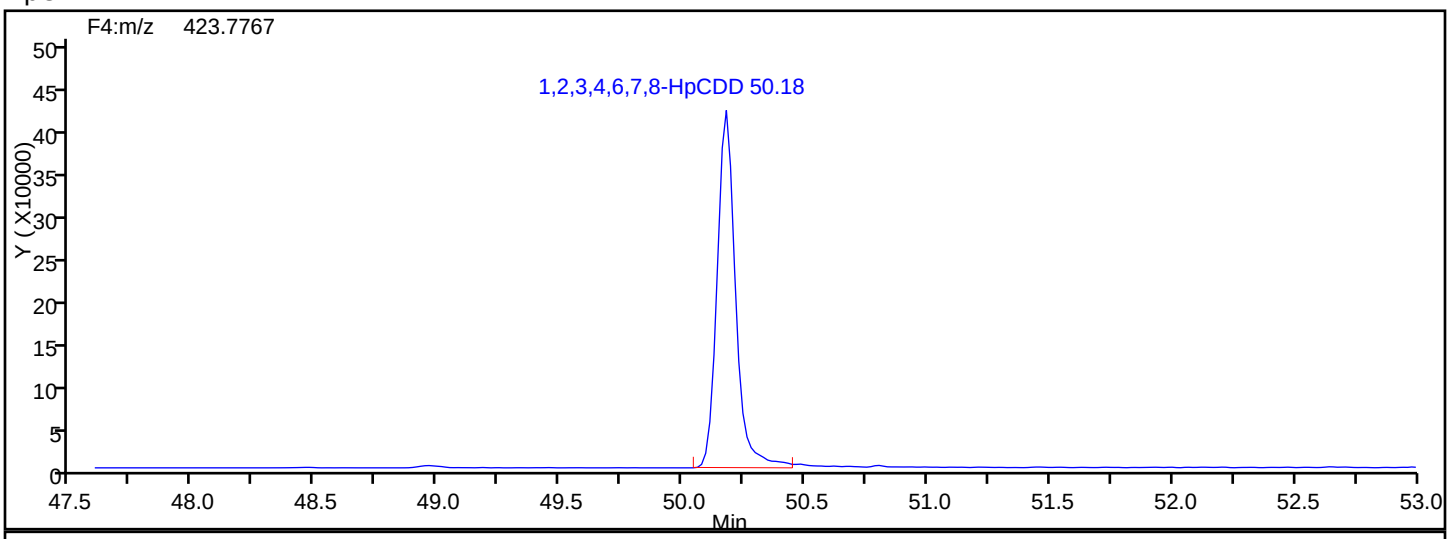
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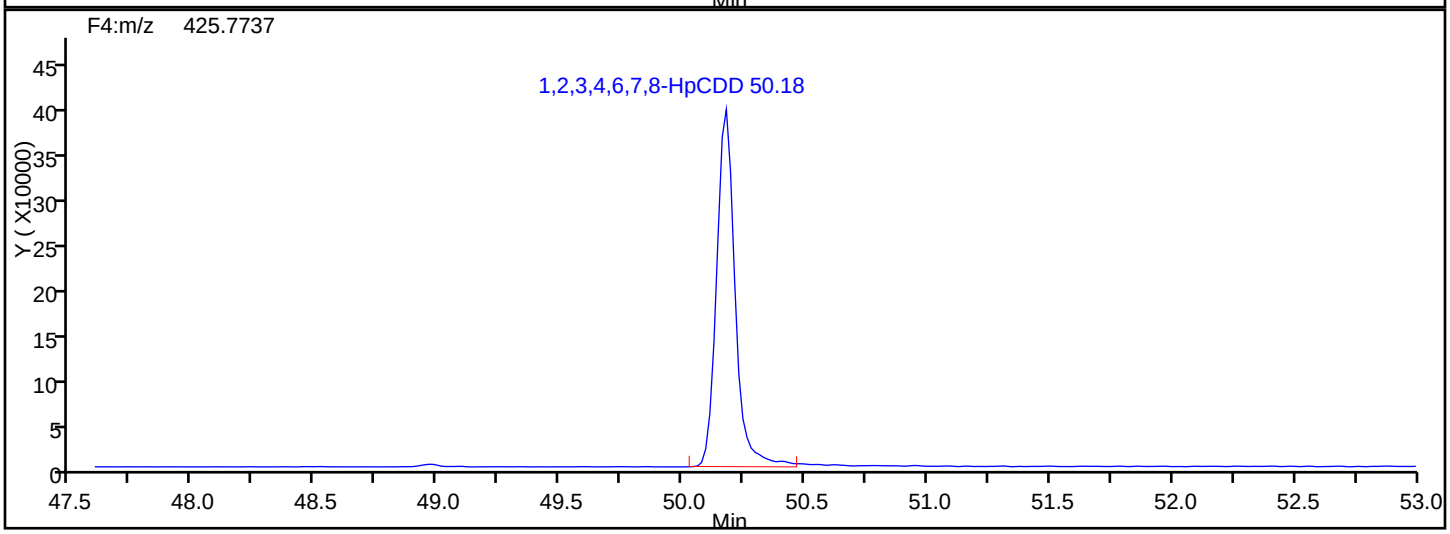
TestAmerica Knoxville

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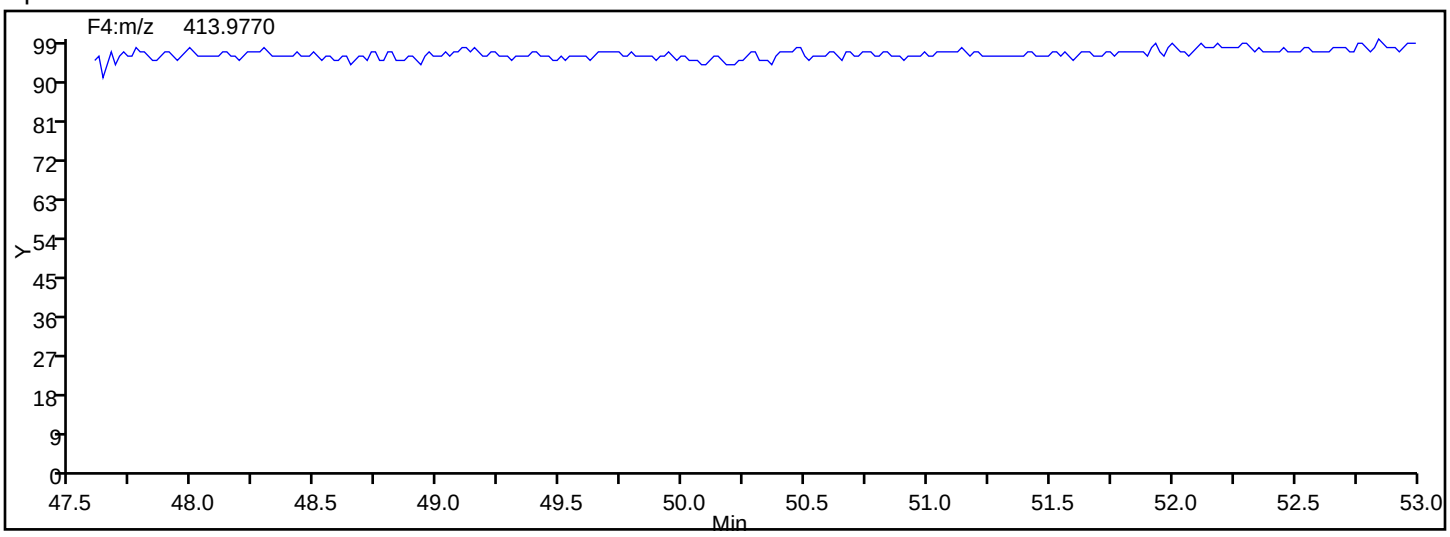
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Worklist#: | 7768 | Sample Line#: | 4 |
| Column Type: | | Column Dia: | |

HpCDD




HpCDD Lock Mass



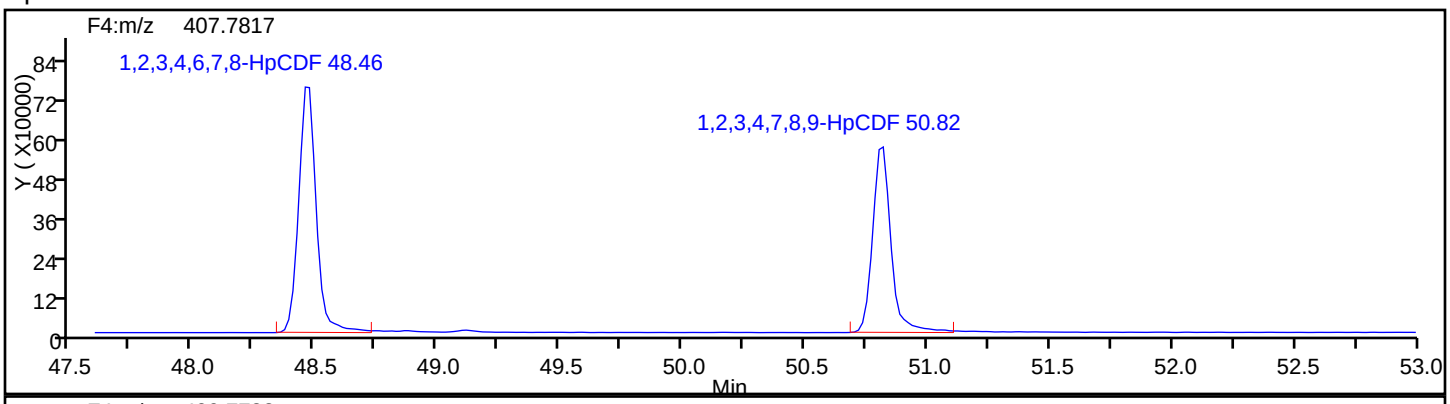
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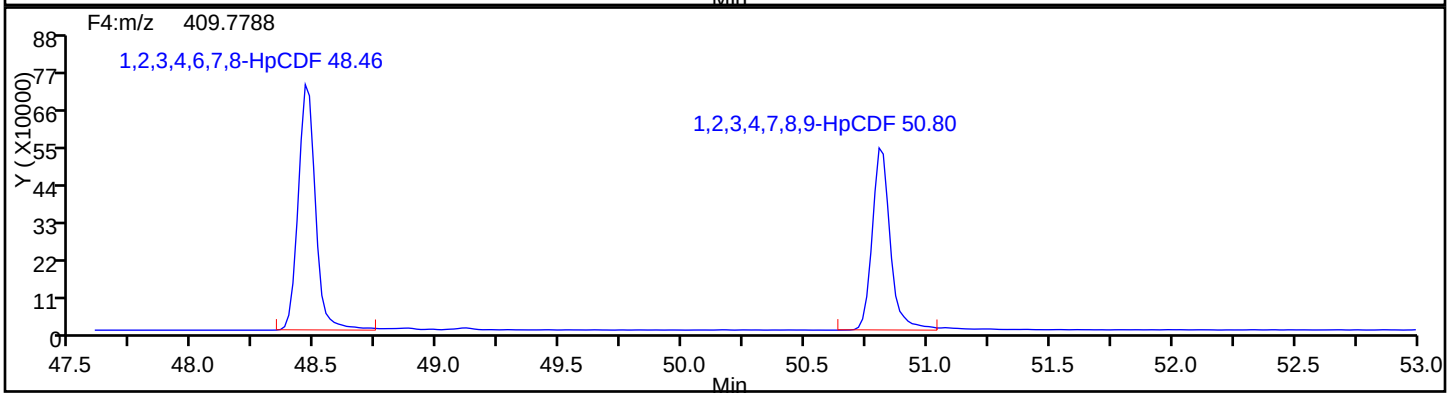
TestAmerica Knoxville

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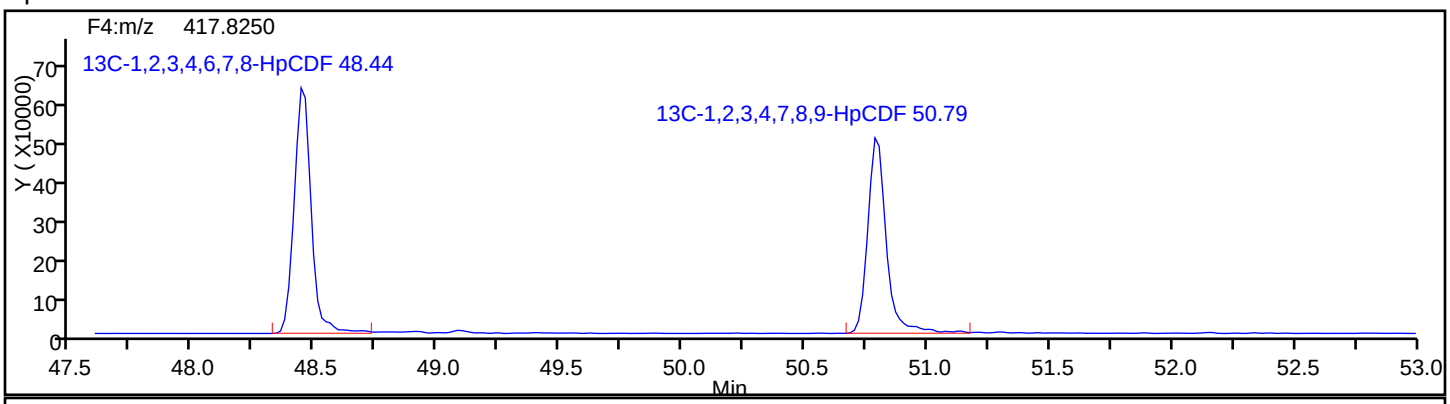
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
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| Column Type: | | Column Dia: | |

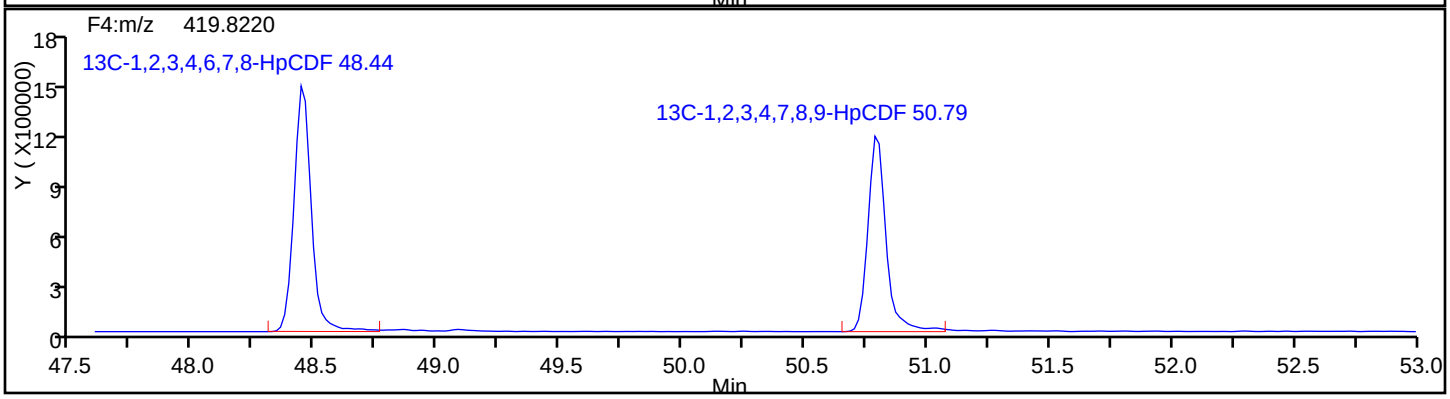
HpCDF




HpCDF Standards



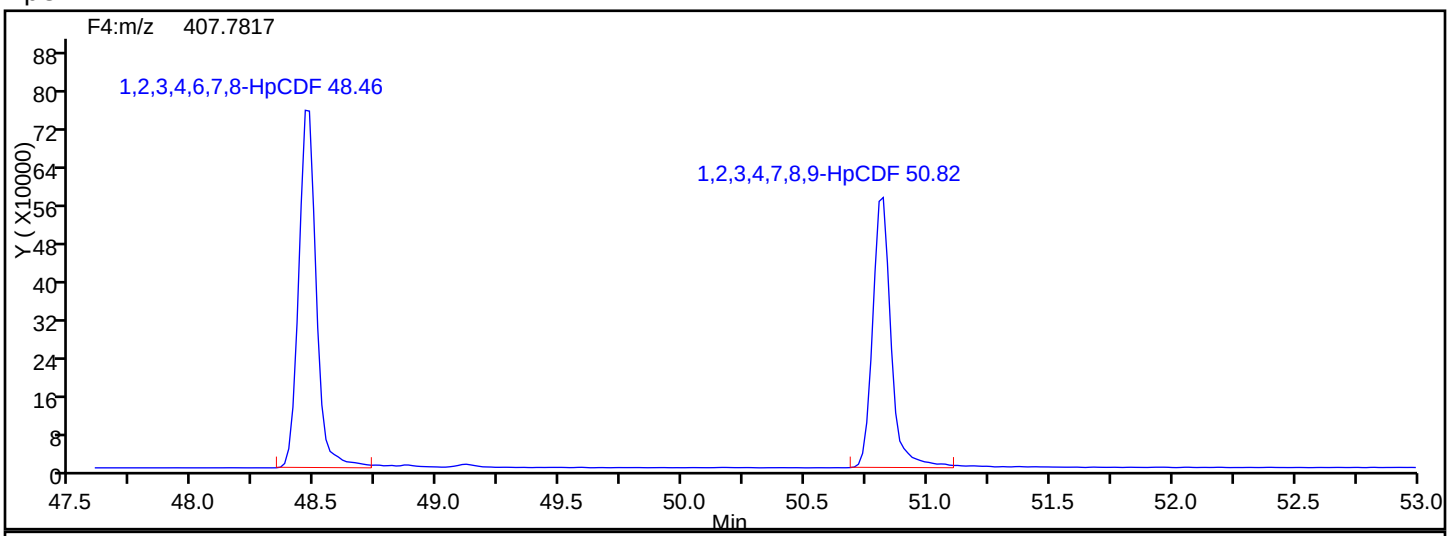
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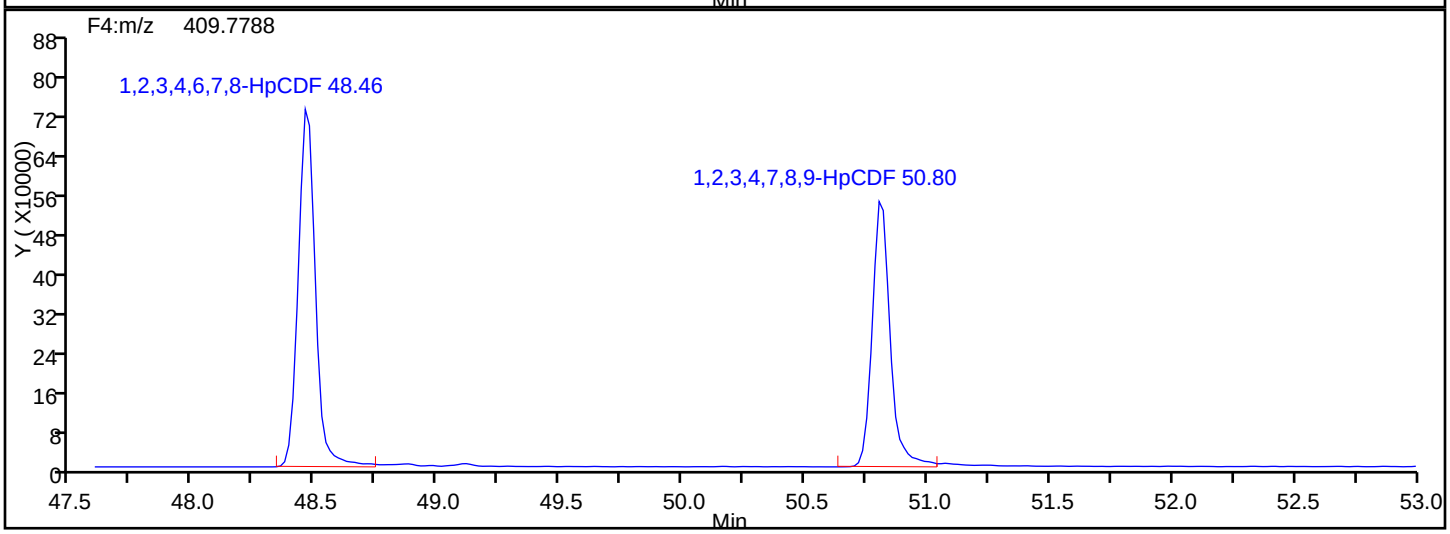
TestAmerica Knoxville

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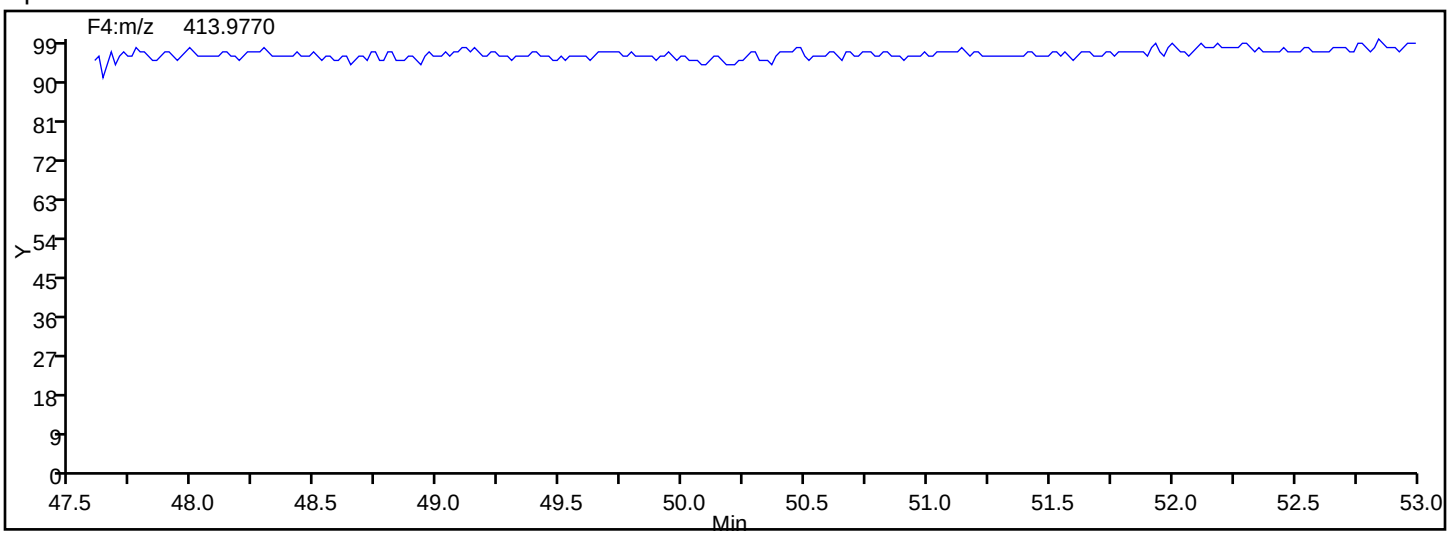
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HpCDF




HpCDF Lock Mass



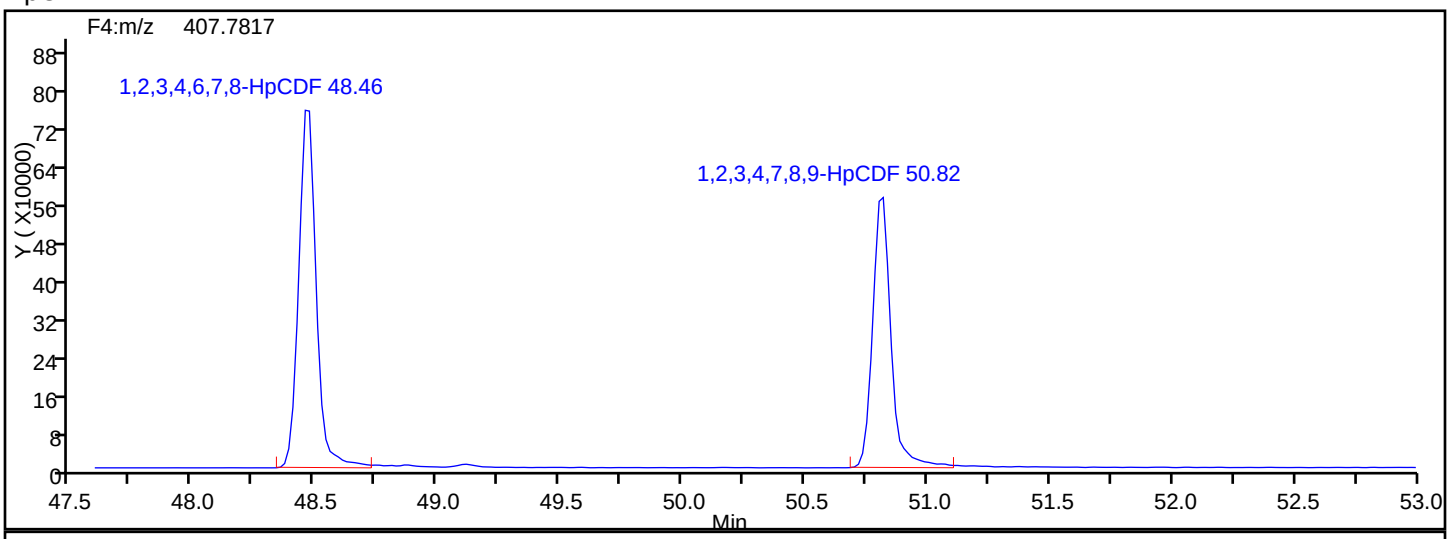
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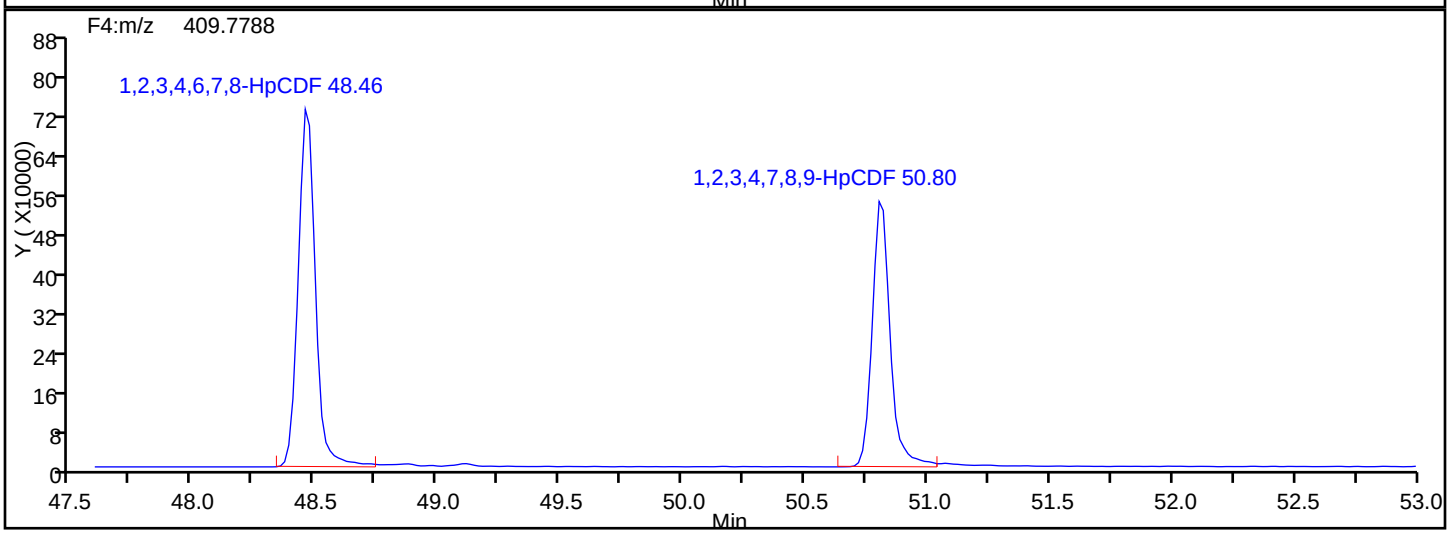
TestAmerica Knoxville

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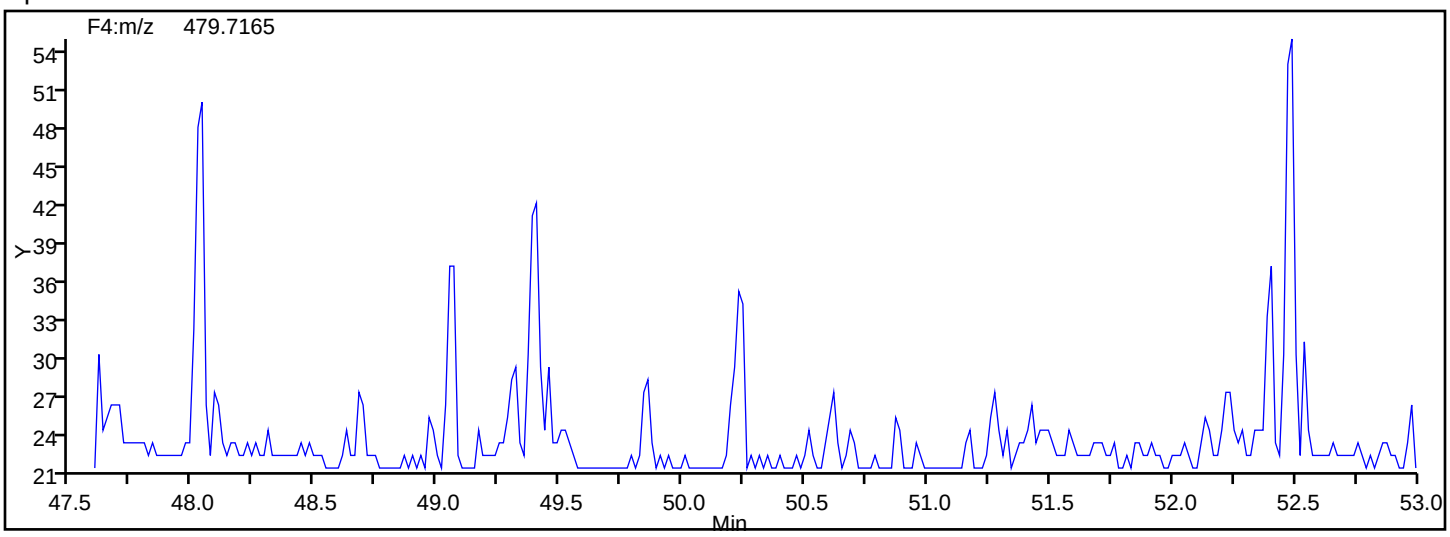
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

HpCDF




HpCDF Interference Mass



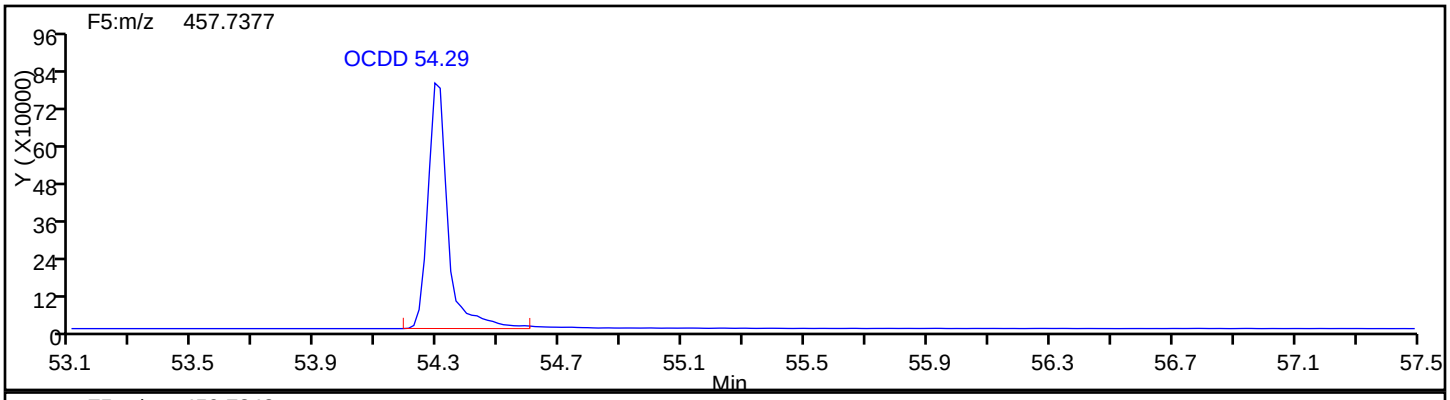
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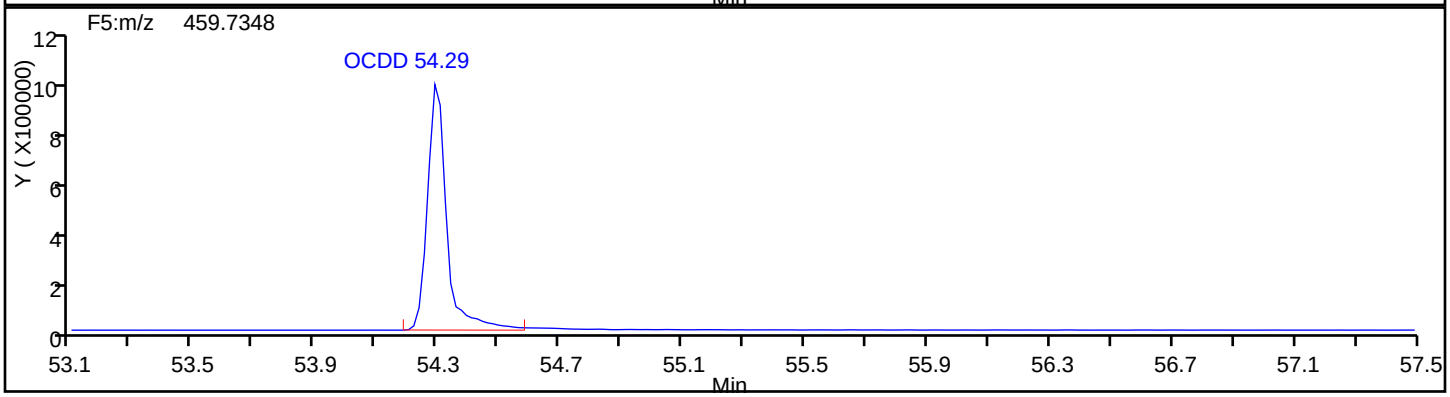
TestAmerica Knoxville

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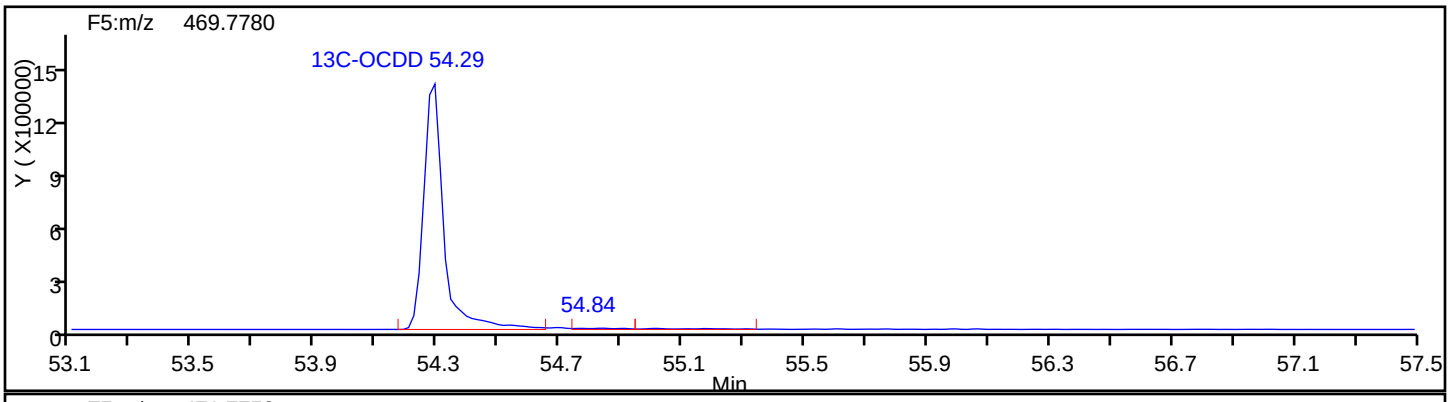
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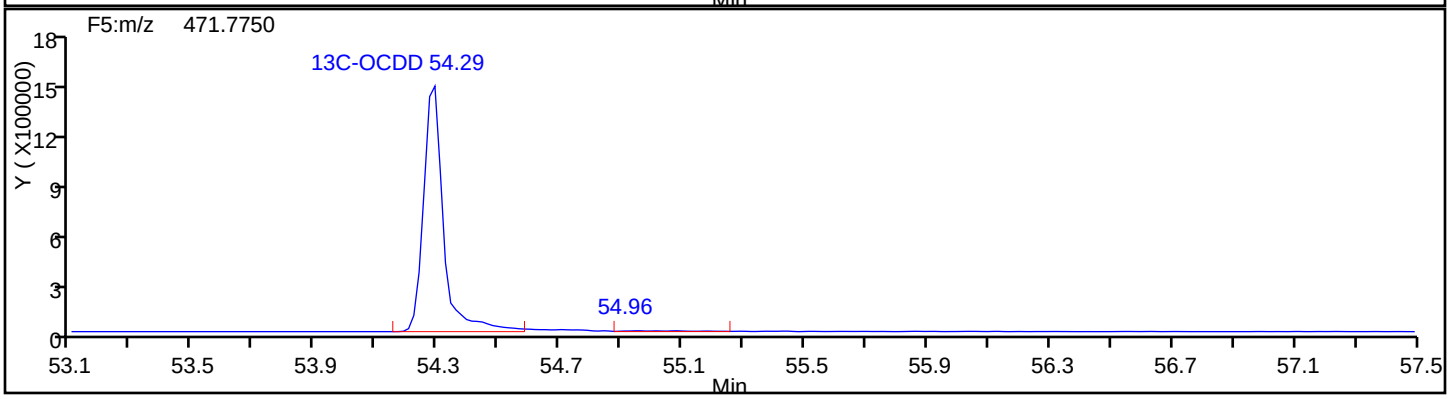
OCDD




OCDD Standards



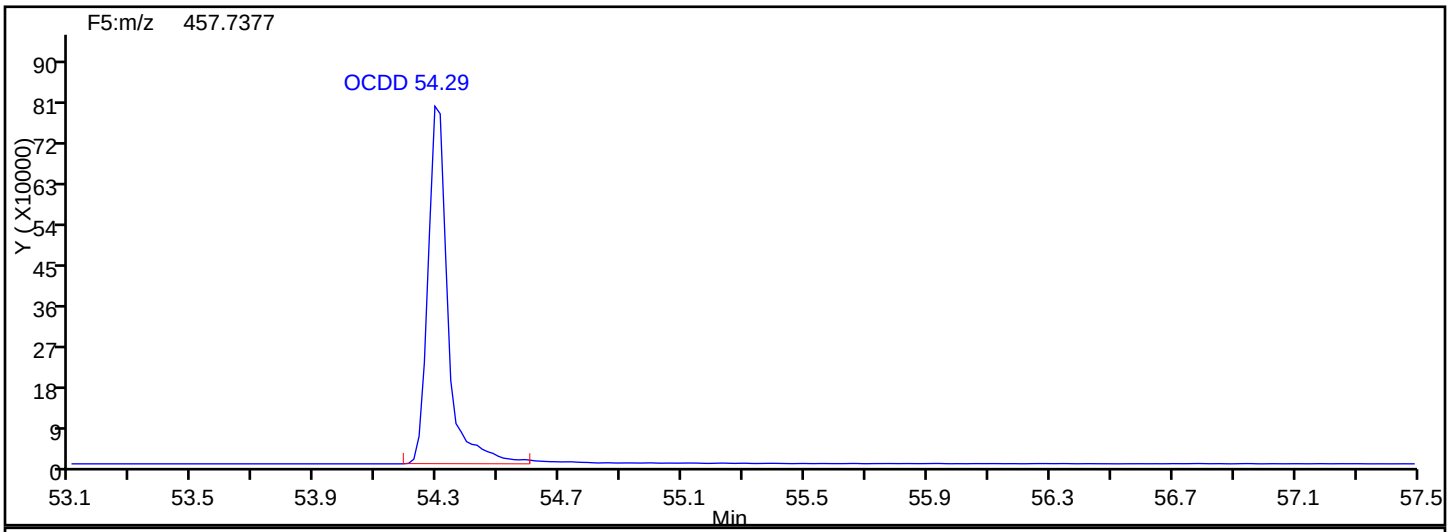
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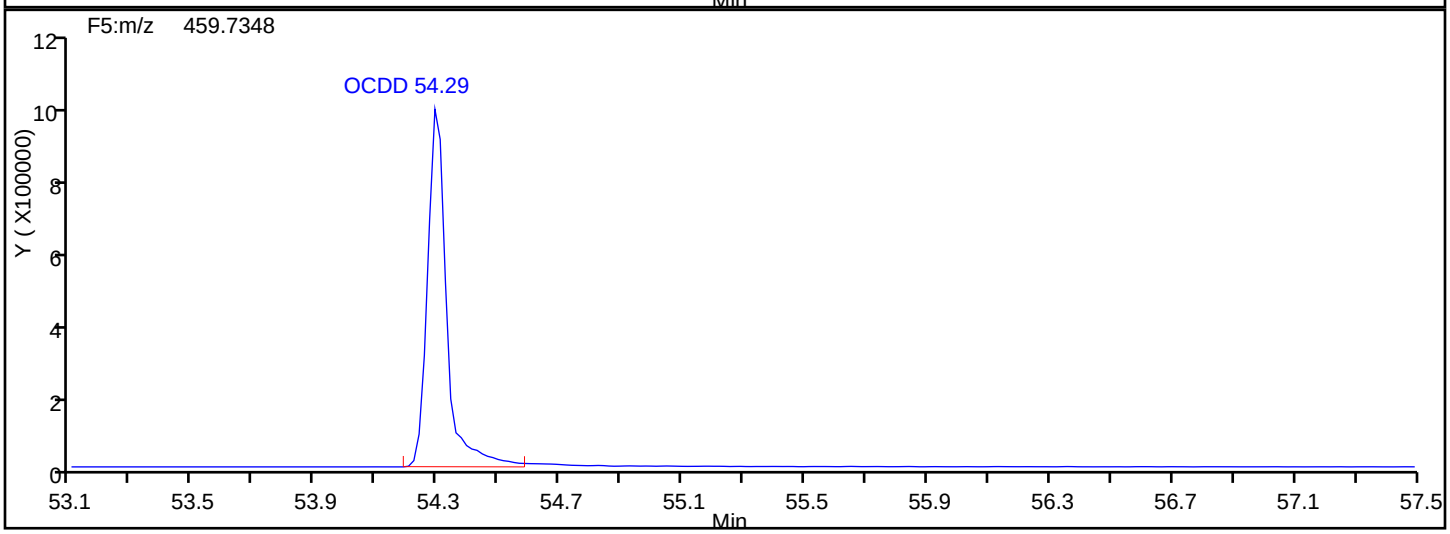
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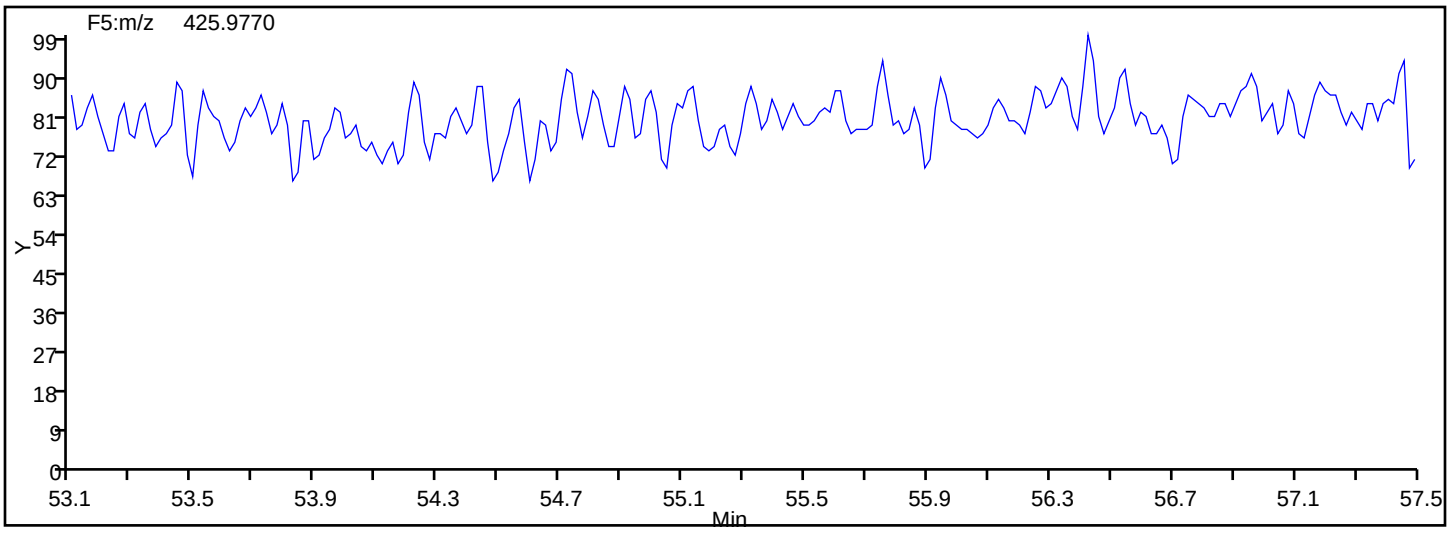
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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OCDD




OCDD Lock Mass



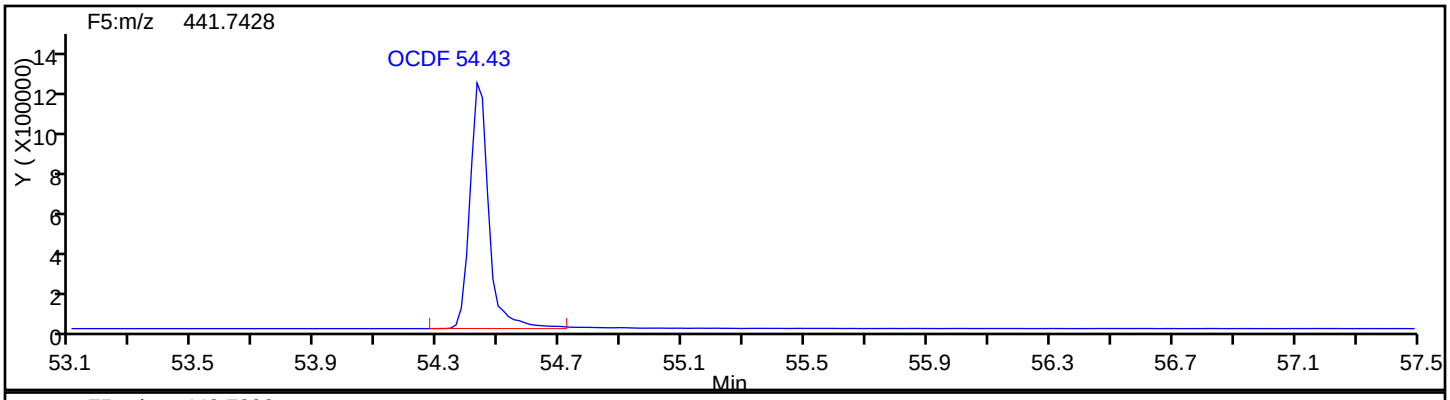
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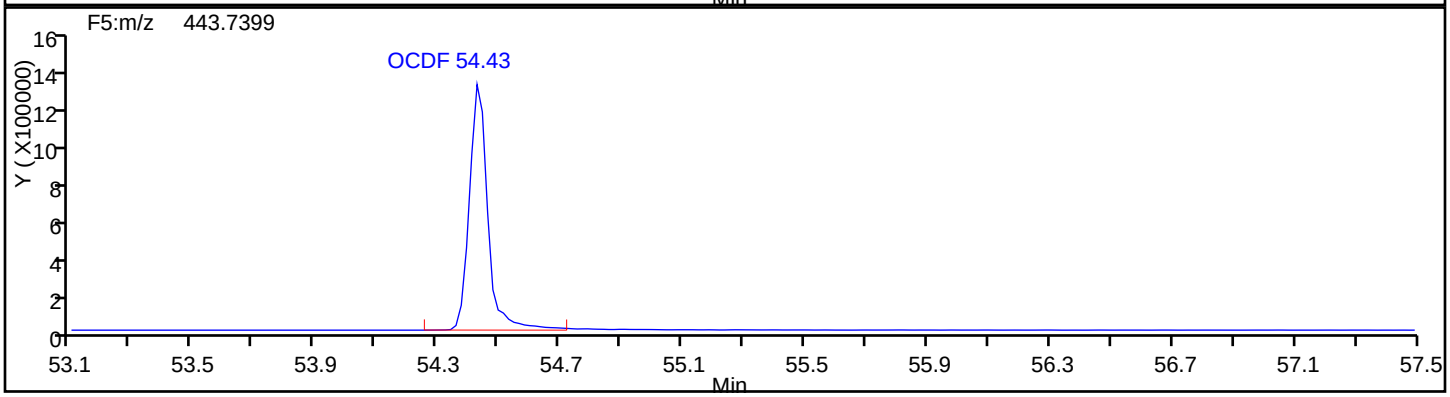
TestAmerica Knoxville

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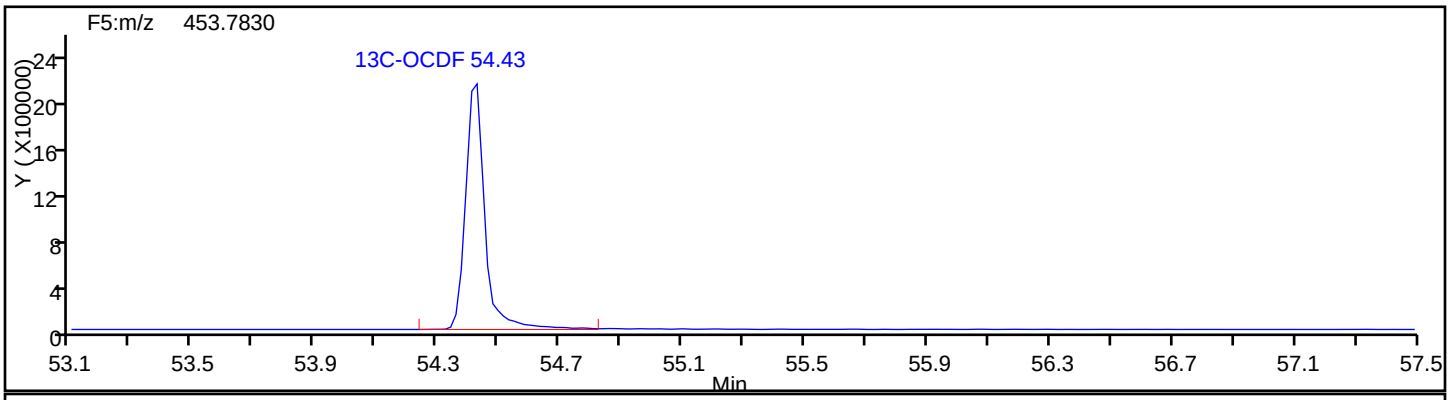
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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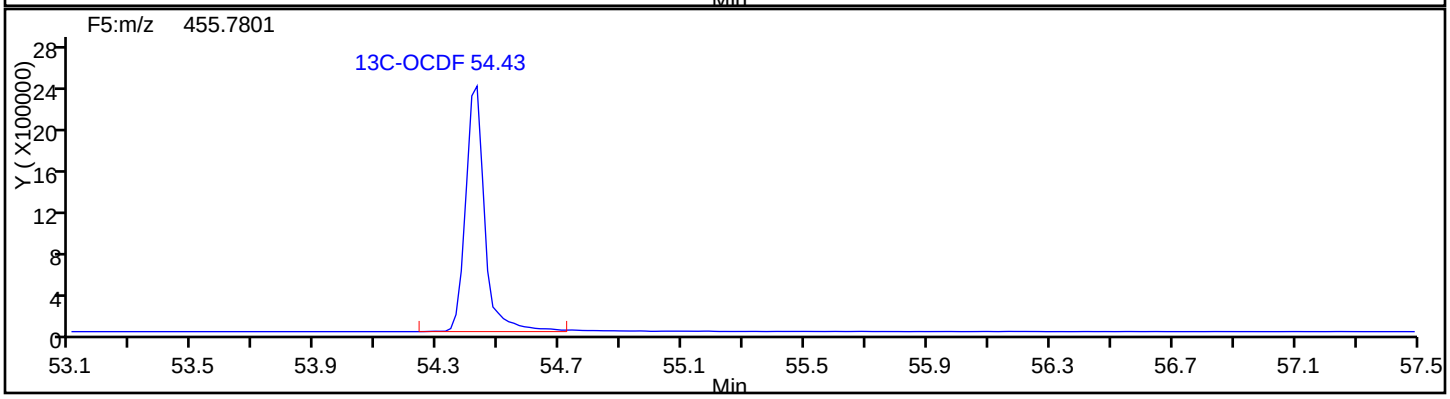
OCDF




OCDF Standards



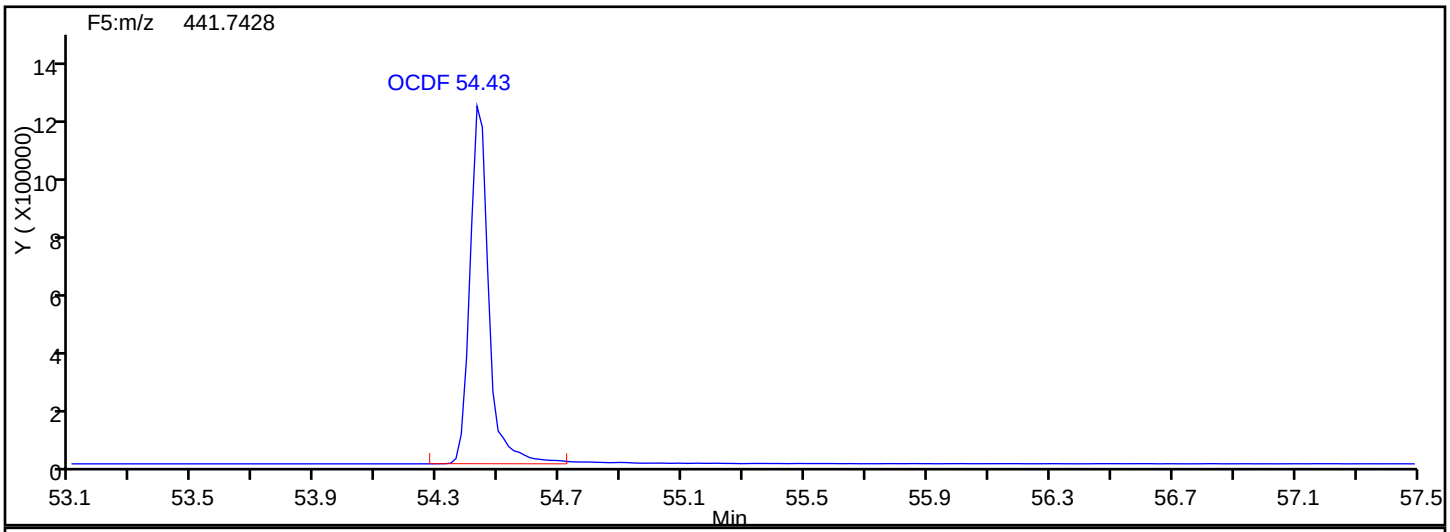
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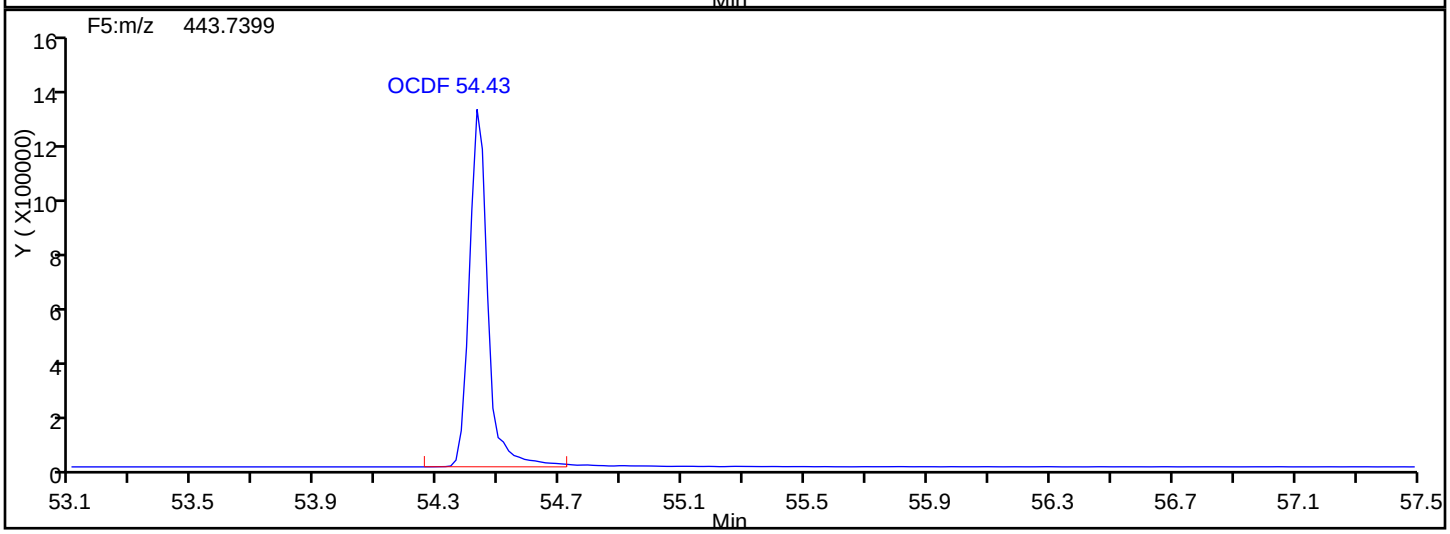
TestAmerica Knoxville

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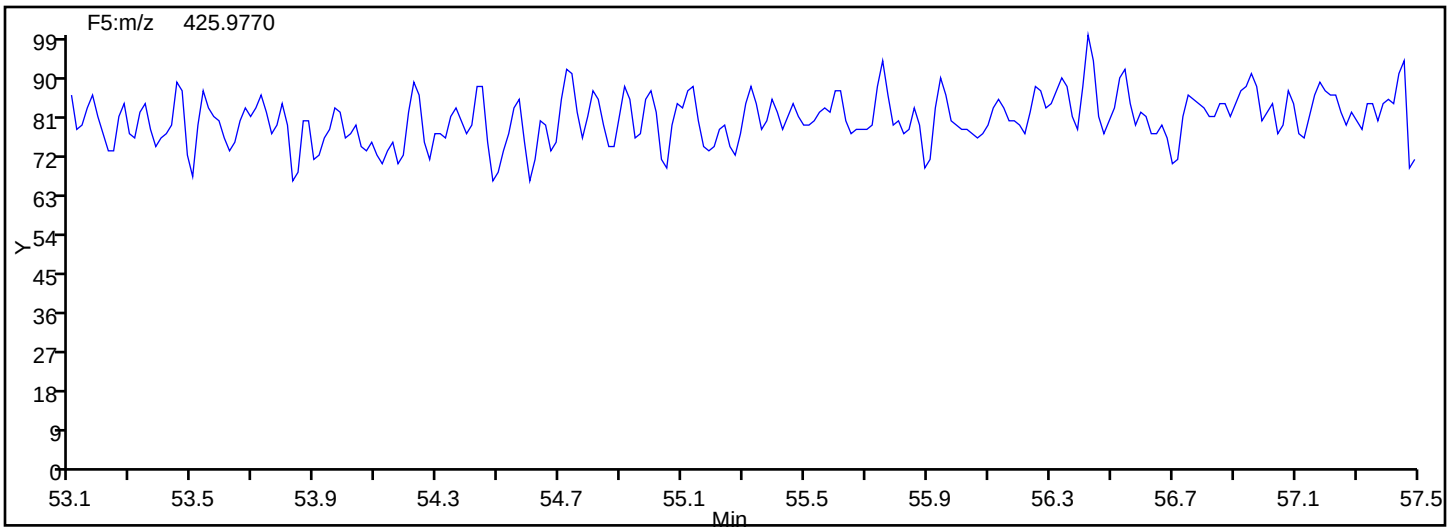
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 4 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Lock Mass



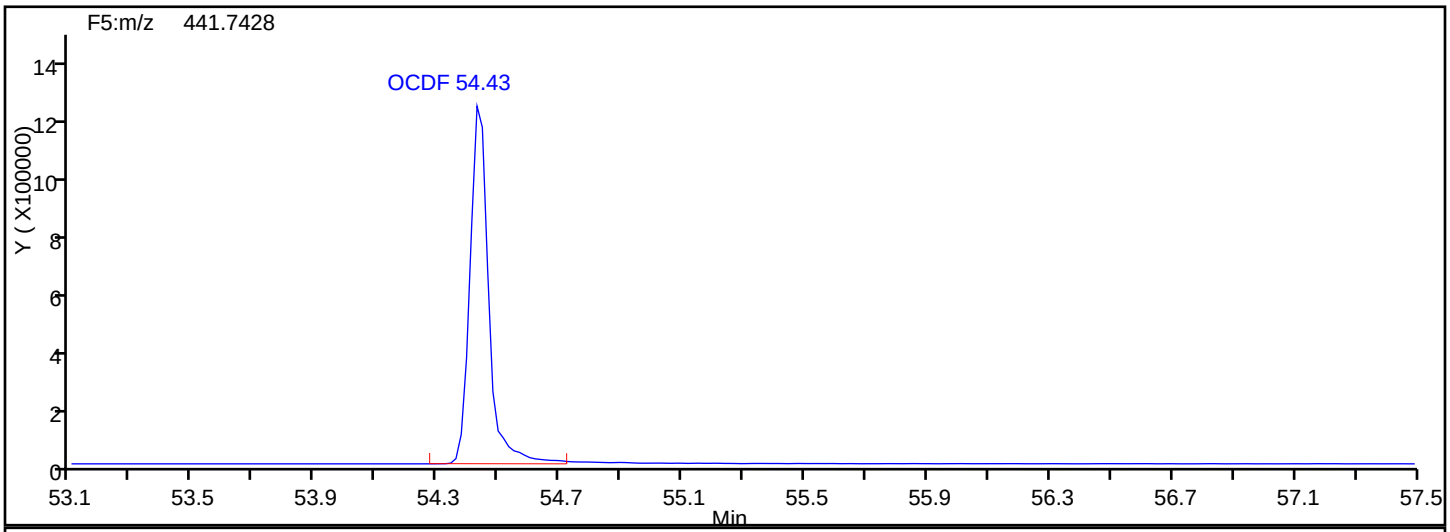
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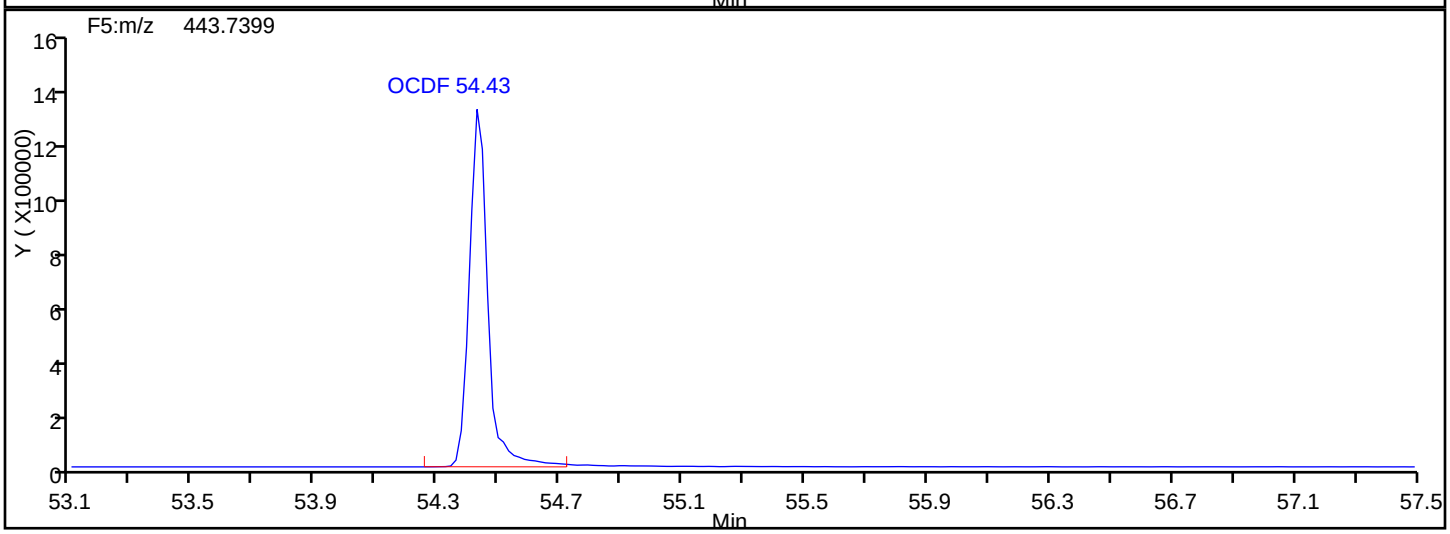
TestAmerica Knoxville

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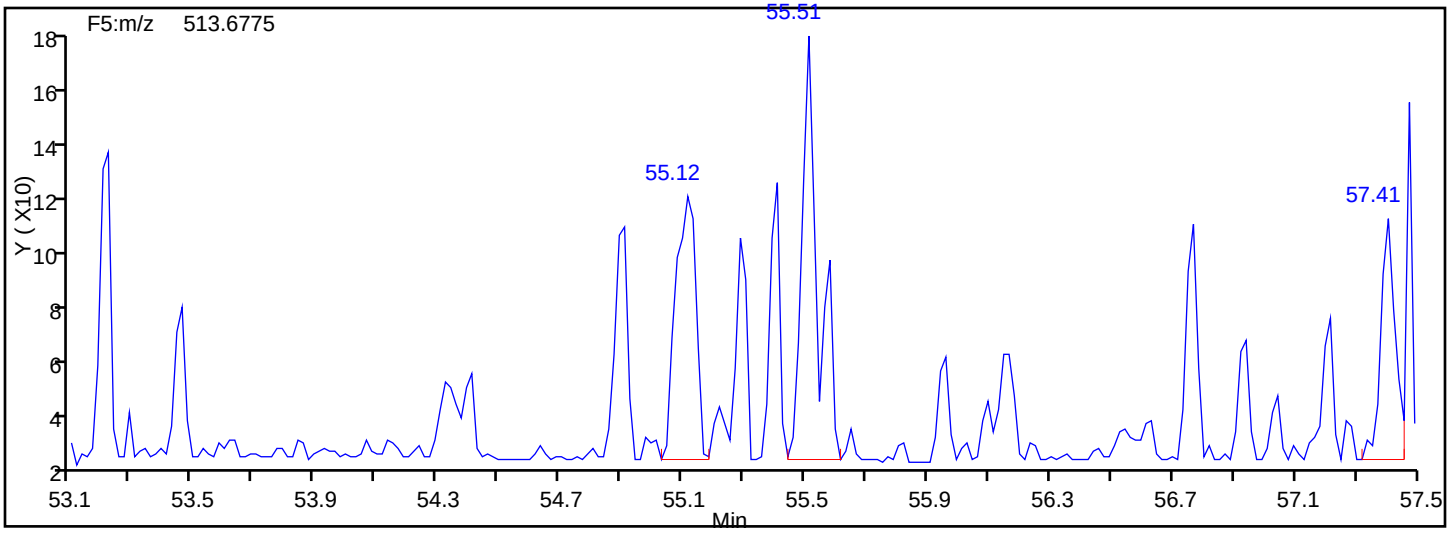
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 4 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Interference Mass



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i4.d
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 16-May-2014 17:29:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:74cs4 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 12-Jan-2017 08:09:34 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK029

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:15:14

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 31.815 | 4263534 | 0.80 | 1.1733 | 38.6 | 38.6 | 0.0562 | 0.0562 | 96.61 | |
| A Non-2,3,7,8-sub-TCDD | 30.308 | | | | | | 0.0 | 0.0 | | |
| S Total TCDD | | | | | 38.6 | 38.6 | 0.0562 | 0.0562 | | |
| 2,3,7,8-TCDF | 29.738 | 6586510 | 0.79 | 1.0881 | 39.2 | 39.2 | 0.0448 | 0.0448 | 98.00 | |
| A Non-2,3,7,8-sub-TCDF | 28.995 | 62222 | 0.77 | 0.0000 | | | | | | RQ |
| S Total TCDF | | | | | 39.2 | 39.2 | 0.0448 | 0.0448 | | RQ |
| 1,2,3,7,8-PeCDD | 40.977 | 15915139 | 1.57 | 1.0434 | 192.3 | 192.3 | 0.1041 | 0.1041 | 96.13 | |
| A Non-2,3,7,8-sub-PeCDD | 39.915 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDD | | | | | 192.3 | 192.3 | 0.1041 | 0.1041 | | |
| 1,2,3,7,8-PeCDF | 39.255 | 28353659 | 1.58 | 1.1898 | 194.0 | 194.0 | 0.6108 | 0.6108 | 96.98 | |
| 2,3,4,7,8-PeCDF | 40.461 | 26657615 | 1.59 | 1.1095 | 192.9 | 192.9 | 0.5785 | 0.5785 | 96.45 | |
| A Non-2,3,7,8-sub-PeCDF | 38.623 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDF | | | | | 386.9 | 386.9 | 0.5947 | 0.5947 | | |
| 1,2,3,4,7,8-HxCDD | 45.212 | 19615008 | 1.24 | 1.1409 | 193.1 | 193.1 | 0.4370 | 0.4370 | 96.53 | |
| 1,2,3,6,7,8-HxCDD | 45.330 | 20922527 | 1.27 | 1.1481 | 190.0 | 190.0 | 0.4327 | 0.4327 | 94.98 | |
| 1,2,3,7,8,9-HxCDD | 45.718 | 21806109 | 1.26 | 1.2212 | 193.1 | 193.1 | 0.4076 | 0.4076 | 96.53 | |
| A Non-2,3,7,8-sub-HxCDD | 44.687 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDD | | | | | 576.1 | 576.1 | 0.4258 | 0.4258 | | |
| 1,2,3,4,7,8-HxCDF | 44.166 | 31660907 | 1.24 | 1.3629 | 192.6 | 192.6 | 0.4101 | 0.4101 | 96.29 | |
| 1,2,3,6,7,8-HxCDF | 44.284 | 36461883 | 1.25 | 1.2762 | 190.5 | 190.5 | 0.3742 | 0.3742 | 95.27 | |
| 2,3,4,6,7,8-HxCDF | 45.026 | 32628769 | 1.25 | 1.2654 | 193.4 | 193.4 | 0.4178 | 0.4178 | 96.70 | |
| 1,2,3,7,8,9-HxCDF | 45.988 | 30276117 | 1.25 | 1.2573 | 196.1 | 196.1 | 0.5112 | 0.5112 | 98.06 | |
| A Non-2,3,7,8-sub-HxCDF | 44.552 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDF | | | | | 772.6 | 772.6 | 0.4284 | 0.4284 | | |
| 1,2,3,4,6,7,8-HpCDD | 50.141 | 17971175 | 1.06 | 1.1204 | 192.8 | 192.8 | 0.5434 | 0.5434 | 96.40 | |
| A Non-2,3,7,8-sub-HpCDD | 49.566 | | | | | | 0.0 | 0.0 | | |
| S Total HpCDD | | | | | 192.8 | 192.8 | 0.5434 | 0.5434 | | |
| 1,2,3,4,6,7,8-HpCDF | 48.420 | 30775593 | 1.05 | 1.4984 | 193.1 | 193.1 | 0.3986 | 0.3986 | 96.55 | |
| 1,2,3,4,7,8,9-HpCDF | 50.765 | 24451442 | 1.05 | 1.3807 | 195.2 | 195.2 | 0.5424 | 0.5424 | 97.61 | |

Report Date: 12-Jan-2017 08:09:35 Chrom Revision: 2.2 10-Jan-2017 11:26:10
Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i4.d

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HpCDF | 49.625 | | | | | | 0.0 | 0.0 | | |
| S Total HpCDF | | | | | 388.3 | 388.3 | 0.4705 | 0.4705 | | |
| OCDD | 54.267 | 34014604 | 0.90 | 1.2073 | 380.8 | 380.8 | 0.3541 | 0.3541 | 95.20 | |
| OCDF | 54.388 | 47454024 | 0.92 | 1.1162 | 378.5 | 378.5 | 0.3471 | 0.3471 | 94.62 | |
| D 13C-2,3,7,8-TCDD | 31.766 | 9403373 | 0.83 | 1.0709 | 100.8 | 100.8 | 0.2750 | 0.2750 | 101 | |
| D 13C-2,3,7,8-TCDF | 29.688 | 15441140 | 0.82 | 1.7545 | 101.1 | 101.1 | 0.0968 | 0.0968 | 101 | |
| D 13C-1,2,3,7,8-PeCDD | 40.960 | 7933559 | 1.61 | 0.8743 | 104.2 | 104.2 | 0.3387 | 0.3387 | 104 | |
| D 13C-1,2,3,7,8-PeCDF | 39.238 | 12286310 | 1.60 | 1.3704 | 102.9 | 102.9 | 0.3105 | 0.3105 | 103 | |
| D 13C-2,3,4,7,8-PeCDF | 40.444 | 12455454 | 1.59 | 1.3837 | 103.4 | 103.4 | 0.3075 | 0.3075 | 103 | |
| D 13C-1,2,3,4,7,8-HxCDD | 45.195 | 8905352 | 1.28 | 0.8772 | 101.2 | 101.2 | 0.1612 | 0.1612 | 101 | |
| D 13C-1,2,3,6,7,8-HxCDD | 45.313 | 9593131 | 1.26 | 0.9171 | 104.3 | 104.3 | 0.1542 | 0.1542 | 104 | |
| D 13C-1,2,3,4,7,8-HxCDF | 44.149 | 12063156 | 0.53 | 1.1892 | 101.1 | 101.1 | 0.1383 | 0.1383 | 101 | |
| D 13C-1,2,3,6,7,8-HxCDF | 44.267 | 14993755 | 0.55 | 1.4625 | 102.2 | 102.2 | 0.1125 | 0.1125 | 102 | |
| D 13C-2,3,4,6,7,8-HxCDF | 45.009 | 13333182 | 0.53 | 1.3197 | 100.7 | 100.7 | 0.1246 | 0.1246 | 101 | |
| D 13C-1,2,3,7,8,9-HxCDF | 45.971 | 12277599 | 0.54 | 1.2001 | 102.0 | 102.0 | 0.1370 | 0.1370 | 102 | |
| D 13C-1,2,3,4,6,7,8-HpCDD | 50.124 | 8319073 | 1.10 | 0.8155 | 101.7 | 101.7 | 0.2654 | 0.2654 | 102 | |
| D 13C-1,2,3,4,6,7,8-HpCDF | 48.403 | 10636138 | 0.46 | 1.0496 | 101.0 | 101.0 | 0.1544 | 0.1544 | 101 | |
| D 13C-1,2,3,4,7,8,9-HpCDF | 50.748 | 9071146 | 0.45 | 0.8947 | 101.0 | 101.0 | 0.1811 | 0.1811 | 101 | |
| D 13C-OCDD | 54.250 | 14797795 | 0.93 | 0.7044 | 209.4 | 209.4 | 0.1227 | 0.1227 | 105 | |
| D 13C-OCDF | 54.388 | 22466050 | 0.91 | 1.0615 | 210.9 | 210.9 | 0.1026 | 0.1026 | 105 | |
| $ 37Cl4-2,3,7,8-TCDD | 31.799 | 4258282 | | 1.2266 | 39.9 | 39.9 | 0.0284 | 0.0284 | 99.66 | |
| * 13C-1,2,3,4-TCDD | 31.234 | 8708927 | 0.81 | 9.1E+04 | 100.0 | 100.0 | | | | |
| * 13C-1,2,3,7,8,9-HxCDD | 45.701 | 10033553 | 1.25 | 1E+05 | 100.0 | 100.0 | | | | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

## Reagents:

61L41613OP_00001 Amount Added: 20.00 Units: uL

Report Date: 12-Jan-2017 08:09:35 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i4.d
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 16-May-2014 17:29:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:74cs4 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 12-Jan-2017 08:09:34 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK029

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:15:14

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | |
| 319.8965 | 31.815 | 31.838 | -1 | 1.002 | 1891248 | 191979 | 134 | 335 | 1433 | | |
| 321.8936 | 31.799 | 31.838 | -2 | 1.001 | 2372286 | 242692 | 126 | 315 | 1926 | 0.80(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | |
| 319.8965 | 30.308 | | | | | | 134 | 335 | | | |
| 321.8936 | 30.308 | | | | | | 126 | 315 | | | |
| 2,3,7,8-TCDF | | | | | | | | | | | |
| 303.9016 | 29.738 | 29.760 | -1 | 1.002 | 2915517 | 328500 | 135 | 337 | 2433 | | |
| 305.8987 | 29.721 | 29.760 | -2 | 1.001 | 3670993 | 403994 | 191 | 477 | 2115 | 0.79(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | RQ |
| 303.9016 | 28.591 | 28.995 | -24 | | 24843 | 3402 | 135 | 337 | 25 | | |
| 305.8987 | 28.591 | 28.995 | -24 | | 28149 | 3247 | 191 | 477 | 17 | 0.88(0.65-0.89) | |
| 303.9016 | 30.070 | 28.995 | 64 | | 9552 | 855 | 135 | 337 | 6 | | |
| 305.8987 | 30.137 | 28.995 | 68 | | 5215 | 1125 | 191 | 477 | 6 | 1.83(0.65-0.89) | |
| 1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 355.8546 | 40.977 | 41.015 | -2 | 1.000 | 9711201 | 2312647 | 455 | 1137 | 5083 | | |
| 357.8516 | 40.977 | 41.015 | -2 | 1.000 | 6203938 | 1486672 | 371 | 927 | 4007 | 1.57(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | |
| 355.8546 | 39.915 | | | | | | 455 | 1137 | | | |
| 357.8516 | 39.915 | | | | | | 371 | 927 | | | |
| 1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 39.255 | 39.293 | -2 | 1.000 | 17352103 | 3551979 | 4380 | 10950 | 811 | | |
| 341.8567 | 39.255 | 39.293 | -2 | 1.000 | 11001556 | 2244107 | 2922 | 7305 | 768 | 1.58(1.32-1.78) | |
| 2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 40.461 | 40.499 | -2 | 1.000 | 16366381 | 3807031 | 4380 | 10950 | 869 | | |
| 341.8567 | 40.461 | 40.499 | -2 | 1.000 | 10291234 | 2372495 | 2922 | 7305 | 812 | 1.59(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | |
| 339.8597 | 38.623 | | | | | | 4380 | 10950 | | | |
| 341.8567 | 38.623 | | | | | | 2922 | 7305 | | | |
| 1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.212 | 45.248 | -2 | 1.000 | 10866678 | 2725560 | 2588 | 6470 | 1053 | | |
| 391.8127 | 45.195 | 45.248 | -3 | 1.000 | 8748330 | 2182787 | 1821 | 4552 | 1199 | 1.24(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.330 | 45.366 | -2 | 1.000 | 11699331 | 2736260 | 2588 | 6470 | 1057 | | |
| 391.8127 | 45.313 | 45.366 | -3 | 1.000 | 9223196 | 2118323 | 1821 | 4552 | 1163 | 1.27(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.718 | 45.754 | -2 | 1.012 | 12176851 | 2829631 | 2588 | 6470 | 1093 | | |
| 391.8127 | 45.718 | 45.754 | -2 | 1.012 | 9629258 | 2234894 | 1821 | 4552 | 1227 | 1.26(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | |
| 389.8158 | 44.687 | | | | | | 2588 | 6470 | | | |
| 391.8127 | 44.687 | | | | | | 1821 | 4552 | | | |
| 1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.166 | 44.202 | -2 | 1.000 | 17552228 | 4595549 | 3845 | 9612 | 1195 | | |
| 375.8178 | 44.149 | 44.202 | -3 | 1.000 | 14108679 | 3675530 | 3097 | 7742 | 1187 | 1.24(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.284 | 44.337 | -3 | 1.000 | 20275139 | 4913451 | 3845 | 9612 | 1278 | | |
| 375.8178 | 44.284 | 44.337 | -3 | 1.000 | 16186744 | 4031681 | 3097 | 7742 | 1302 | 1.25(1.05-1.43) | |
| 2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 45.026 | 45.063 | -2 | 1.000 | 18106557 | 4588639 | 3845 | 9612 | 1193 | | |
| 375.8178 | 45.026 | 45.063 | -2 | 1.000 | 14522212 | 3646655 | 3097 | 7742 | 1177 | 1.25(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 45.988 | 46.024 | -2 | 1.000 | 16793197 | 3750981 | 3845 | 9612 | 976 | | |
| 375.8178 | 45.988 | 46.024 | -2 | 1.000 | 13482920 | 3044426 | 3097 | 7742 | 983 | 1.25(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.552 | | | | | | 3845 | 9612 | | | |
| 375.8178 | 44.552 | | | | | | 3097 | 7742 | | | |
| 1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 423.7767 | 50.141 | 50.178 | -2 | 1.000 | 9259060 | 1781113 | 2362 | 5905 | 754 | | |
| 425.7737 | 50.141 | 50.178 | -2 | 1.000 | 8712115 | 1650944 | 1426 | 3565 | 1158 | 1.06(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | |
| 423.7767 | 49.566 | | | | | | 2362 | 5905 | | | |
| 425.7737 | 49.566 | | | | | | 1426 | 3565 | | | |
| 1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 407.7817 | 48.420 | 48.458 | -2 | 1.000 | 15764262 | 3226313 | 2617 | 6542 | 1233 | | |
| 409.7788 | 48.420 | 48.458 | -2 | 1.000 | 15011331 | 3120494 | 2620 | 6550 | 1191 | 1.05(0.88-1.20) | |
| 1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 407.7817 | 50.765 | 50.819 | -3 | 1.000 | 12497949 | 2420397 | 2617 | 6542 | 925 | | |
| 409.7788 | 50.765 | 50.819 | -3 | 1.000 | 11953493 | 2345175 | 2620 | 6550 | 895 | 1.05(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | |
| 407.7817 | 49.625 | | | | | | 2617 | 6542 | | | |
| 409.7788 | 49.625 | | | | | | 2620 | 6550 | | | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCDD | | | | | | | | | | | |
| 457.7377 | 54.267 | 54.290 | -1 | 1.000 | 16128444 | 3708022 | 1051 | 2627 | 3528 | | |
| 459.7348 | 54.250 | 54.290 | -2 | 1.000 | 17886160 | 4037709 | 1866 | 4665 | 2164 | 0.90(0.76-1.02) | |
| OCDF | | | | | | | | | | | |
| 441.7428 | 54.388 | 54.428 | -2 | 1.000 | 22687472 | 5303694 | 2550 | 6375 | 2080 | | |
| 443.7399 | 54.388 | 54.428 | -2 | 1.000 | 24766552 | 5953196 | 1550 | 3875 | 3841 | 0.92(0.76-1.02) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 31.766 | 31.788 | -1 | 1.017 | 4252514 | 446145 | 651 | 1627 | 685 | | |
| 333.9338 | 31.766 | 31.788 | -1 | 1.017 | 5150859 | 538901 | 440 | 1100 | 1225 | 0.83(0.65-0.89) | |
| 13C-2,3,7,8-TCDF | | | | | | | | | | | |
| 315.9419 | 29.688 | 29.727 | -2 | 0.951 | 6943354 | 752027 | 320 | 800 | 2350 | | |
| 317.9389 | 29.688 | 29.727 | -2 | 0.951 | 8497786 | 921617 | 309 | 772 | 2983 | 0.82(0.65-0.89) | |
| 13C-1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 367.8949 | 40.960 | 40.998 | -2 | 1.311 | 4892053 | 1175097 | 744 | 1860 | 1579 | | |
| 369.8919 | 40.960 | 40.998 | -2 | 1.311 | 3041506 | 726434 | 353 | 882 | 2058 | 1.61(1.32-1.78) | |
| 13C-1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 39.238 | 39.276 | -2 | 1.256 | 7554923 | 1540416 | 855 | 2137 | 1802 | | |
| 353.8970 | 39.238 | 39.276 | -2 | 1.256 | 4731387 | 971377 | 721 | 1802 | 1347 | 1.60(1.32-1.78) | |
| 13C-2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 40.444 | 40.481 | -2 | 1.295 | 7639963 | 1738288 | 855 | 2137 | 2033 | | |
| 353.8970 | 40.444 | 40.481 | -2 | 1.295 | 4815491 | 1105777 | 721 | 1802 | 1534 | 1.59(1.32-1.78) | |
| 13C-1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.195 | 45.231 | -2 | 0.989 | 4993367 | 1233498 | 758 | 1895 | 1627 | | |
| 403.8529 | 45.195 | 45.231 | -2 | 0.989 | 3911985 | 977058 | 541 | 1352 | 1806 | 1.28(1.05-1.43) | |
| 13C-1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.313 | 45.350 | -2 | 0.992 | 5339736 | 1220476 | 758 | 1895 | 1610 | | |
| 403.8529 | 45.313 | 45.350 | -2 | 0.992 | 4253395 | 998127 | 541 | 1352 | 1845 | 1.26(1.05-1.43) | |
| 13C-1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44.149 | 44.185 | -2 | 0.966 | 4183066 | 1106590 | 486 | 1215 | 2277 | | |
| 385.8610 | 44.149 | 44.185 | -2 | 0.966 | 7880090 | 1998317 | 1025 | 2562 | 1950 | 0.53(0.43-0.59) | |
| 13C-1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44.267 | 44.320 | -3 | 0.969 | 5312423 | 1289548 | 486 | 1215 | 2653 | | |
| 385.8610 | 44.267 | 44.320 | -3 | 0.969 | 9681332 | 2344271 | 1025 | 2562 | 2287 | 0.55(0.43-0.59) | |
| 13C-2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 45.009 | 45.046 | -2 | 0.985 | 4594531 | 1144207 | 486 | 1215 | 2354 | | |
| 385.8610 | 45.009 | 45.046 | -2 | 0.985 | 8738651 | 2138197 | 1025 | 2562 | 2086 | 0.53(0.43-0.59) | |
| 13C-1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 383.8639 | 45.971 | 46.007 | -2 | 1.006 | 4287134 | 927670 | 486 | 1215 | 1909 | | |
| 385.8610 | 45.971 | 46.007 | -2 | 1.006 | 7990465 | 1772222 | 1025 | 2562 | 1729 | 0.54(0.43-0.59) | |
| 13C-1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 435.8169 | 50.124 | 50.161 | -2 | 1.097 | 4358439 | 814143 | 823 | 2057 | 989 | | |
| 437.8140 | 50.124 | 50.161 | -2 | 1.097 | 3960634 | 741361 | 1165 | 2912 | 636 | 1.10(0.88-1.20) | |
| 13C-1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 417.8250 | 48.403 | 48.441 | -2 | 1.059 | 3337014 | 690637 | 759 | 1897 | 910 | | |
| 419.8220 | 48.403 | 48.441 | -2 | 1.059 | 7299124 | 1501267 | 730 | 1825 | 2057 | 0.46(0.51-0.37) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 417.8250 | 50.748 | 50.786 | -2 | 1.110 | 2821969 | 553394 | 759 | 1897 | 729 | | |
| 419.8220 | 50.748 | 50.786 | -2 | 1.110 | 6249177 | 1194738 | 730 | 1825 | 1637 | 0.45(0.37-0.51) | |
| 13C-OCDD | | | | | | | | | | | |
| 469.7780 | 54.250 | 54.290 | -2 | 1.187 | 7131779 | 1633617 | 392 | 980 | 4167 | | |
| 471.7750 | 54.250 | 54.290 | -2 | 1.187 | 7666016 | 1778388 | 402 | 1005 | 4424 | 0.93(0.76-1.02) | |
| 13C-OCDF | | | | | | | | | | | |
| 453.7830 | 54.388 | 54.428 | -2 | 1.190 | 10677571 | 2517622 | 556 | 1390 | 4528 | | |
| 455.7801 | 54.388 | 54.428 | -2 | 1.190 | 11788479 | 2773637 | 444 | 1110 | 6247 | 0.91(0.76-1.02) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31.799 | 31.838 | -2 | 1.018 | 4258282 | 440452 | 129 | 322 | 3414 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 31.234 | 31.273 | -2 | | 3910026 | 413703 | 651 | 1627 | 635 | | |
| 333.9338 | 31.234 | 31.273 | -2 | | 4798901 | 512178 | 440 | 1100 | 1164 | 0.81(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.701 | 45.737 | -2 | | 5570704 | 1287541 | 758 | 1895 | 1699 | | |
| 403.8529 | 45.701 | 45.737 | -2 | | 4462849 | 1008970 | 541 | 1352 | 1865 | 1.25(1.05-1.43) | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

## Reagents:

61L41613OP_00001 Amount Added: 20.00 Units: uL

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i4.d
Lims ID: IC L4
Client ID:
Inject. Date: 16-May-2014 17:29:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 4
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 5
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDF, RT: 28.995

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 303.9016 Area | 303.9016 Height | 305.8987 Area | 305.8987 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 28.591 | 24843 | 3402 | 28149 | 3247 | | 0.88 | |
| 30.070 | 9552 | 855 | 5215 | 1125 | | 1.83 | Rn |
| Signal Totals: | | | | | | | |
| | 34395 | 4257 | 33364 | 4372 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 67759 | 8629 | | | | 1.03 | RQ |
| | 62222 | 8640 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (67759 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (62222 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

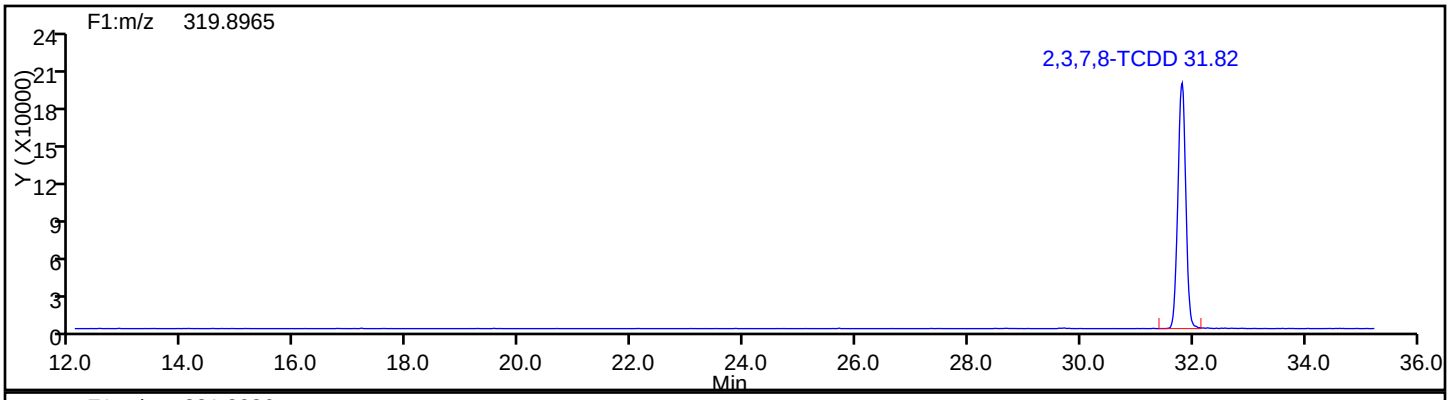
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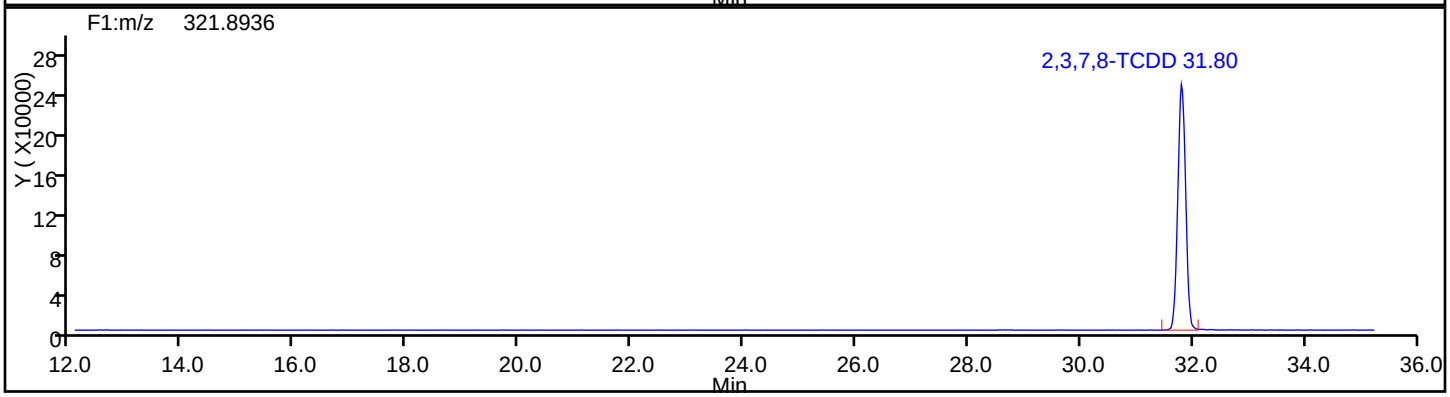
TestAmerica Knoxville

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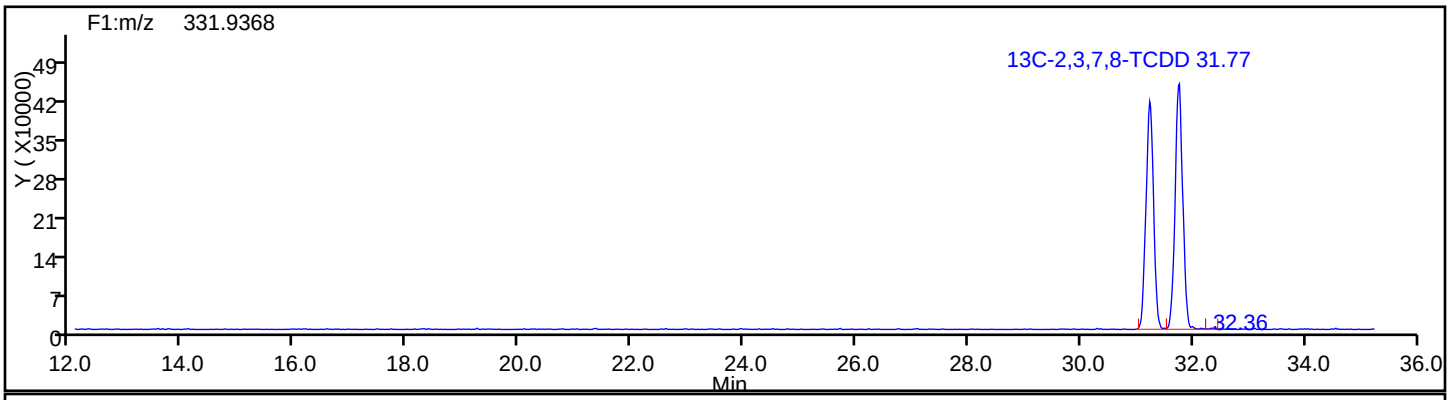
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

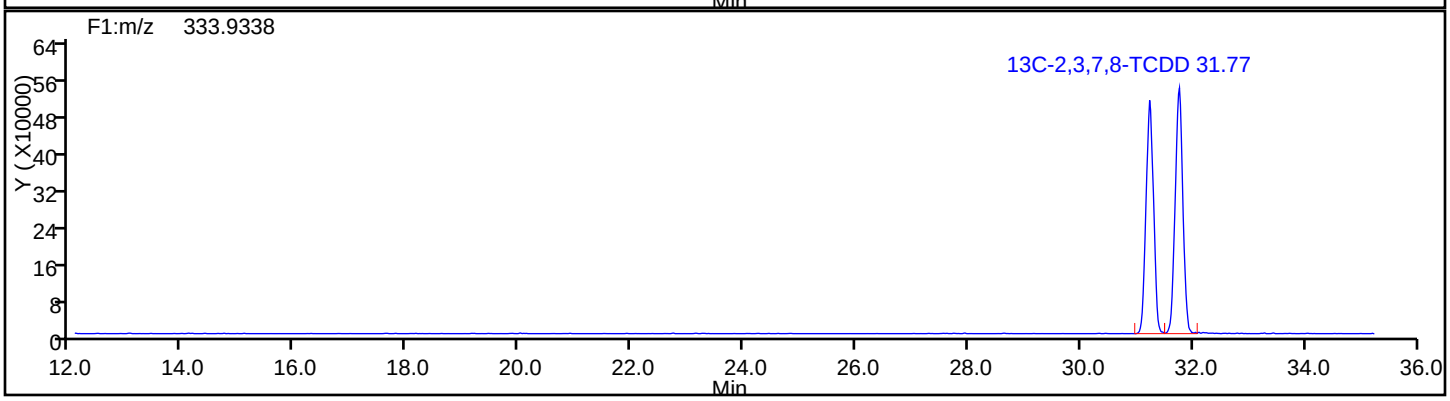
TCDD




TCDD Standards



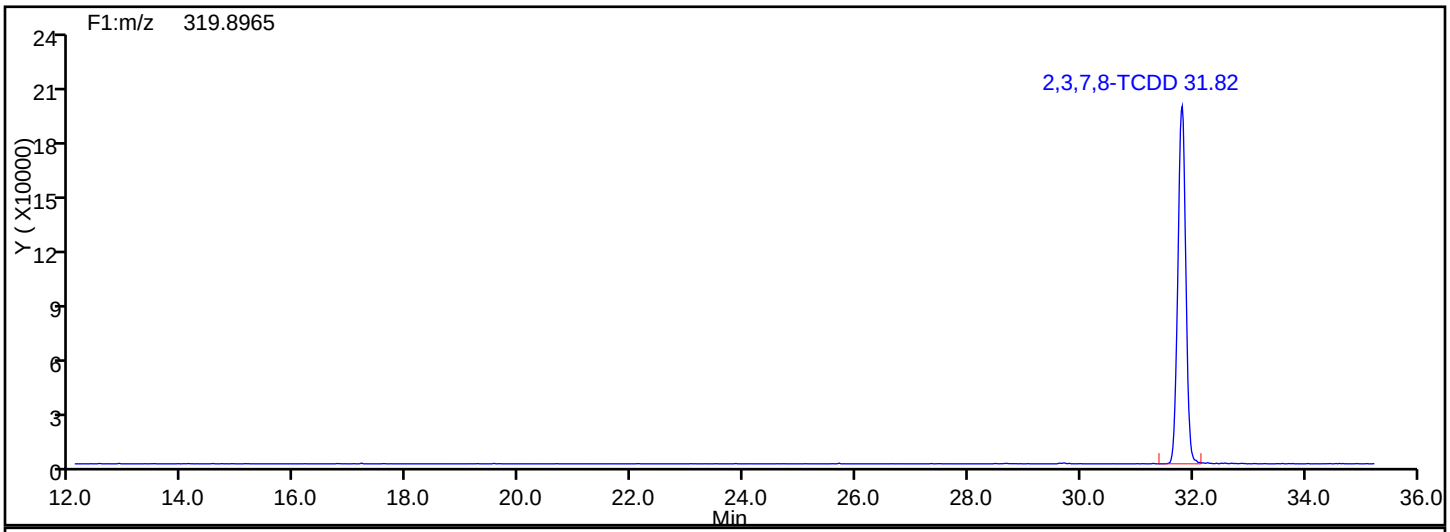
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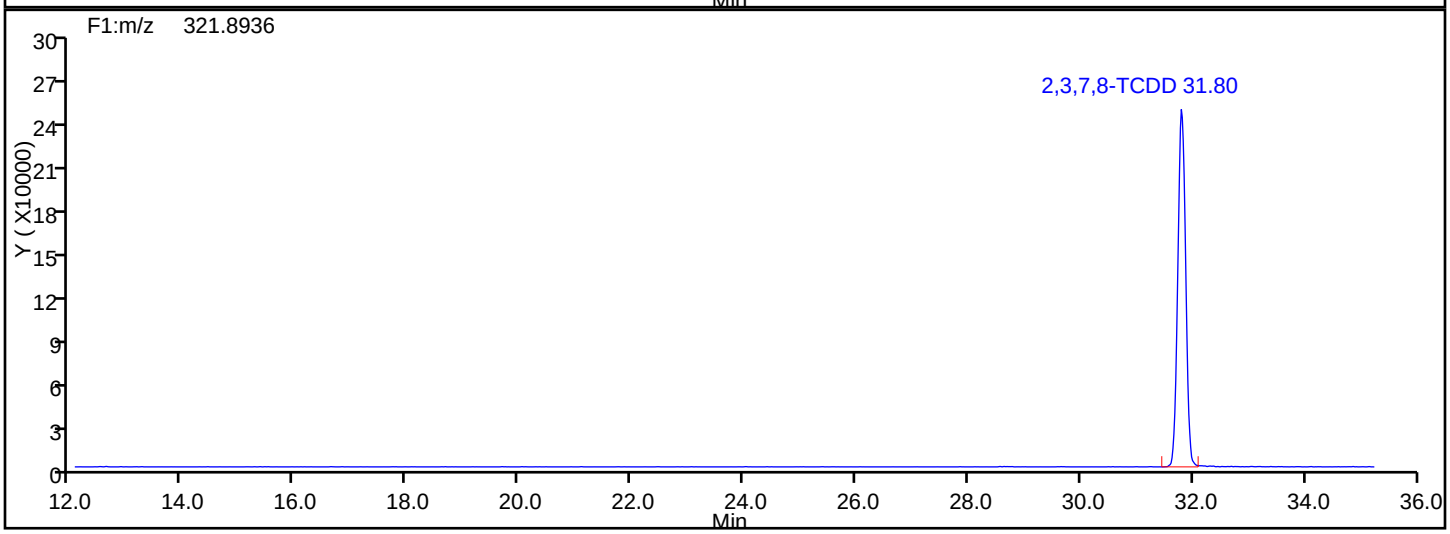
TestAmerica Knoxville

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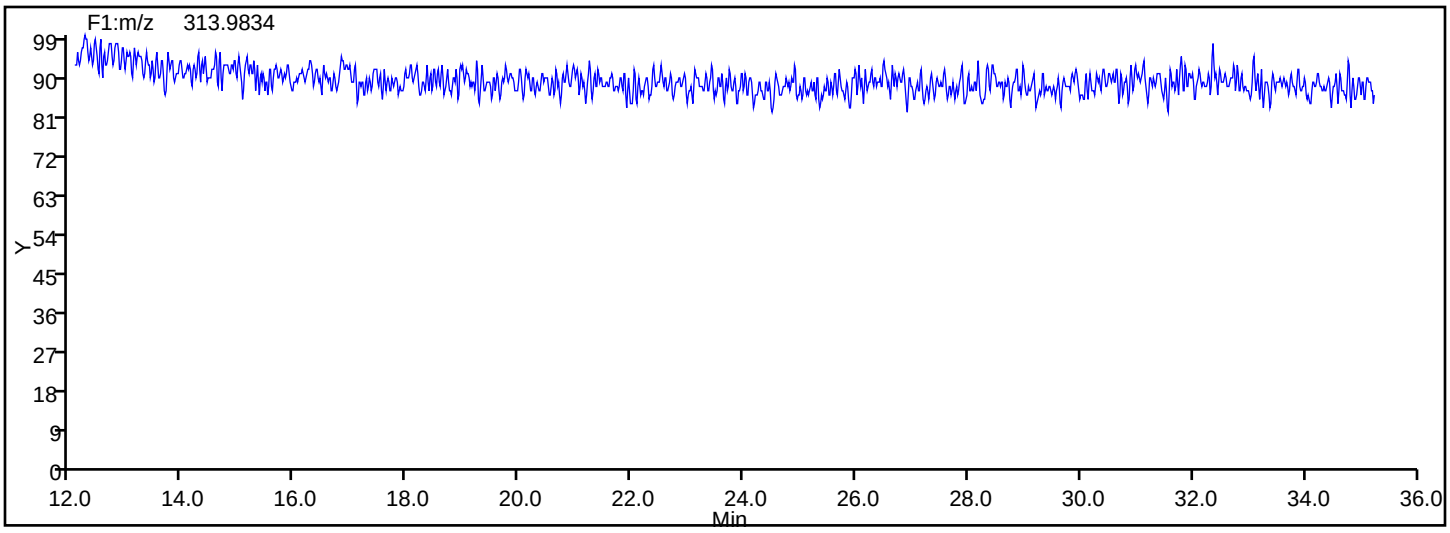
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



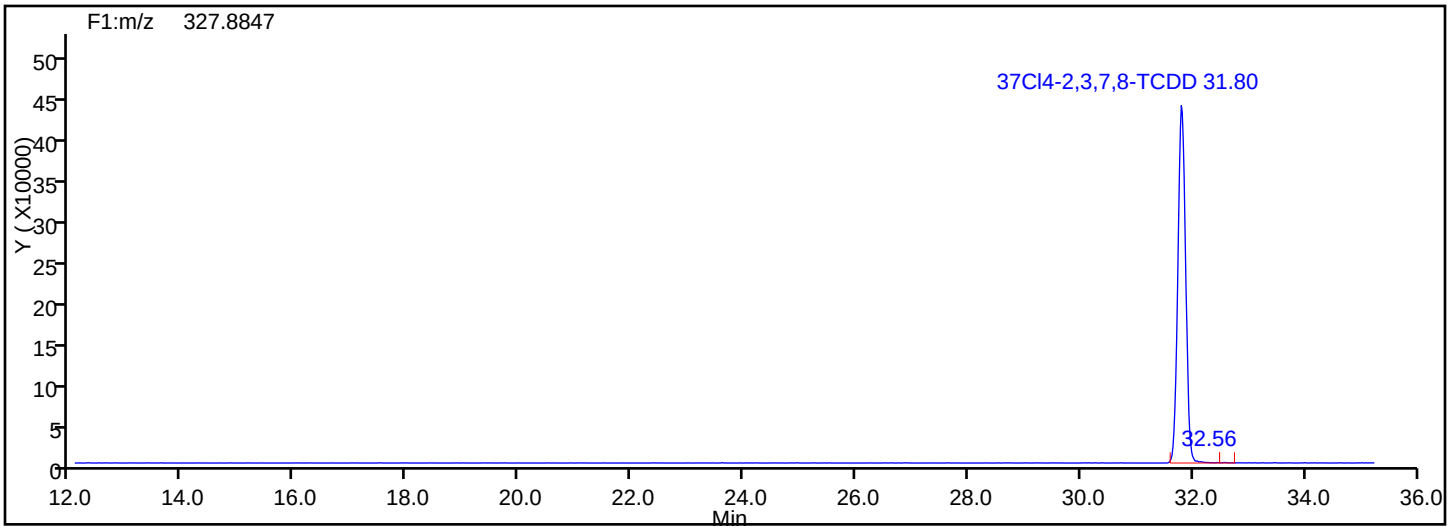
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TestAmerica Knoxville

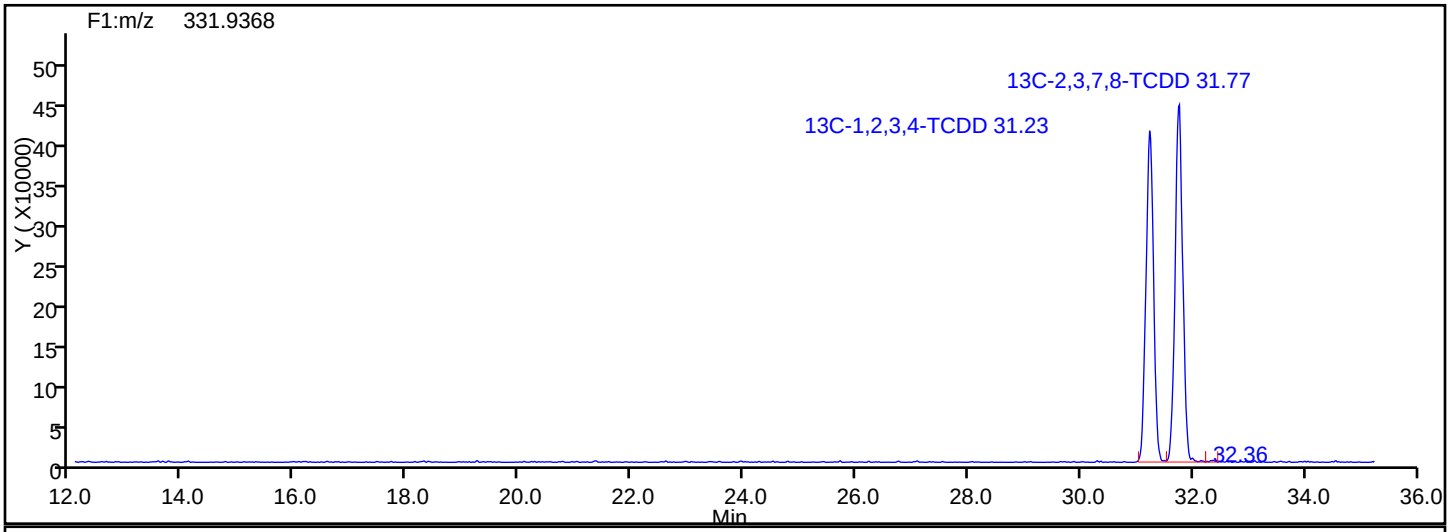
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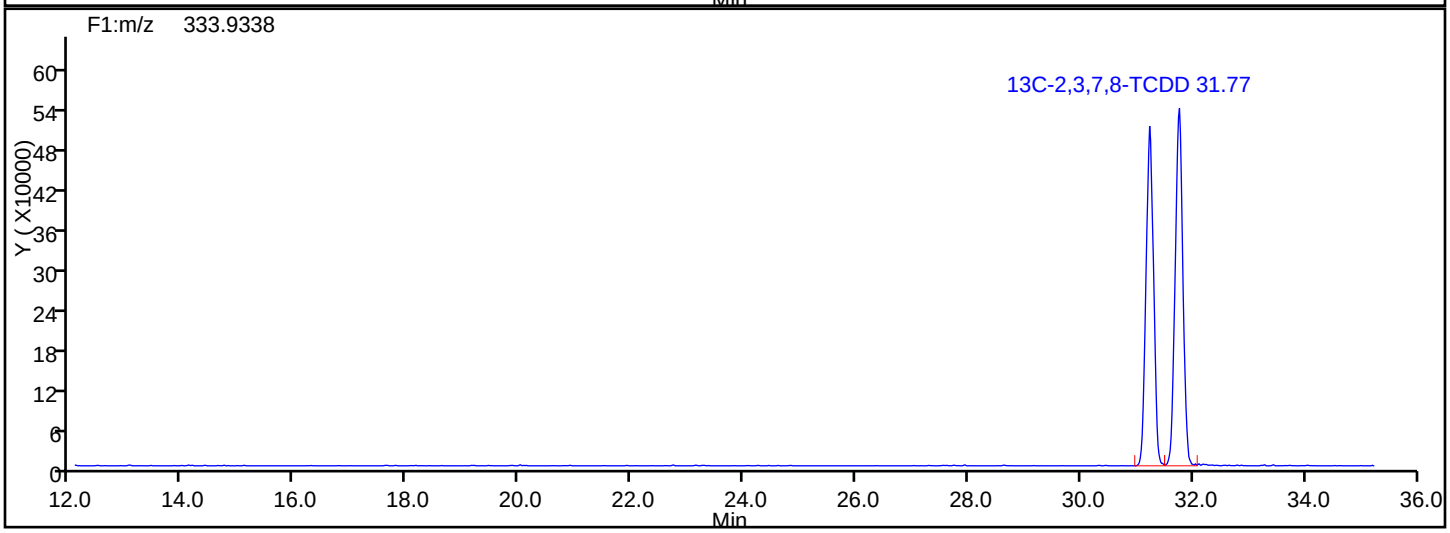
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



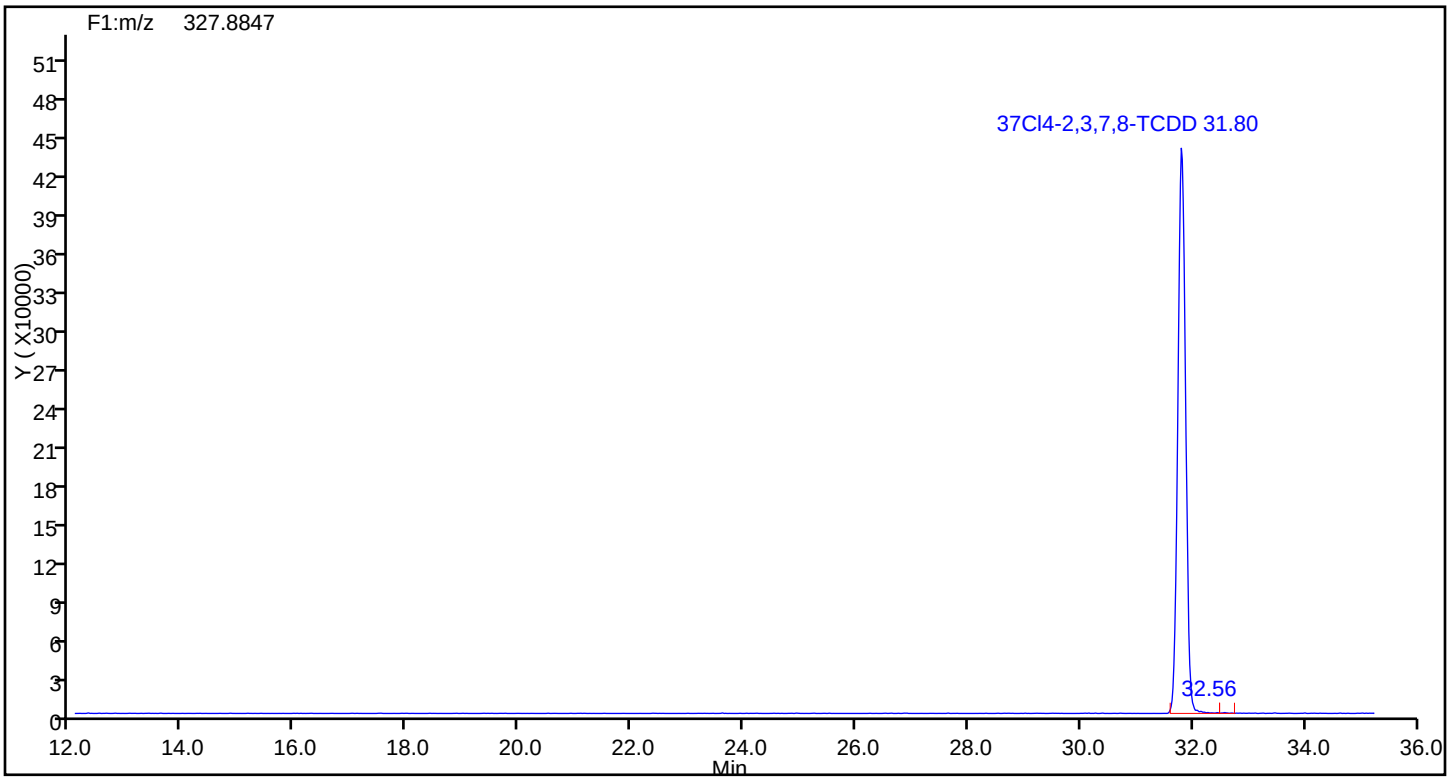
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TestAmerica Knoxville

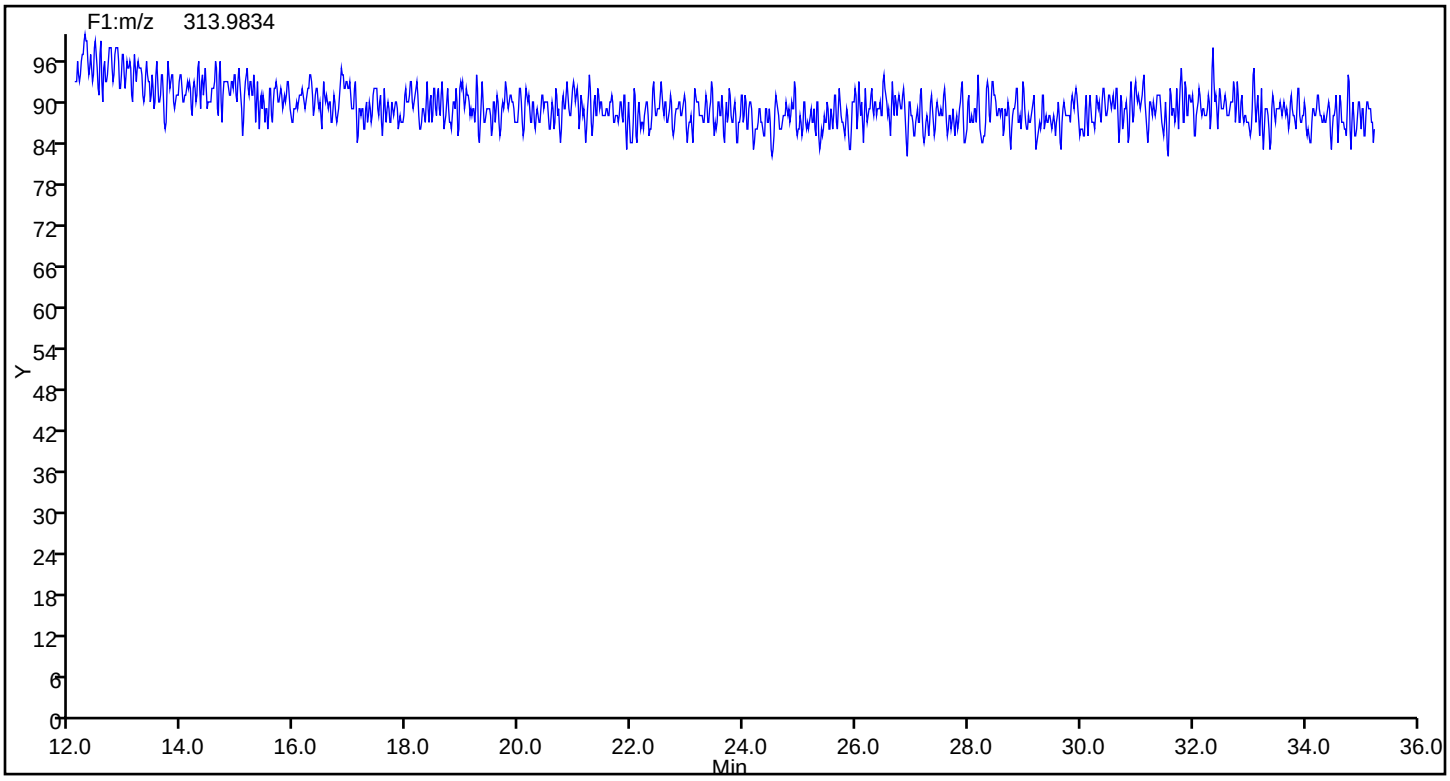
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|---|---|---|---|
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Lock Mass



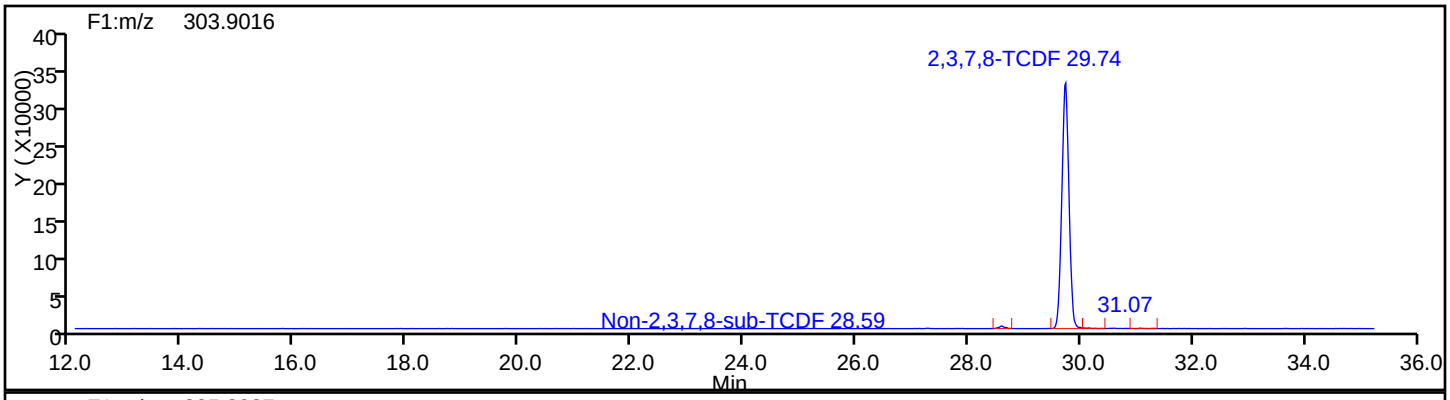
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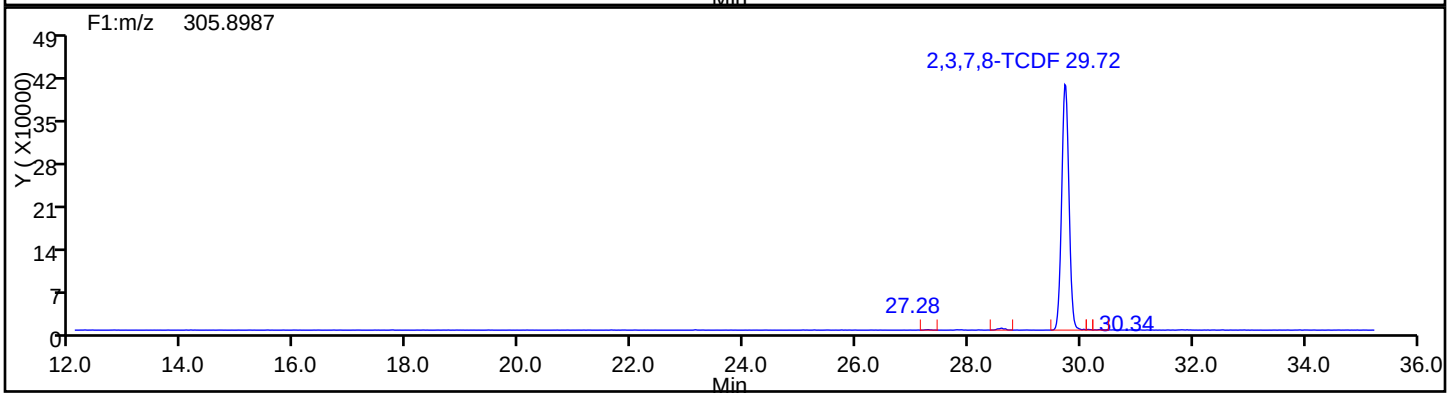
TestAmerica Knoxville

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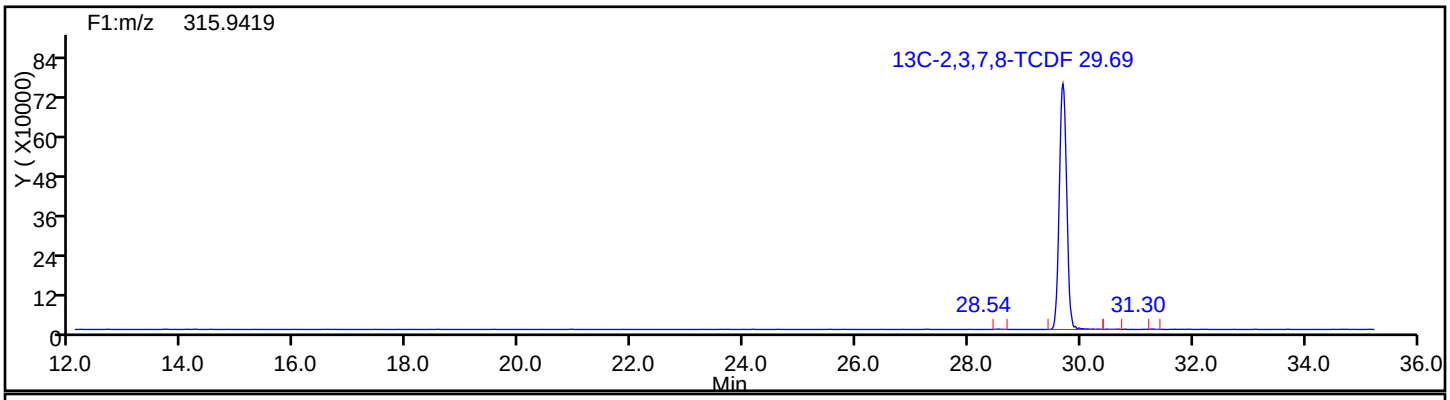
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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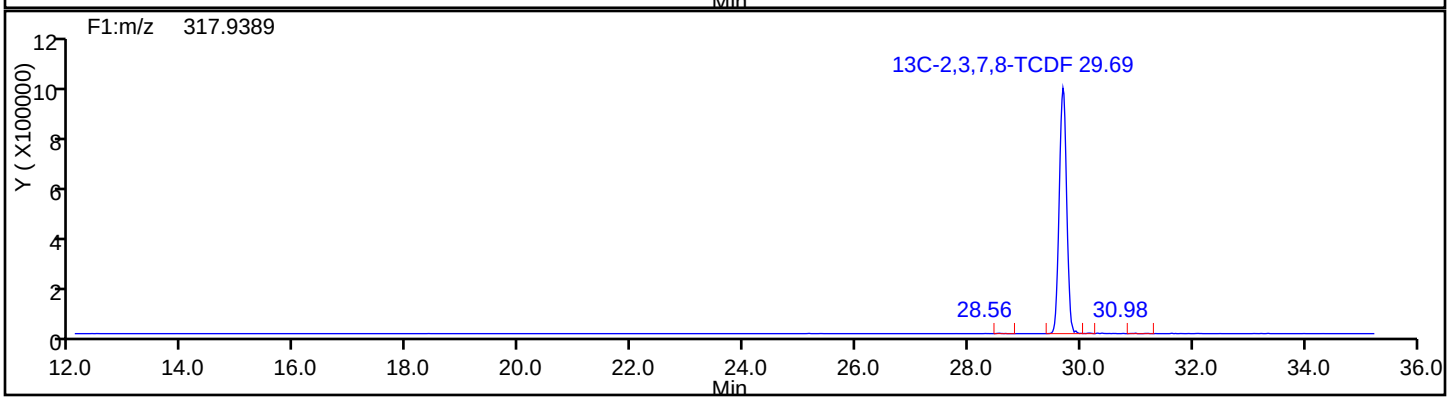
TCDF




TCDF Standards



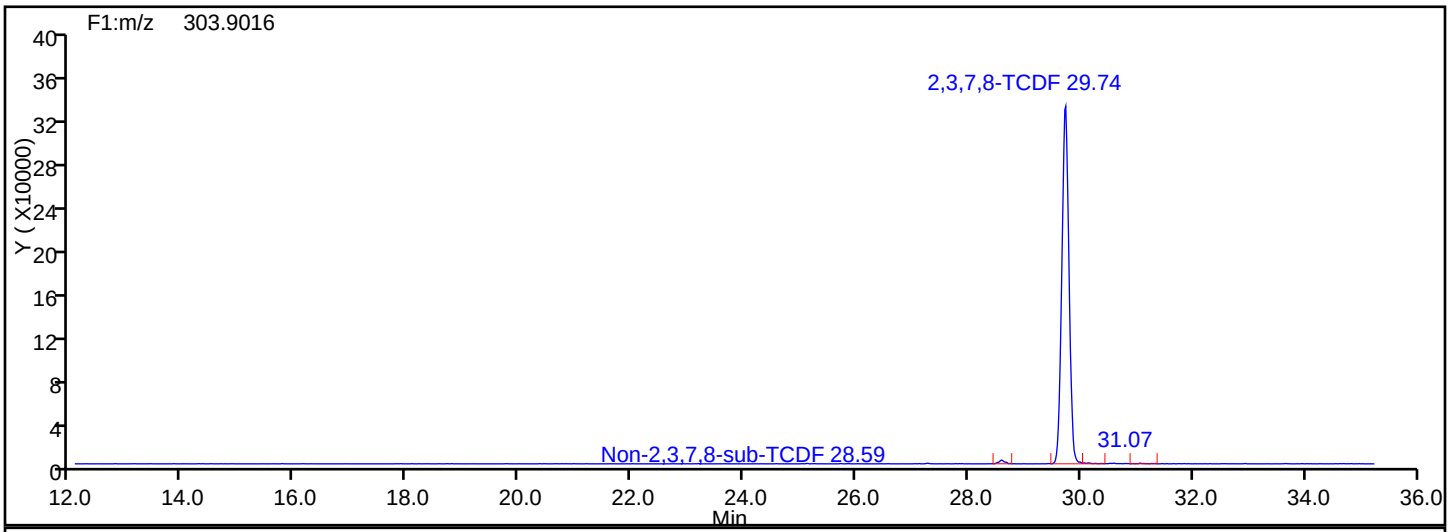
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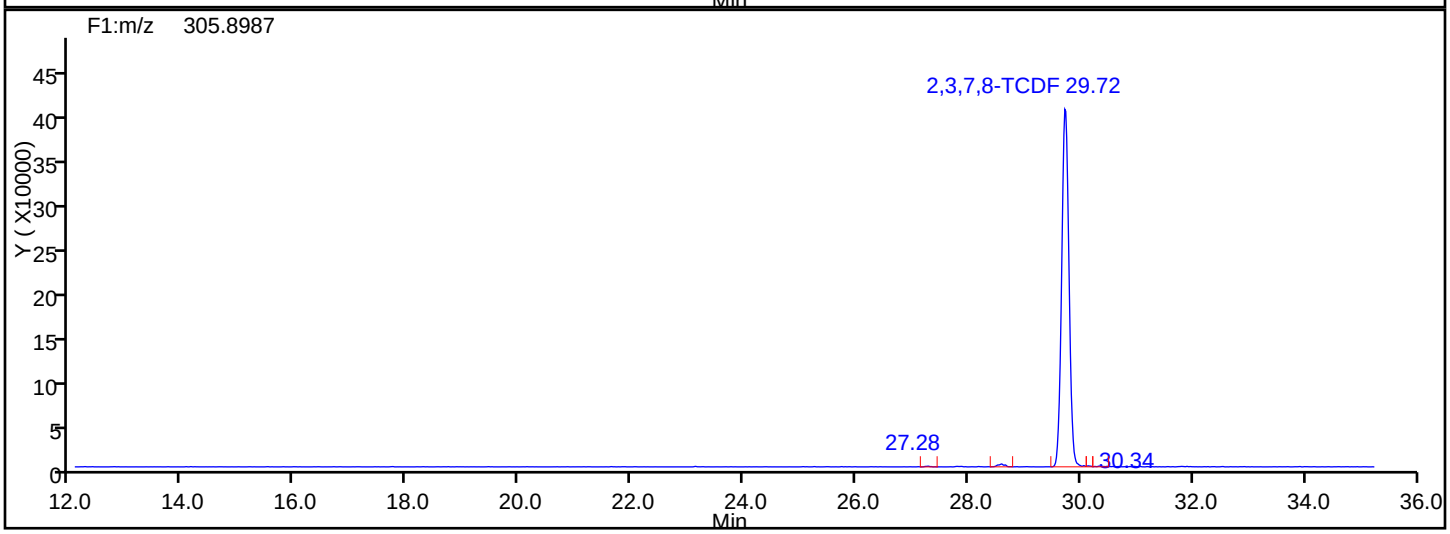
TestAmerica Knoxville

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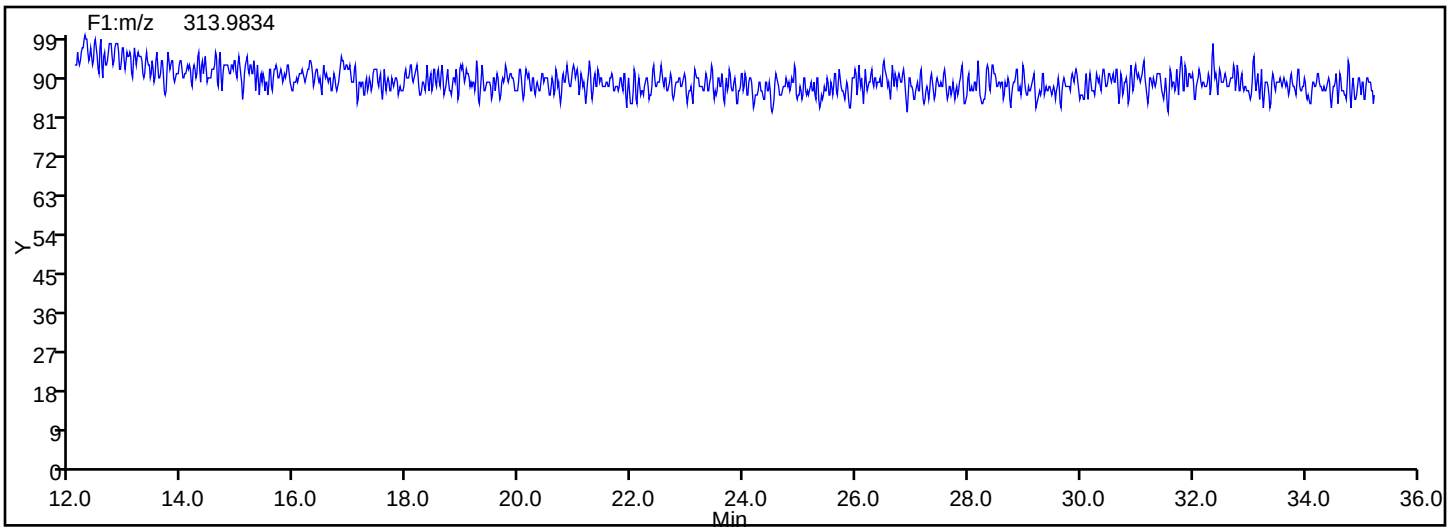
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

TCDF




TCDF Lock Mass

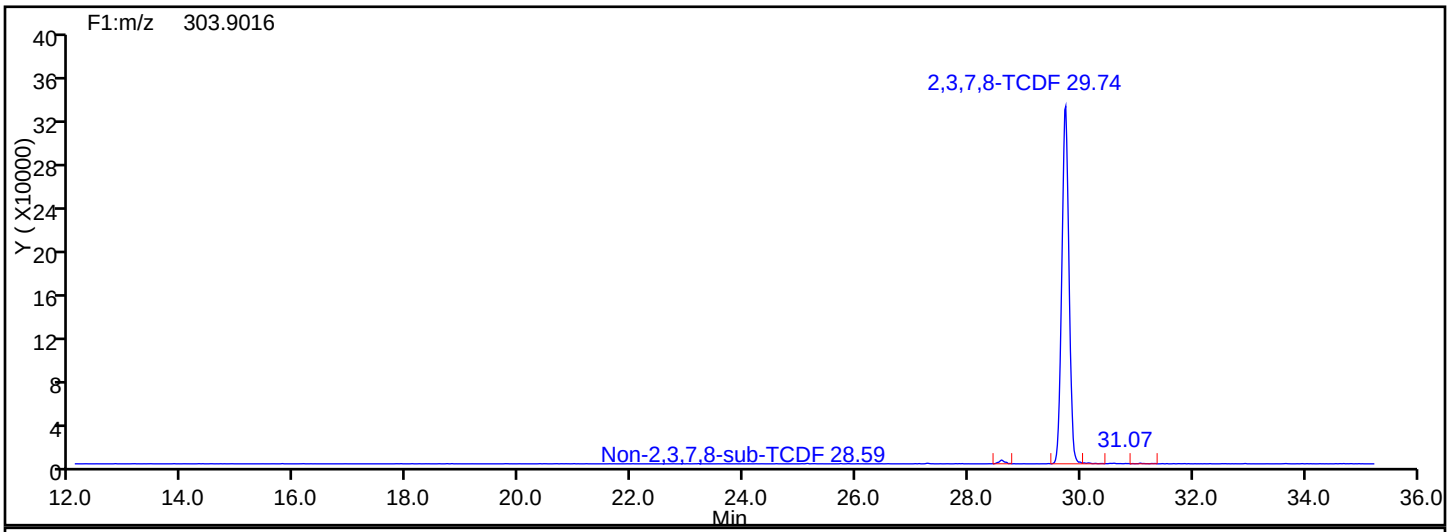


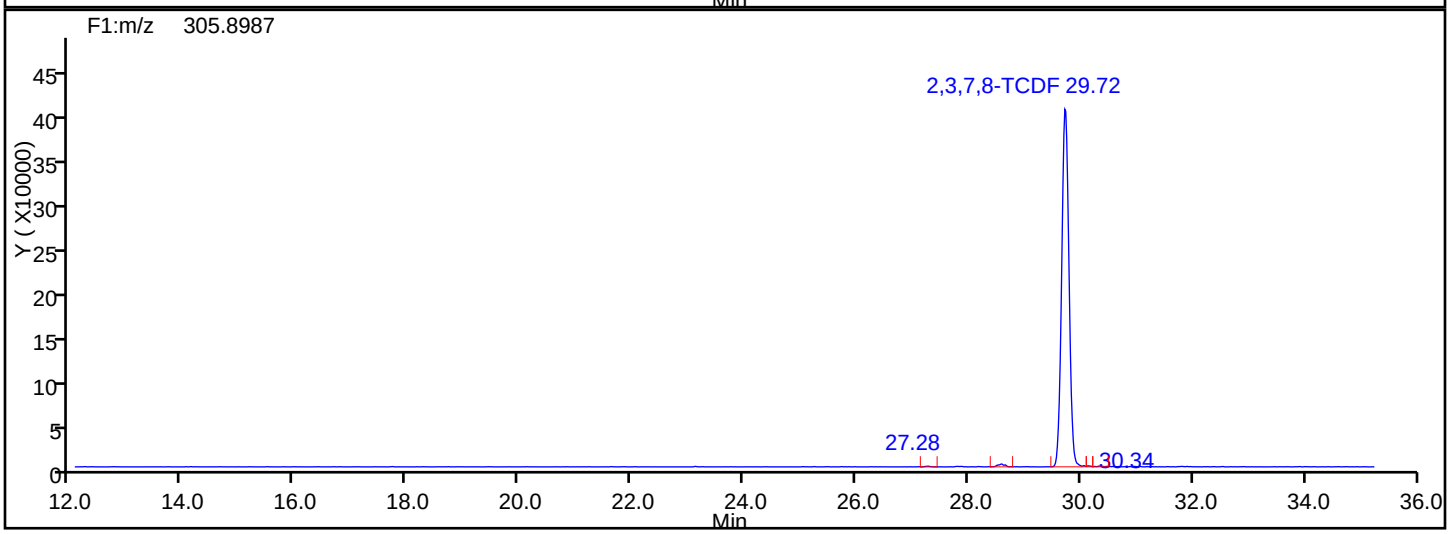
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TestAmerica Knoxville

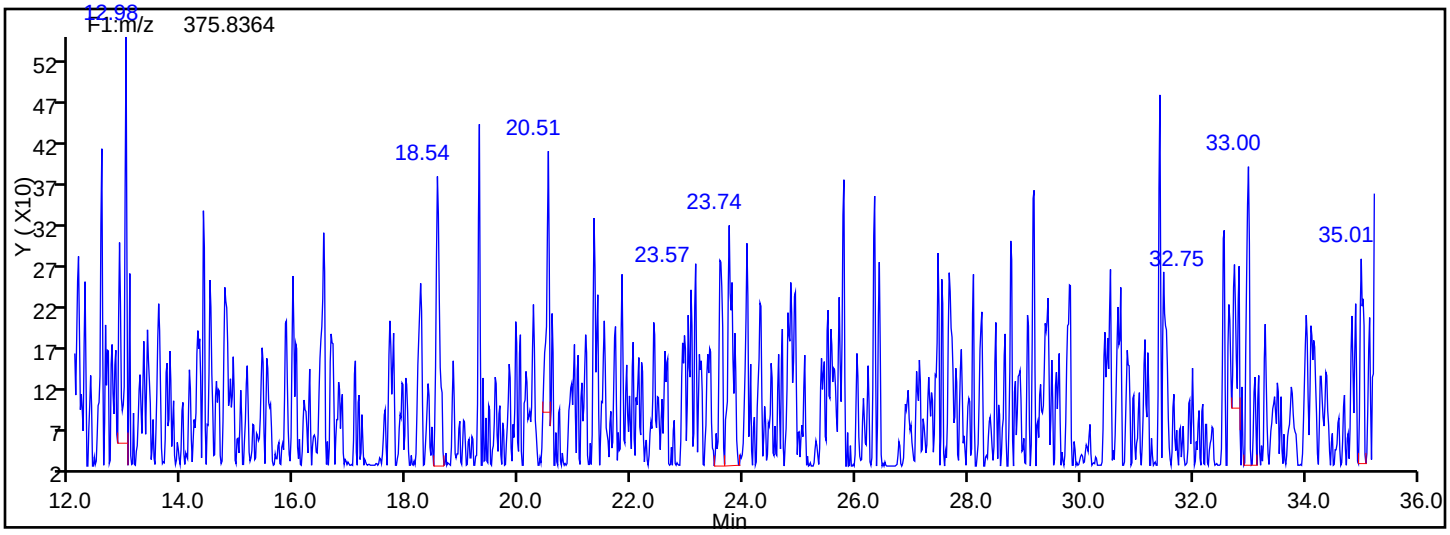
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

TCDF




TCDF Interference Mass



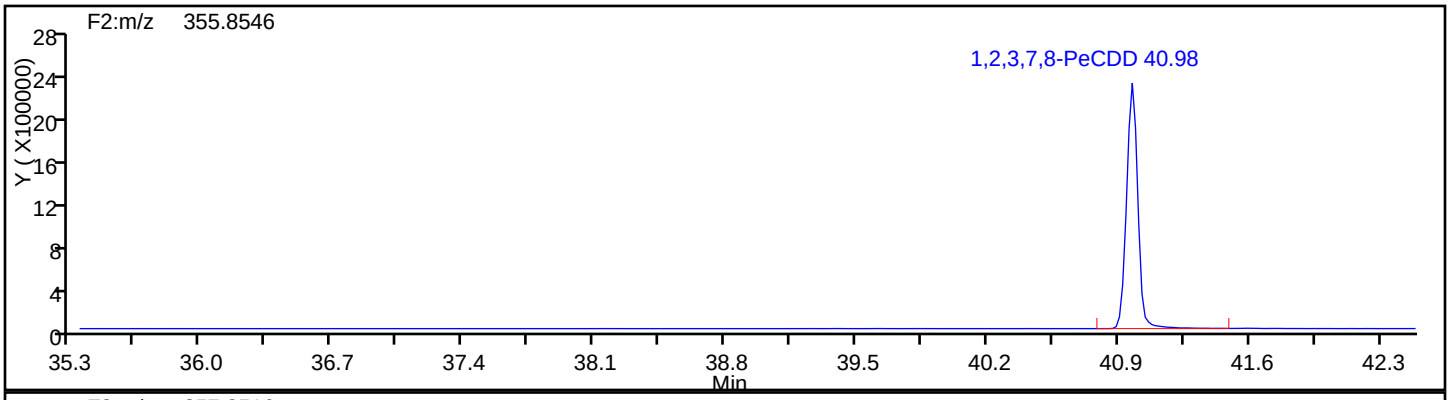
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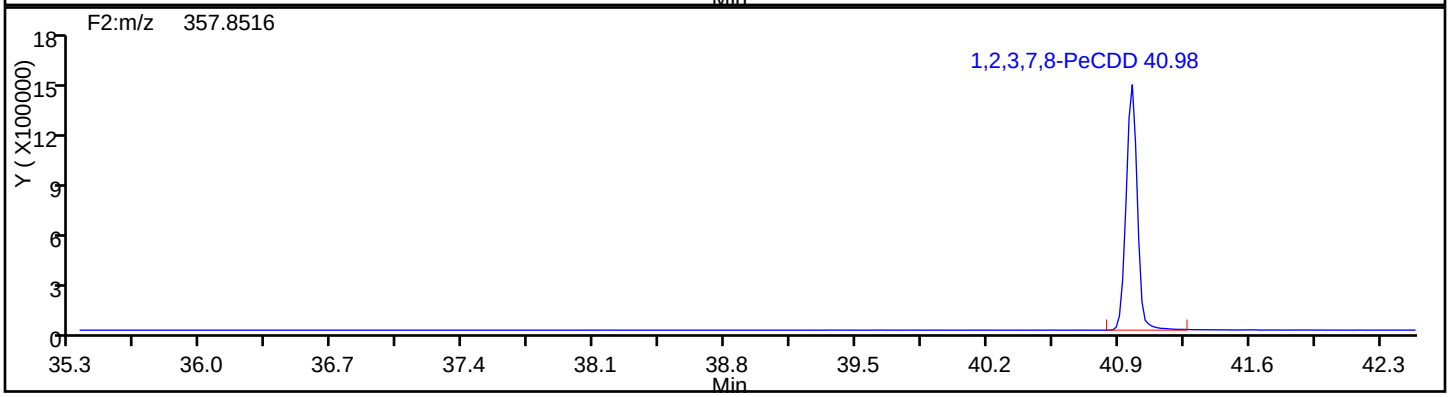
TestAmerica Knoxville

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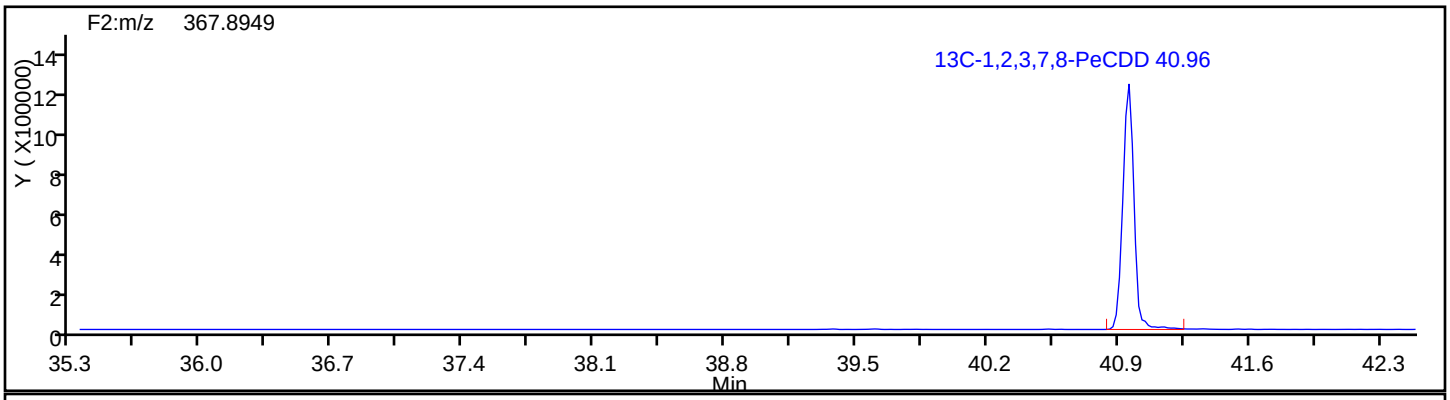
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

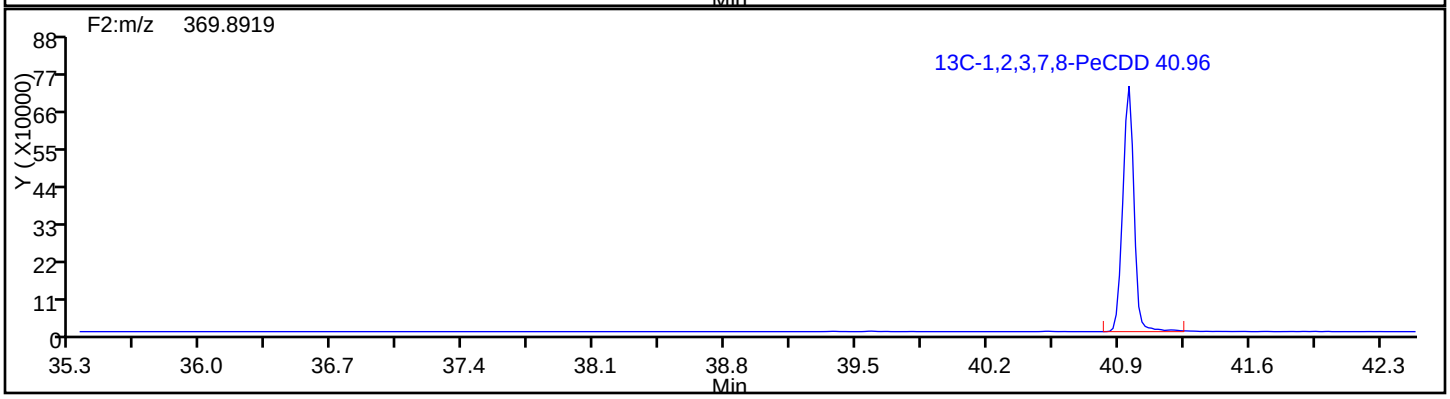
PeCDD




PeCDD Standards



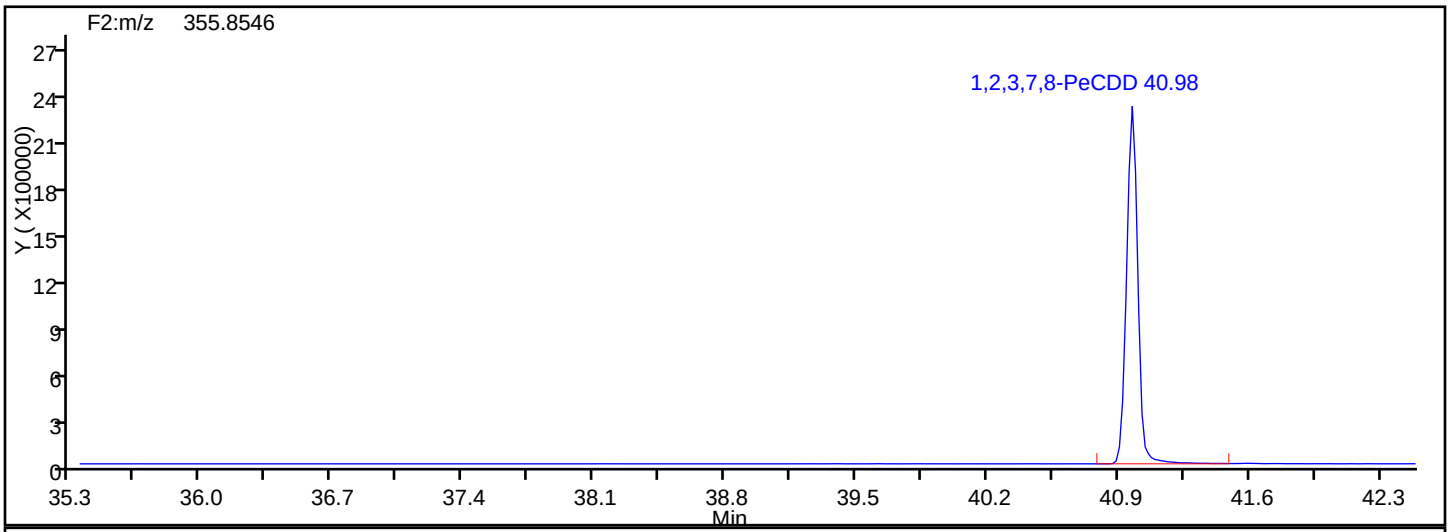
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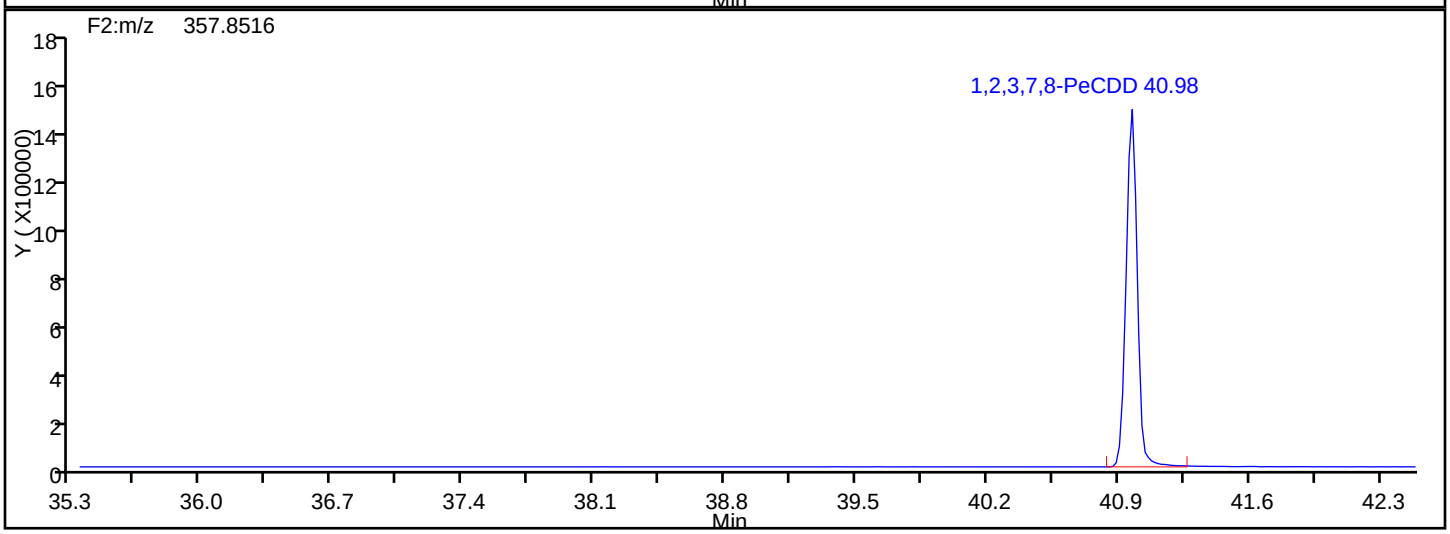
TestAmerica Knoxville

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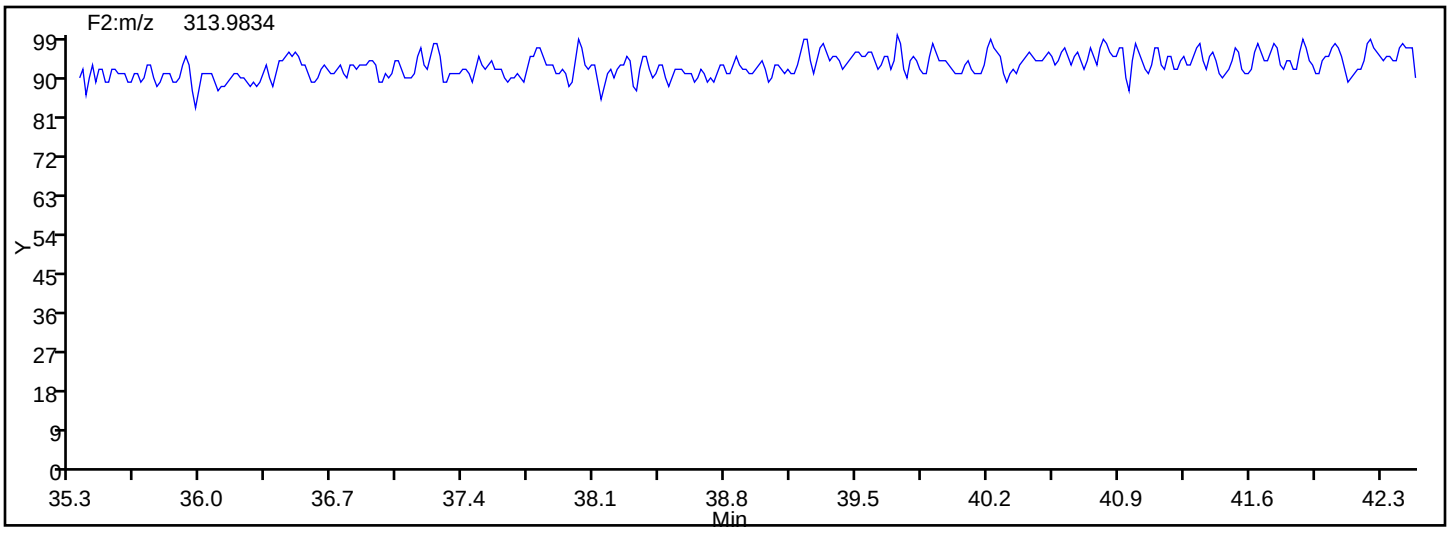
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

PeCDD




PeCDD Lock Mass



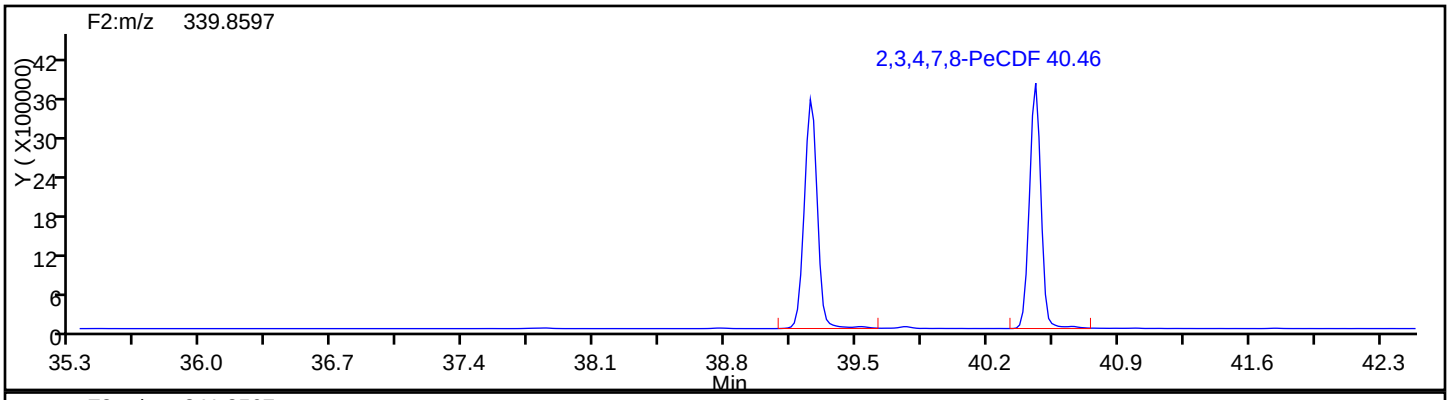
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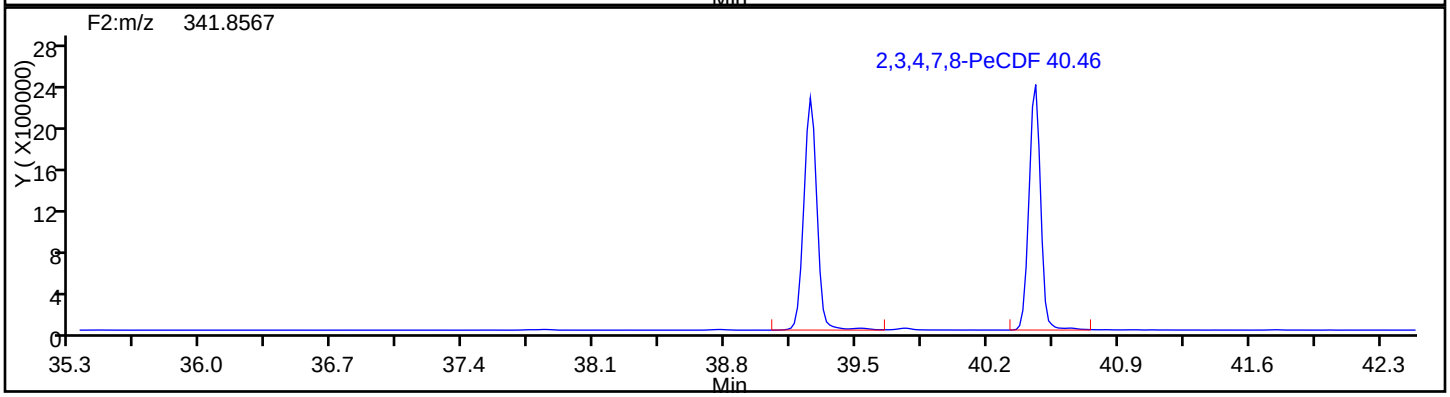
TestAmerica Knoxville

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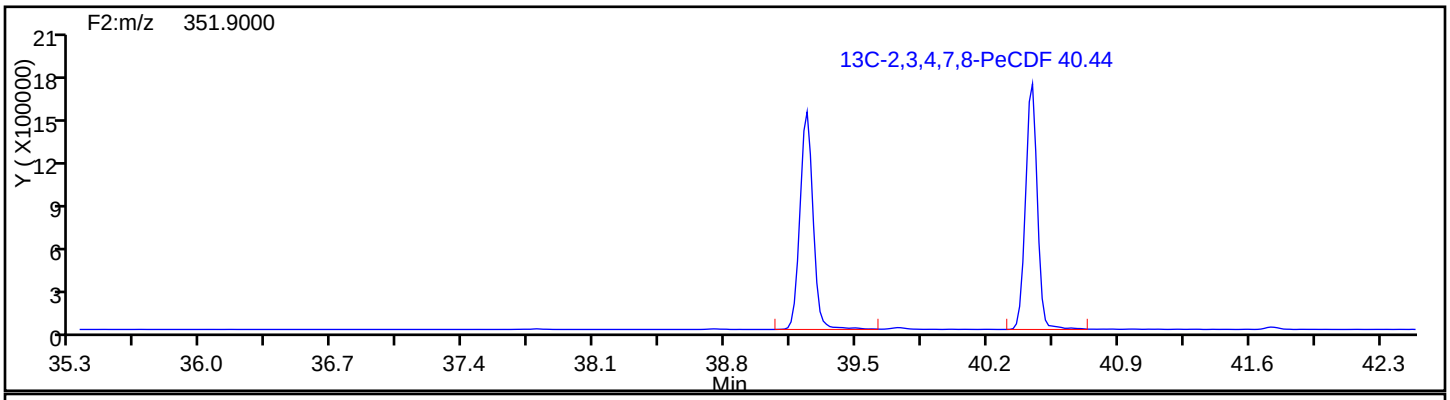
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
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| Column Type: | | Column Dia: | |

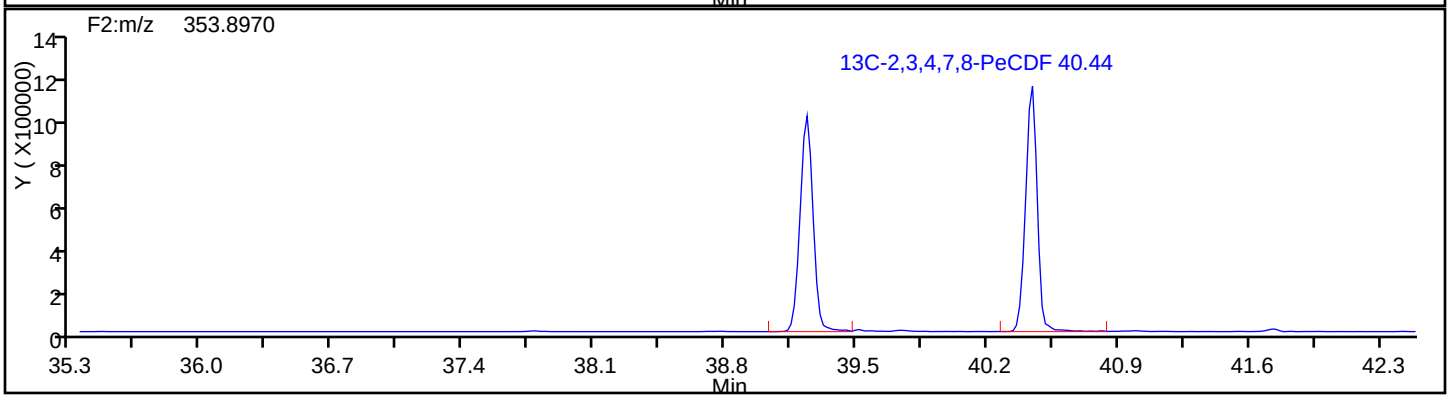
PeCDF




PeCDF Standards



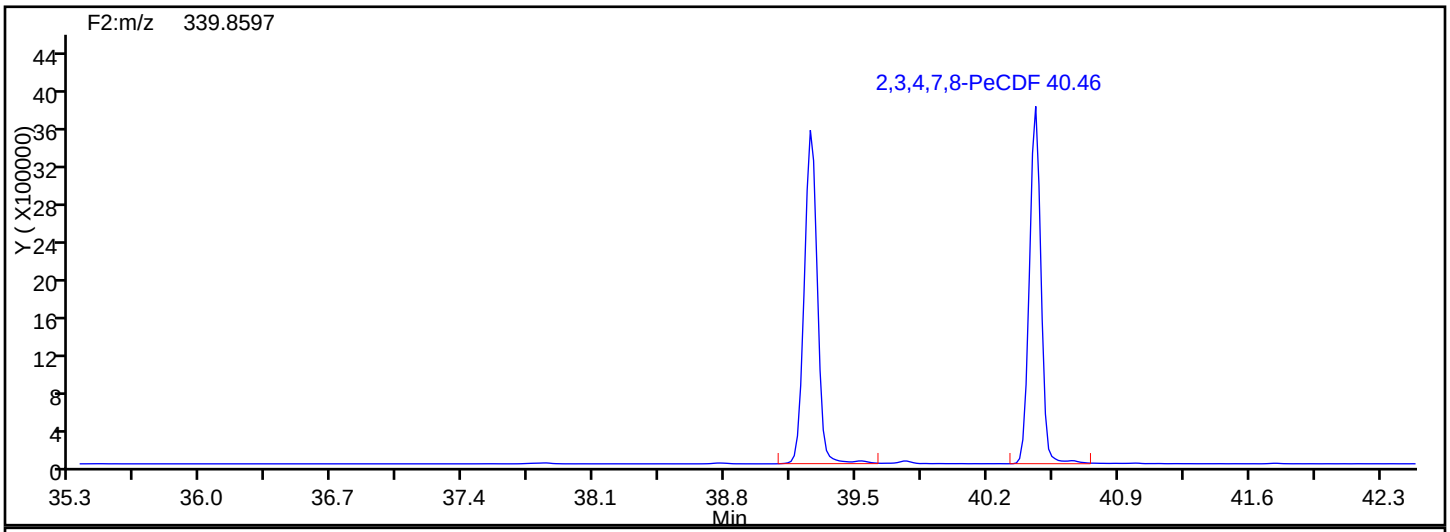
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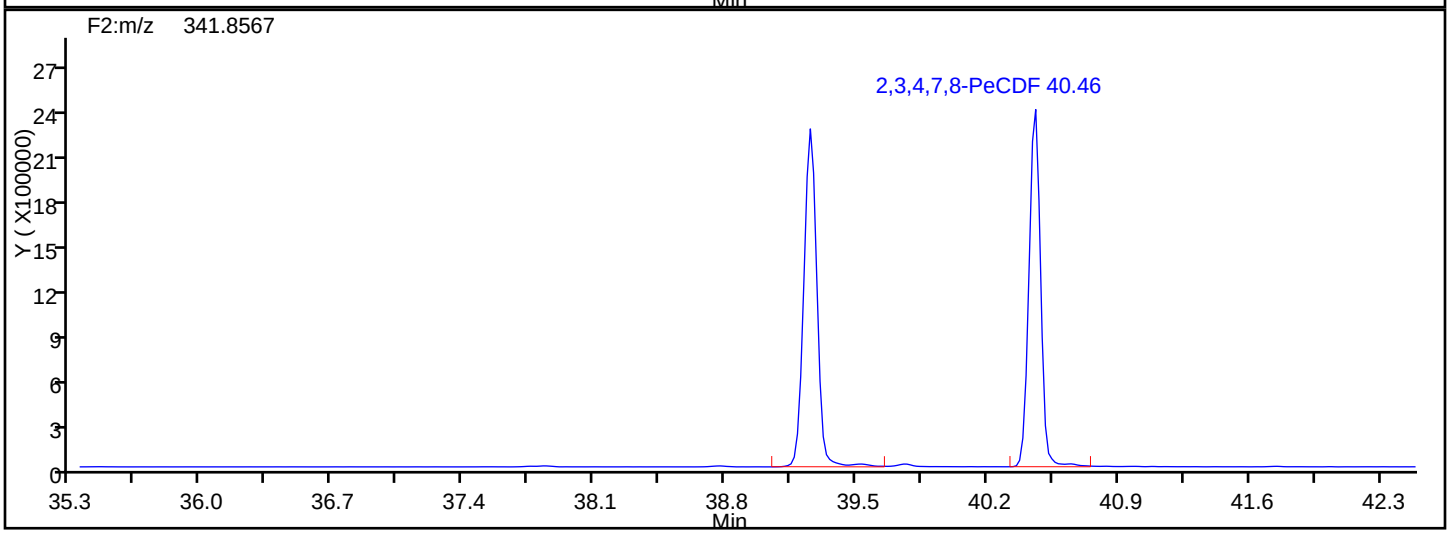
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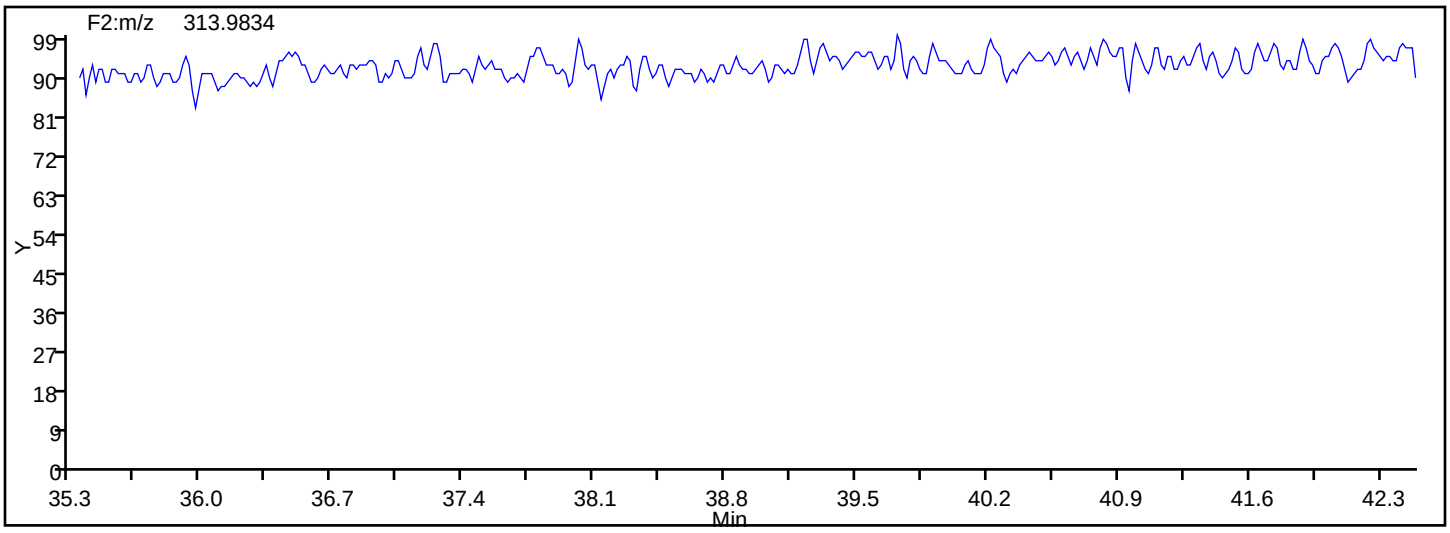
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

PeCDF




PeCDF Lock Mass



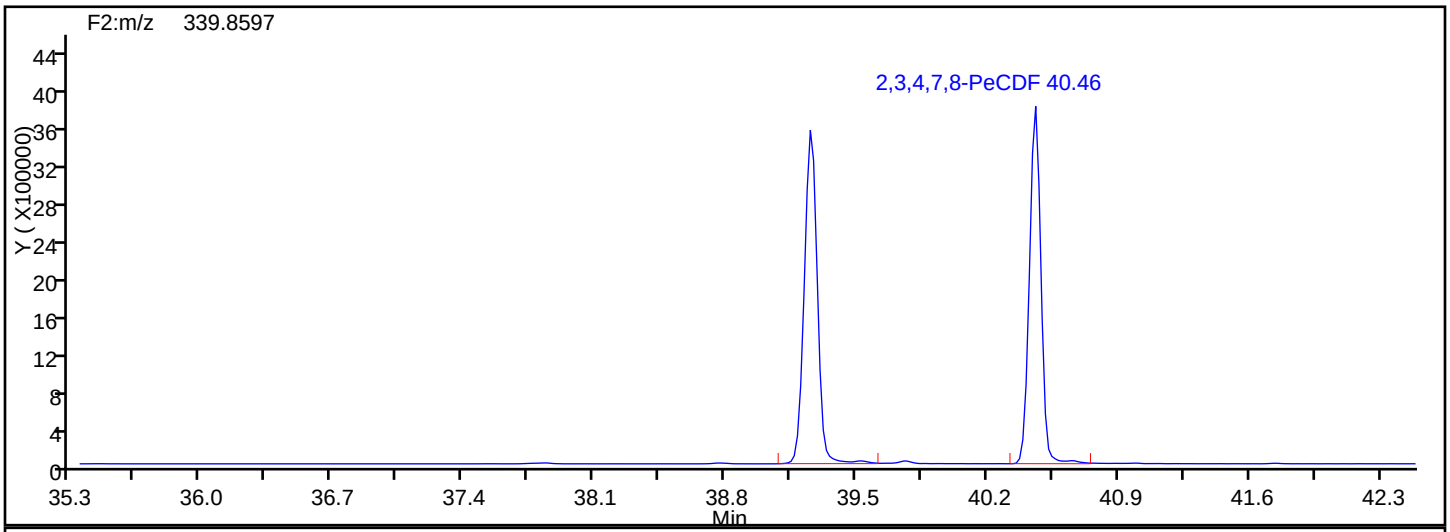
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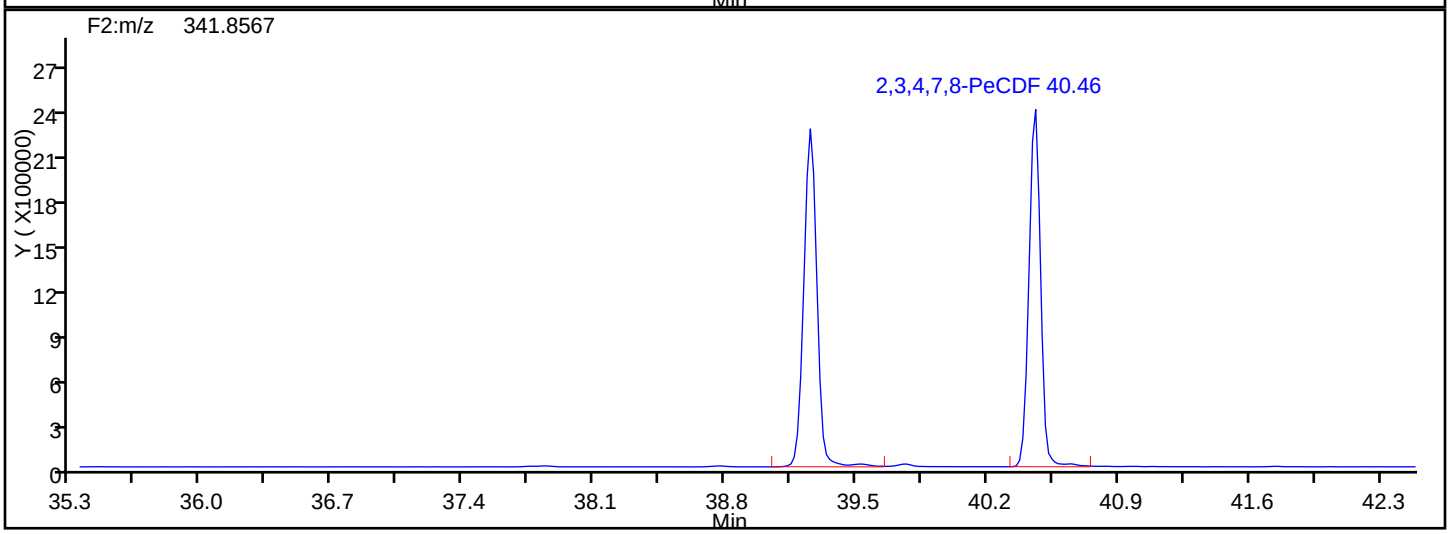
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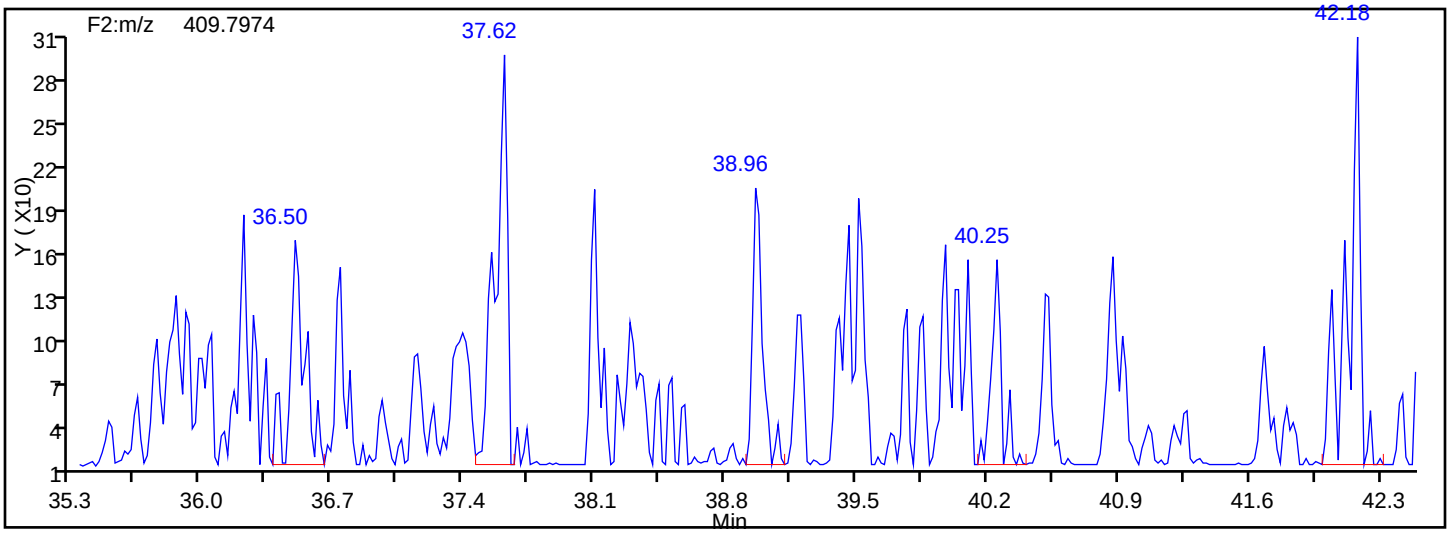
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

PeCDF




PeCDF Interference Mass



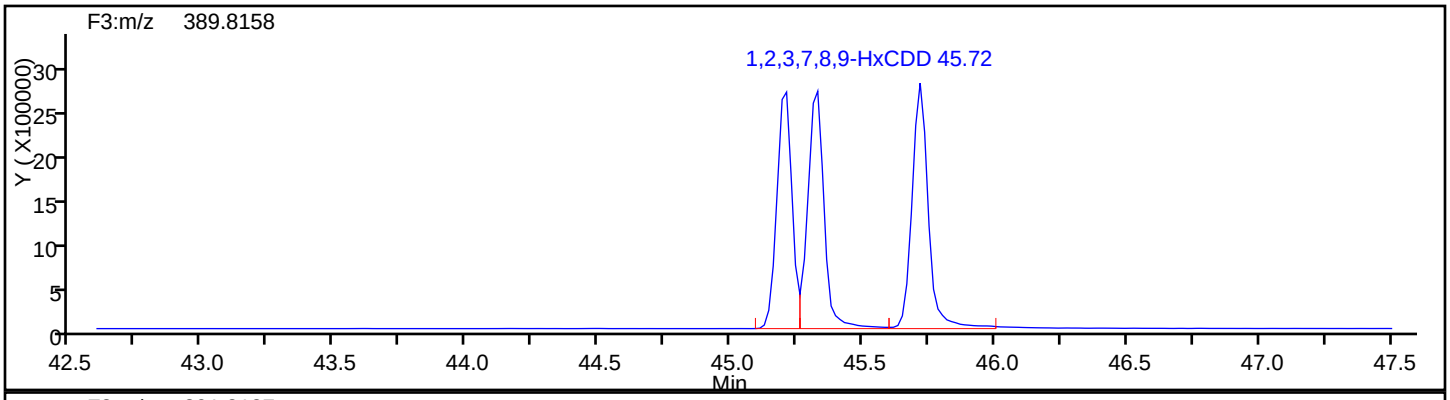
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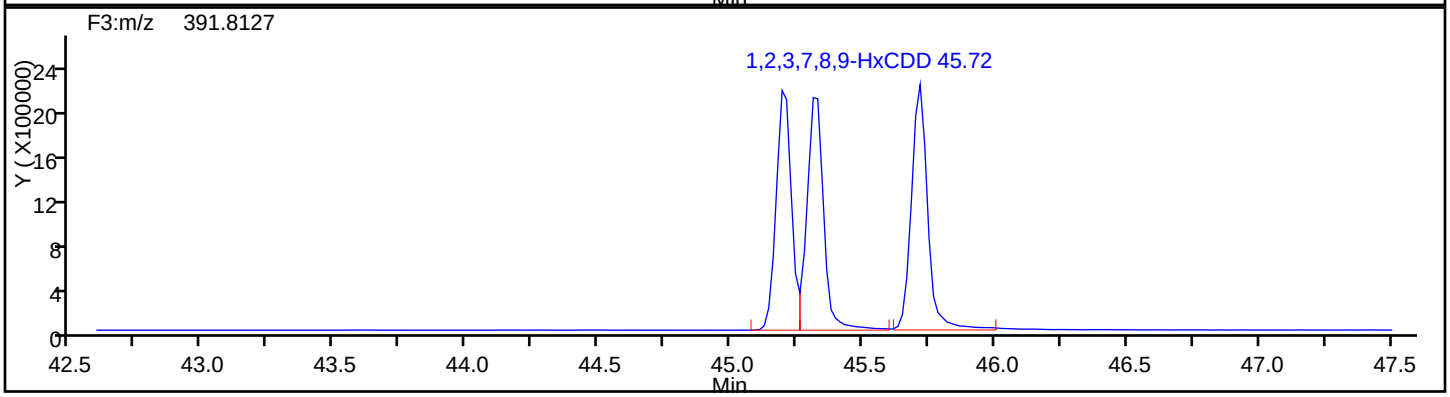
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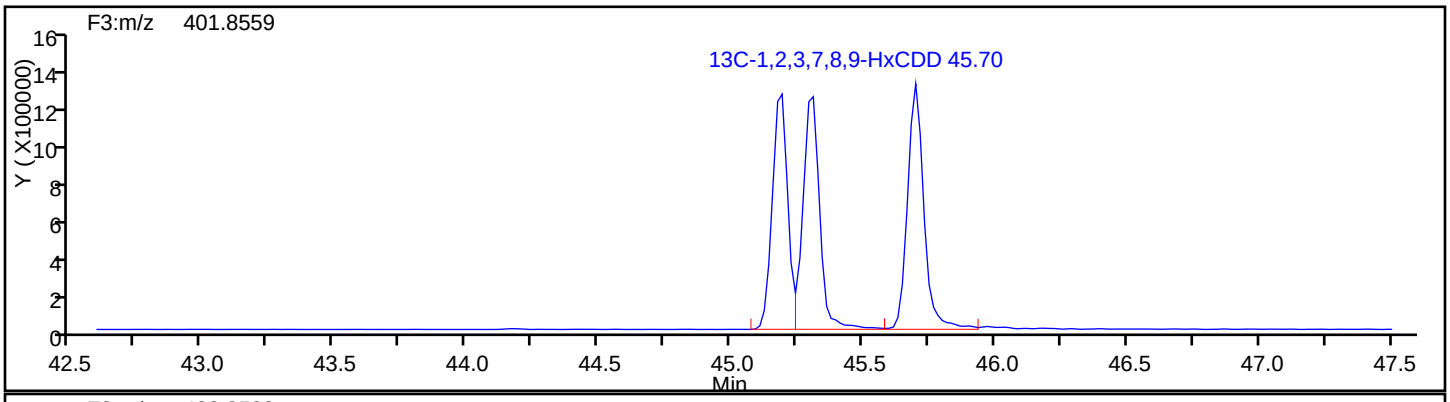
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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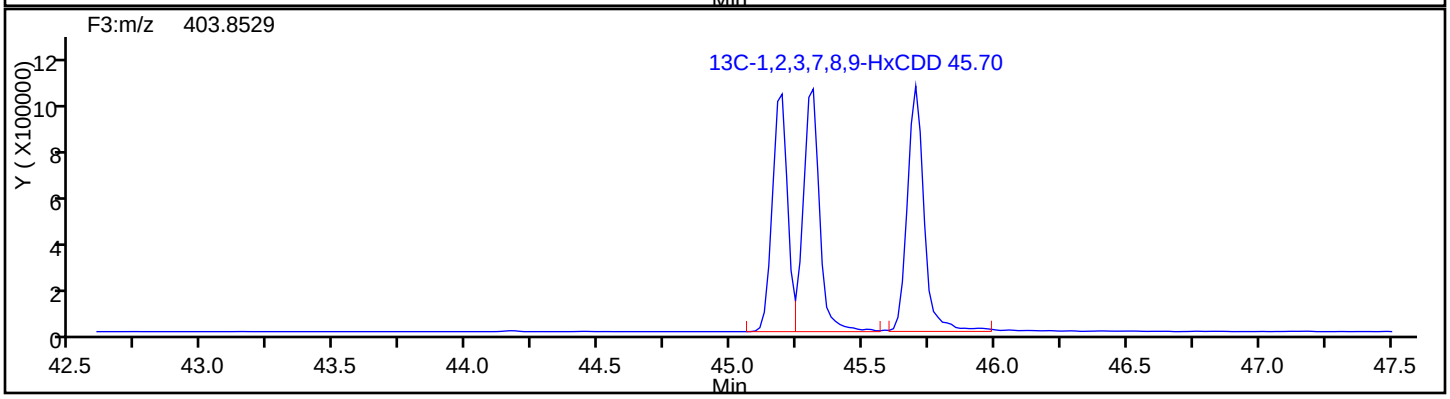
HxCDD




HxCDD Standards



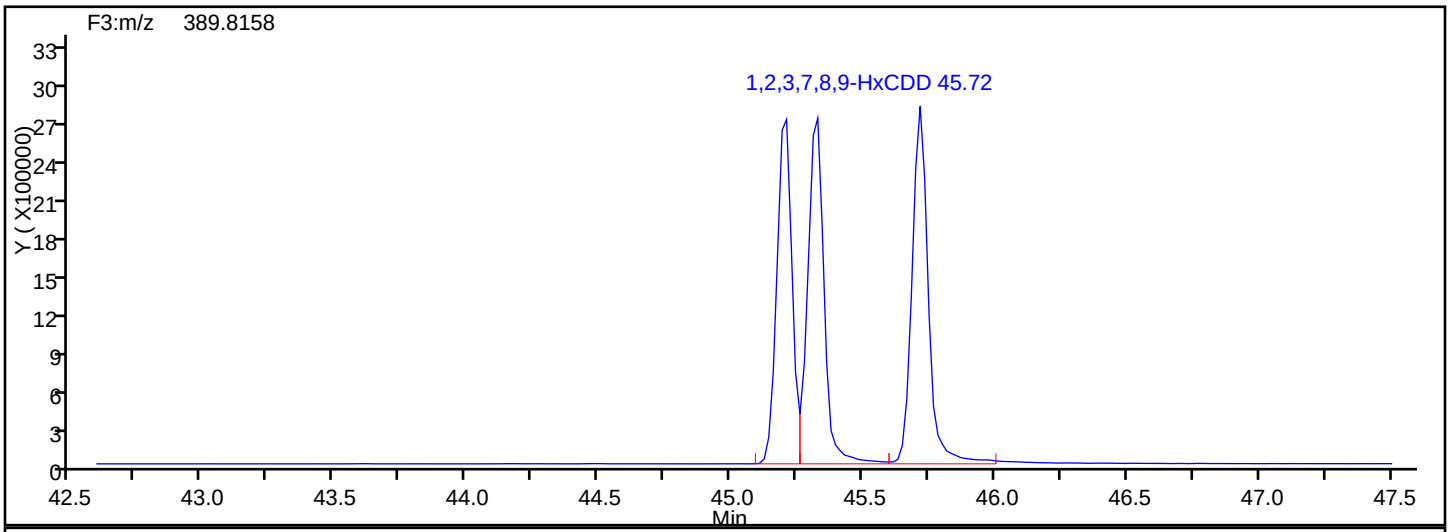
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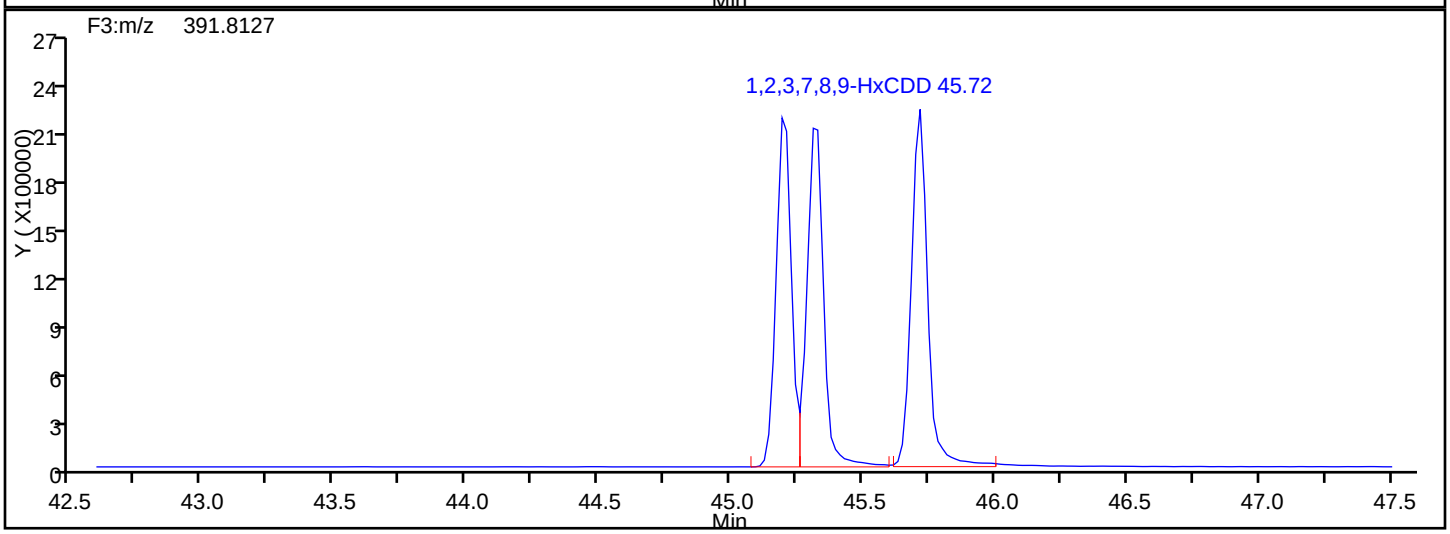
TestAmerica Knoxville

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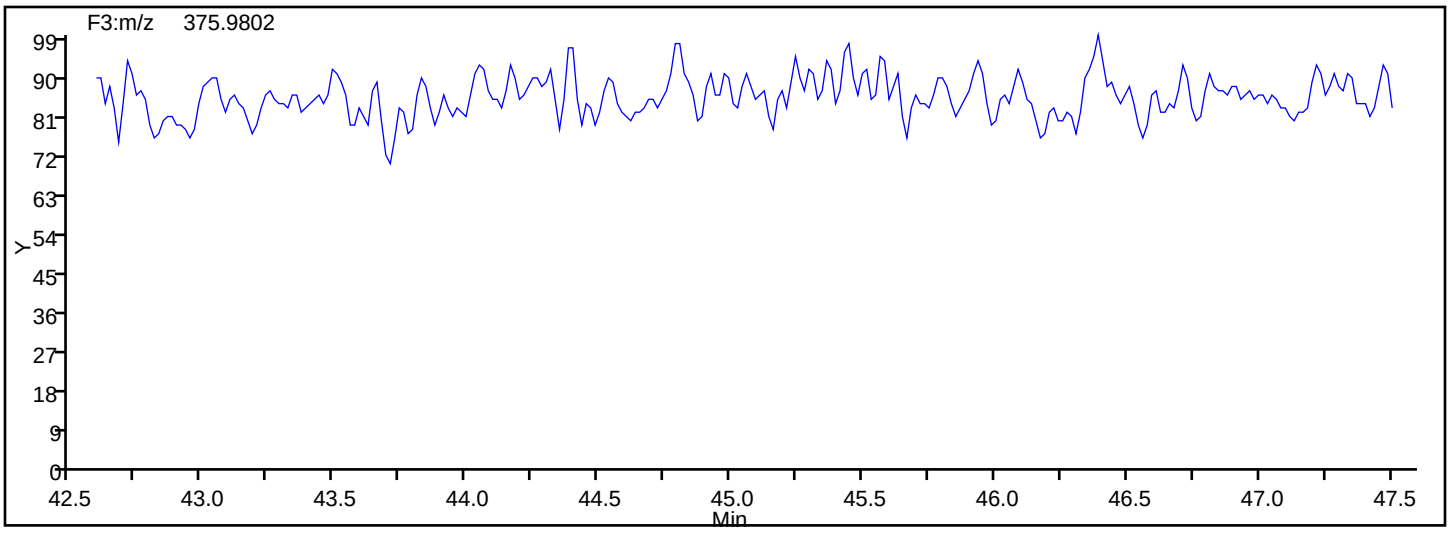
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

HxCDD




HxCDD Lock Mass



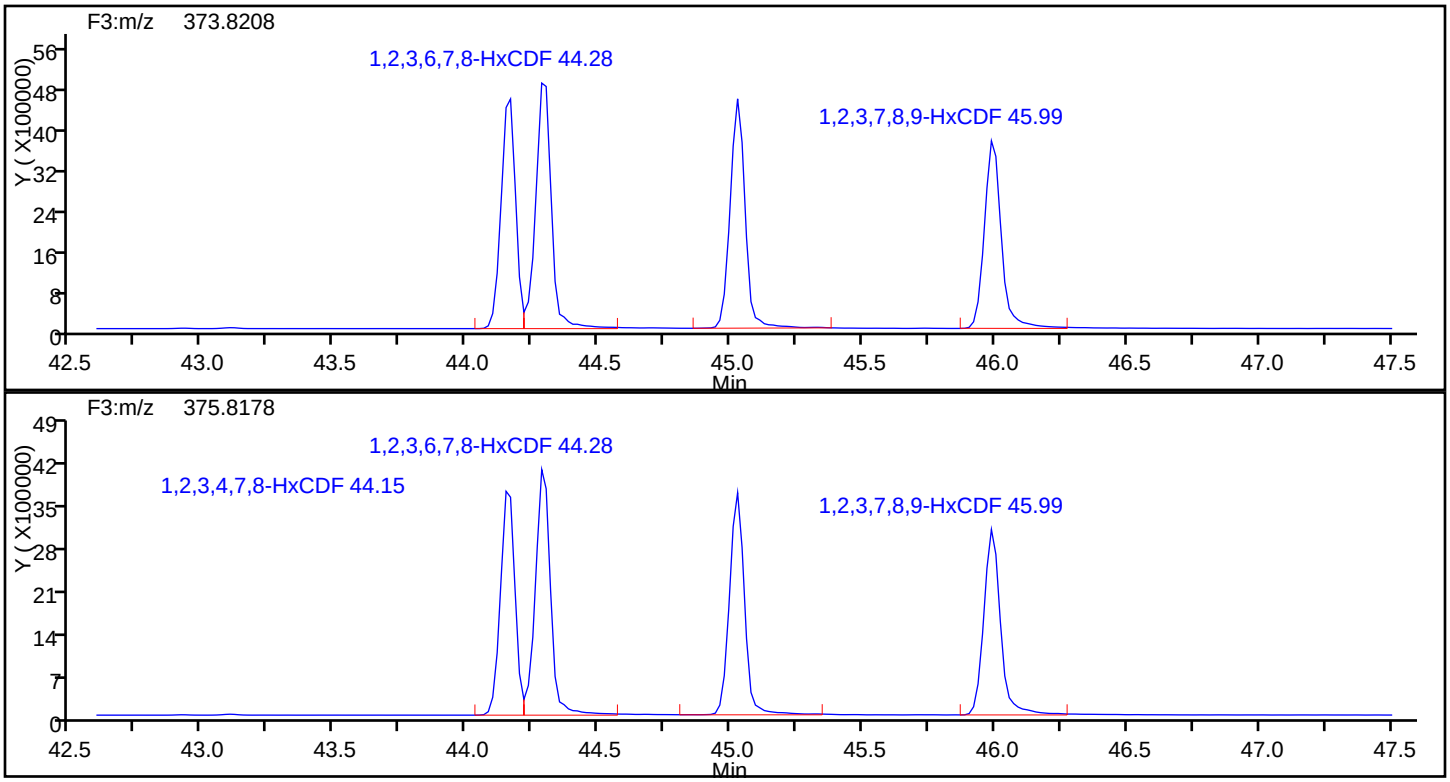
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TestAmerica Knoxville

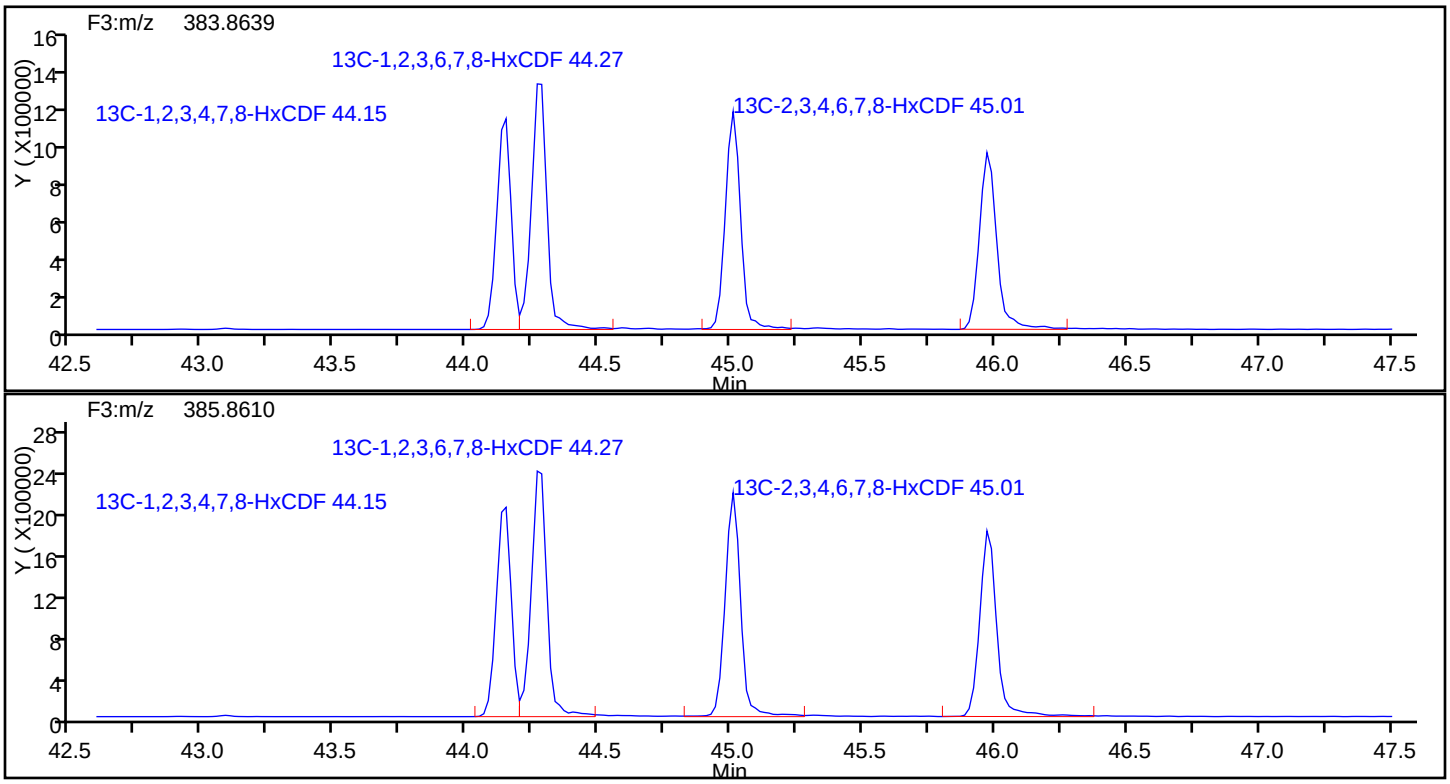
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

HxCDF




HxCDF Standards



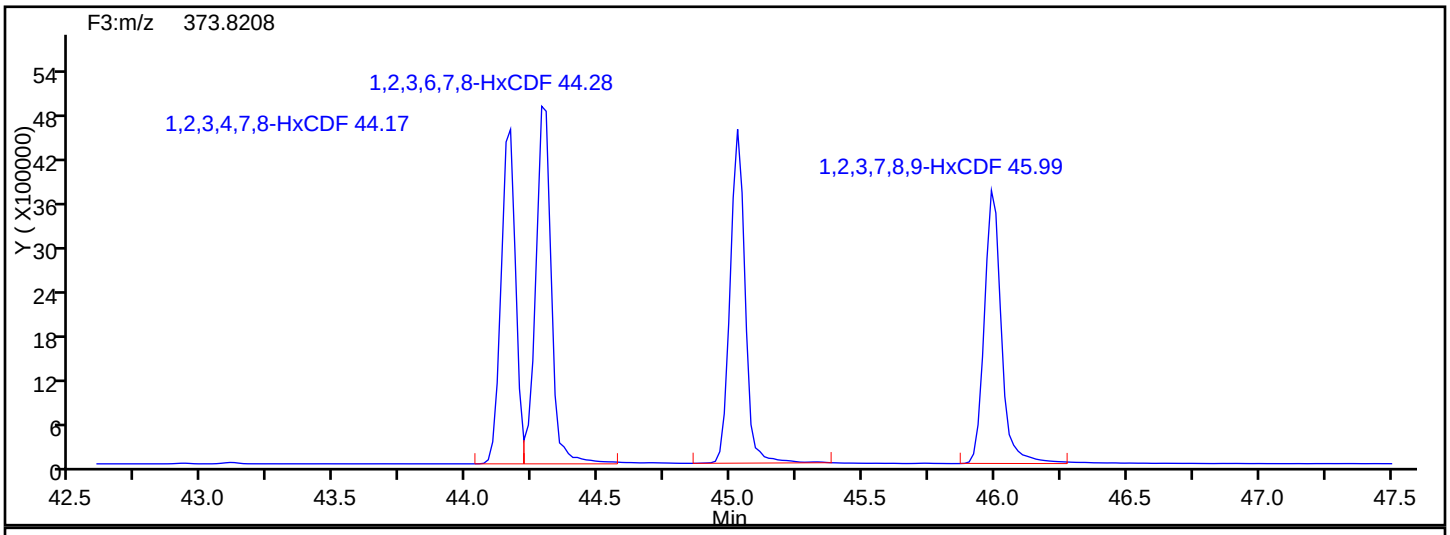
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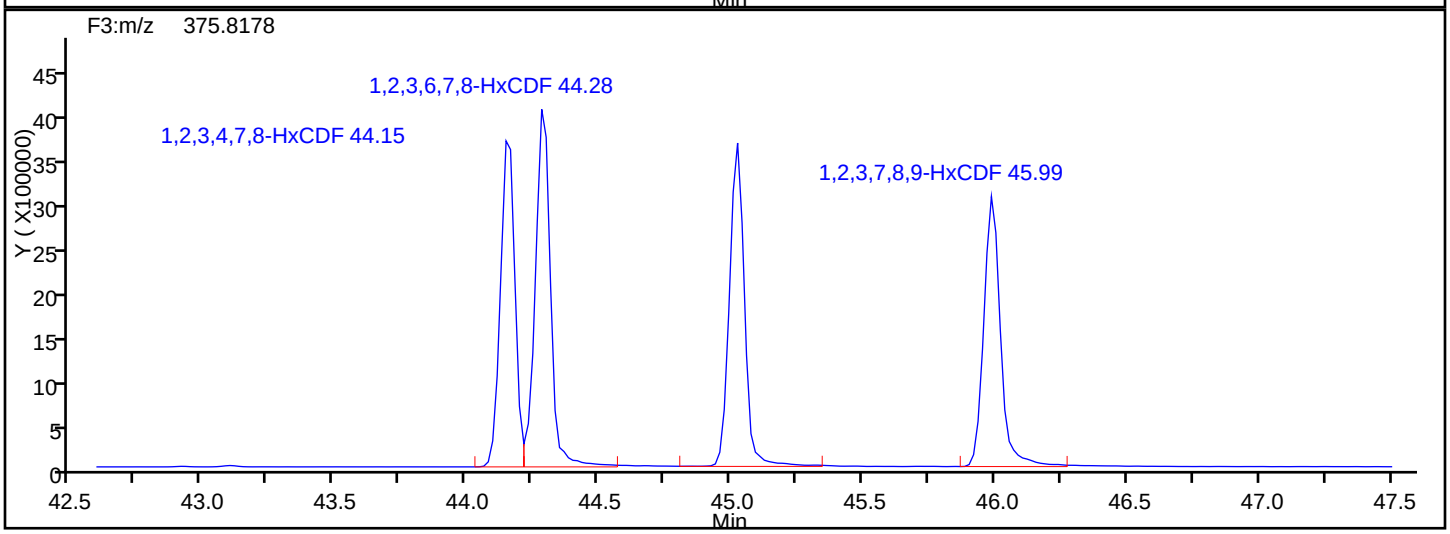
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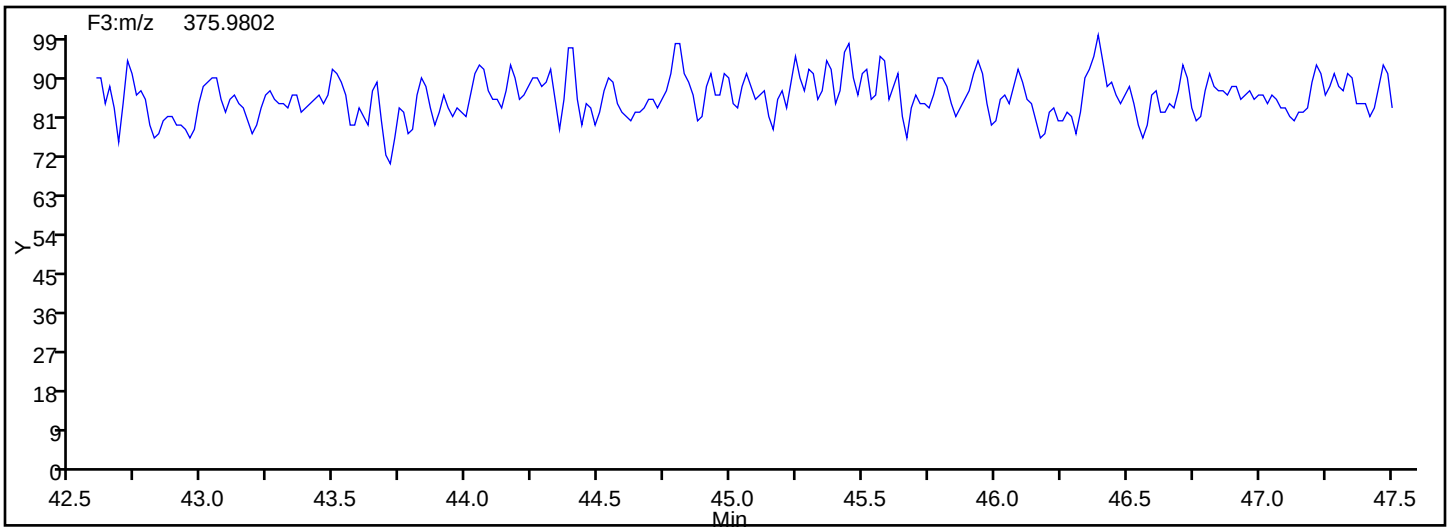
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

HxCDF




HxCDF Lock Mass



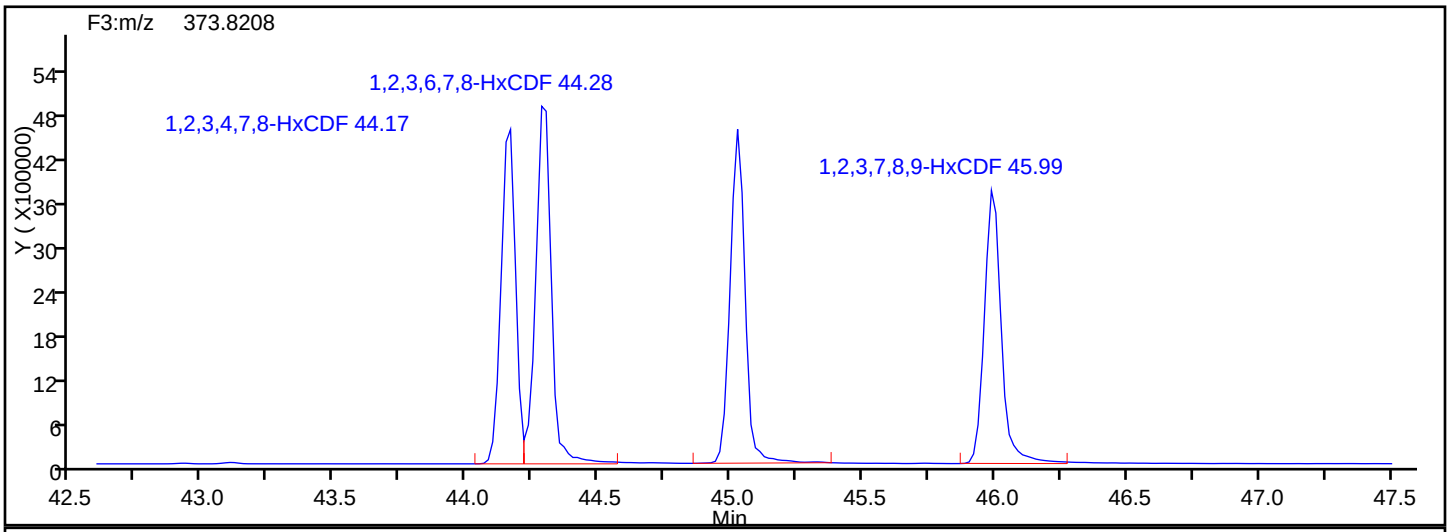
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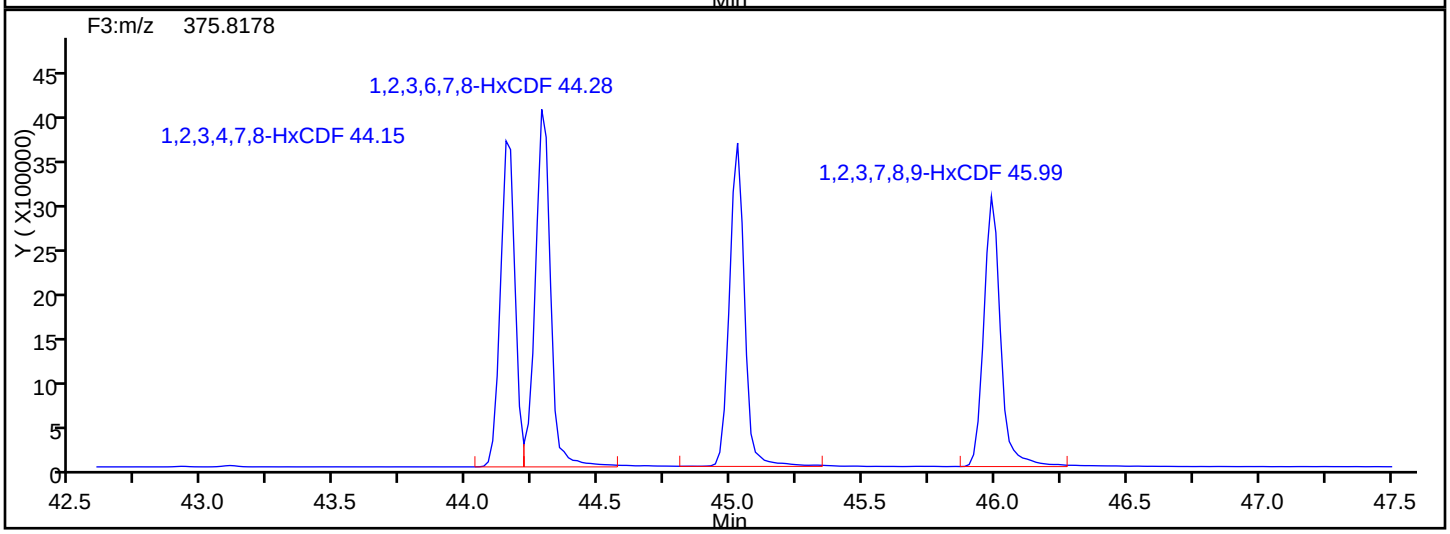
TestAmerica Knoxville

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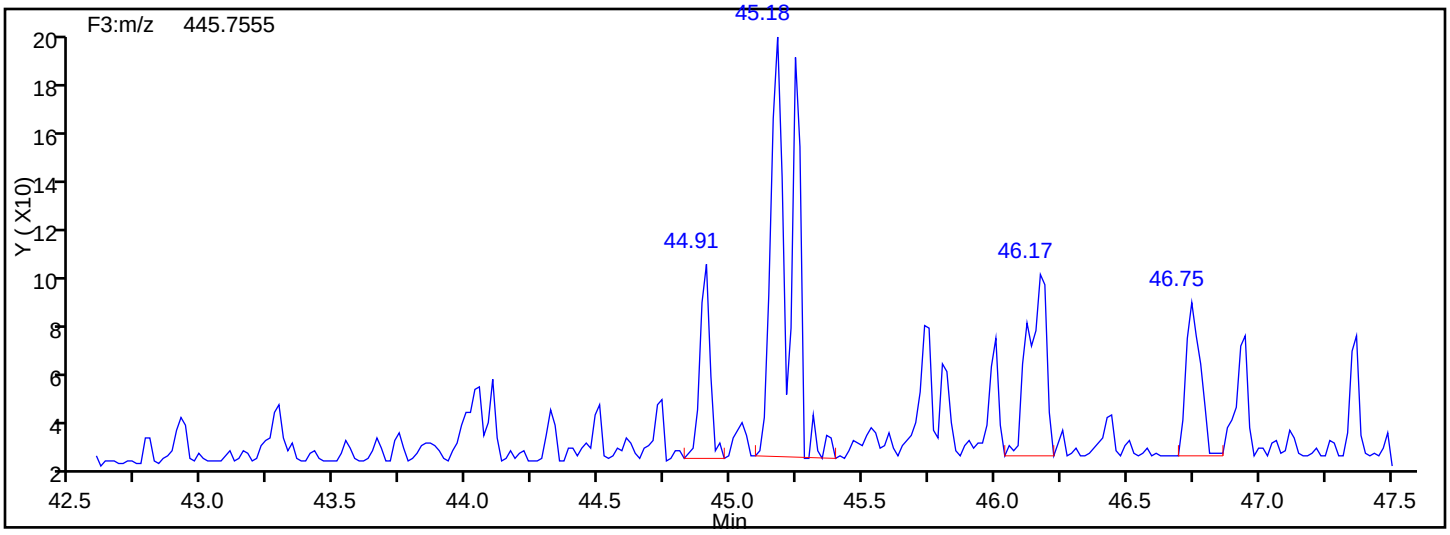
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HxCDF




HxCDF Interference Mass



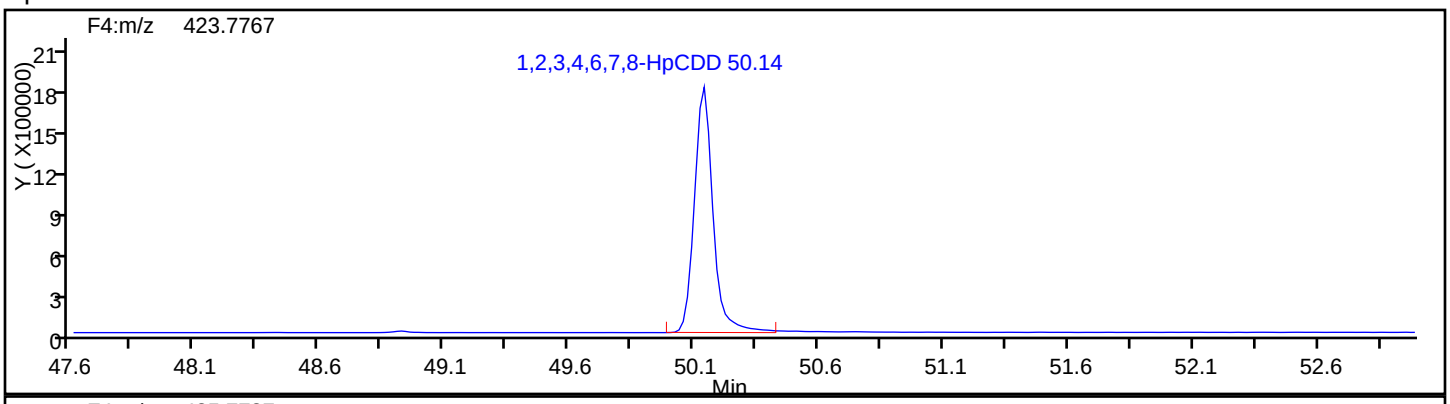
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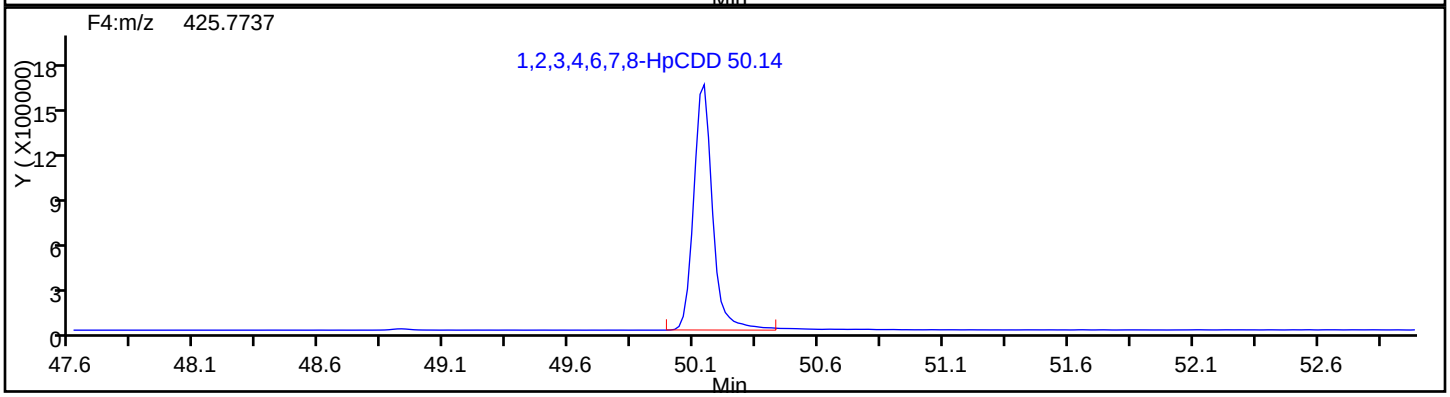
TestAmerica Knoxville

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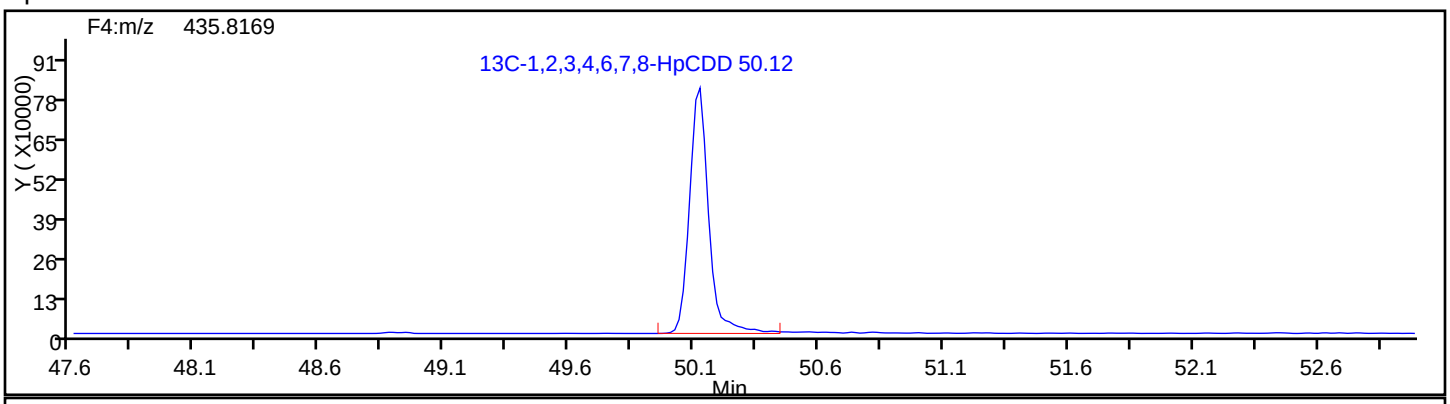
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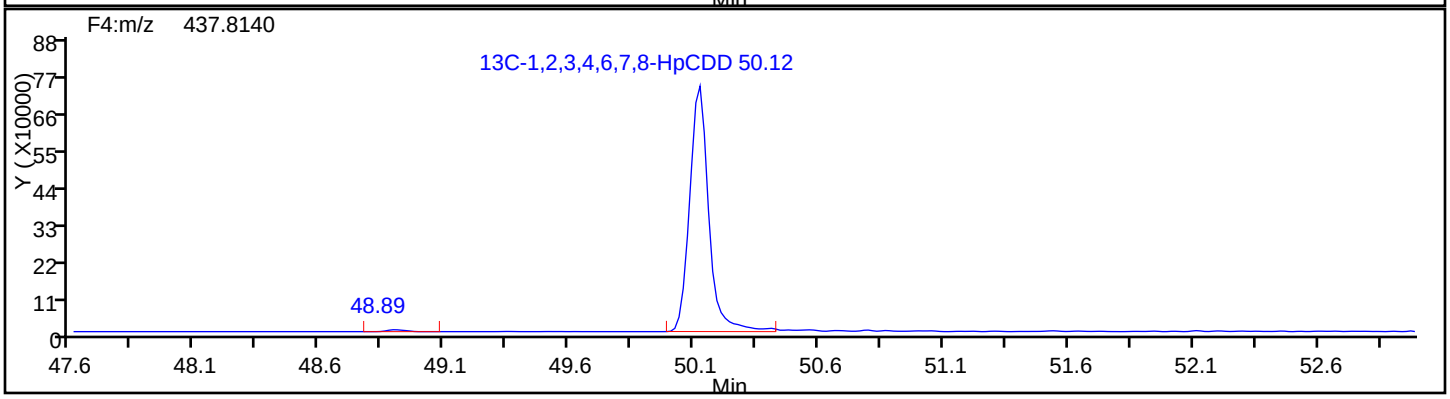
HpCDD




HpCDD Standards



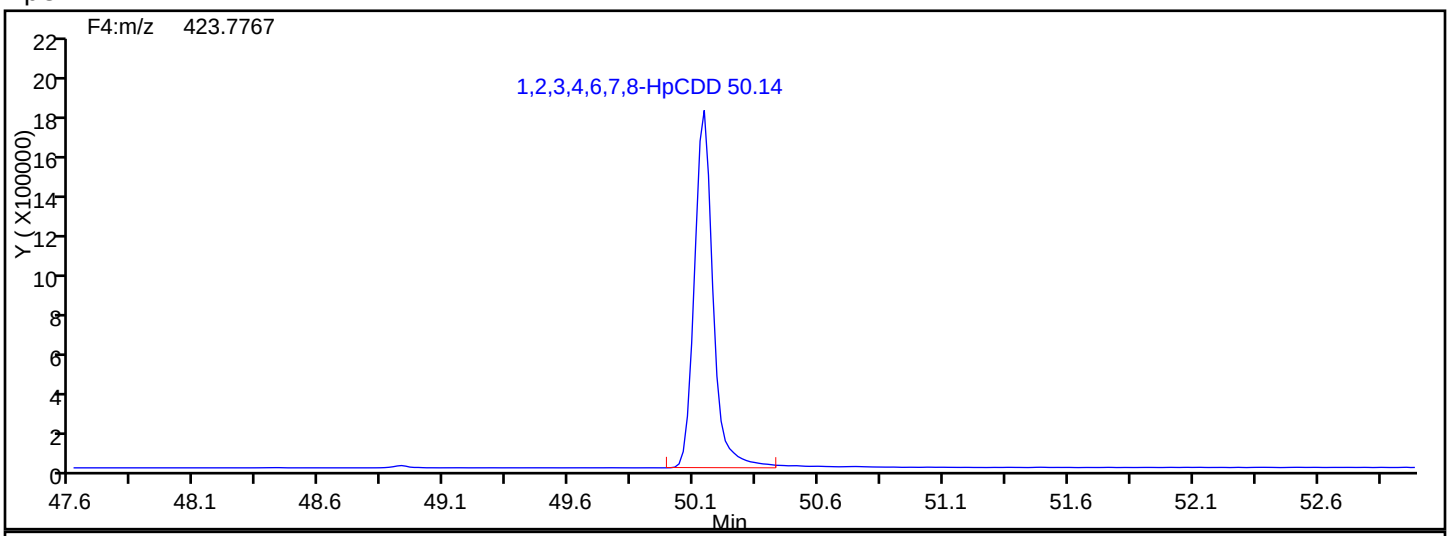
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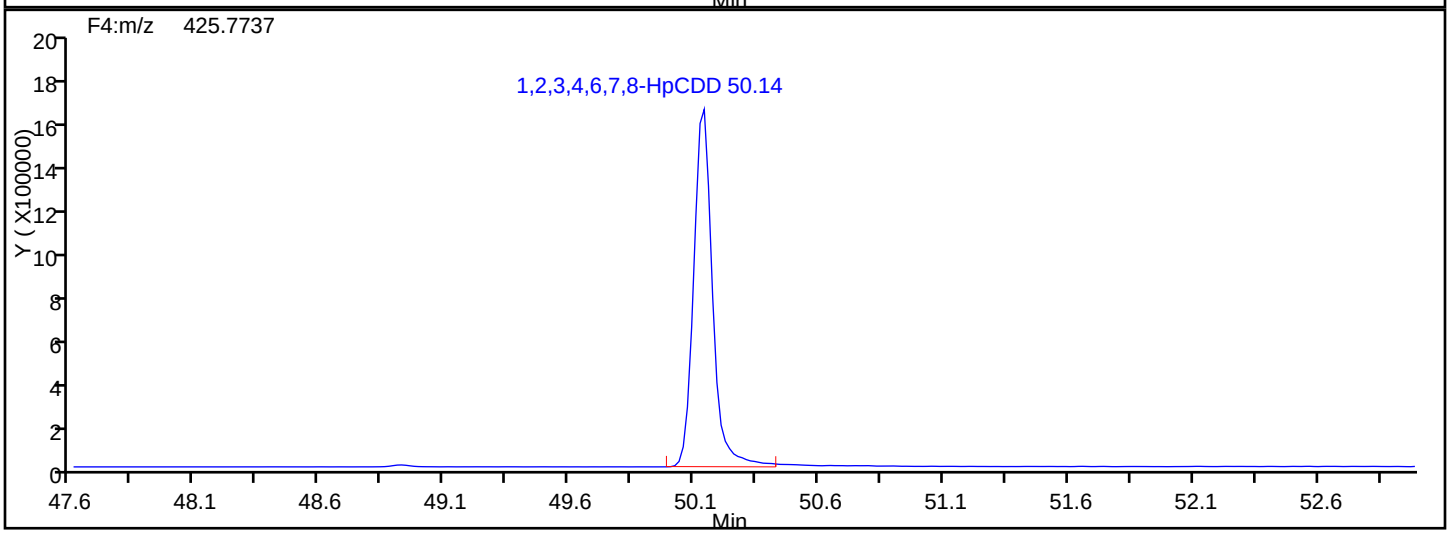
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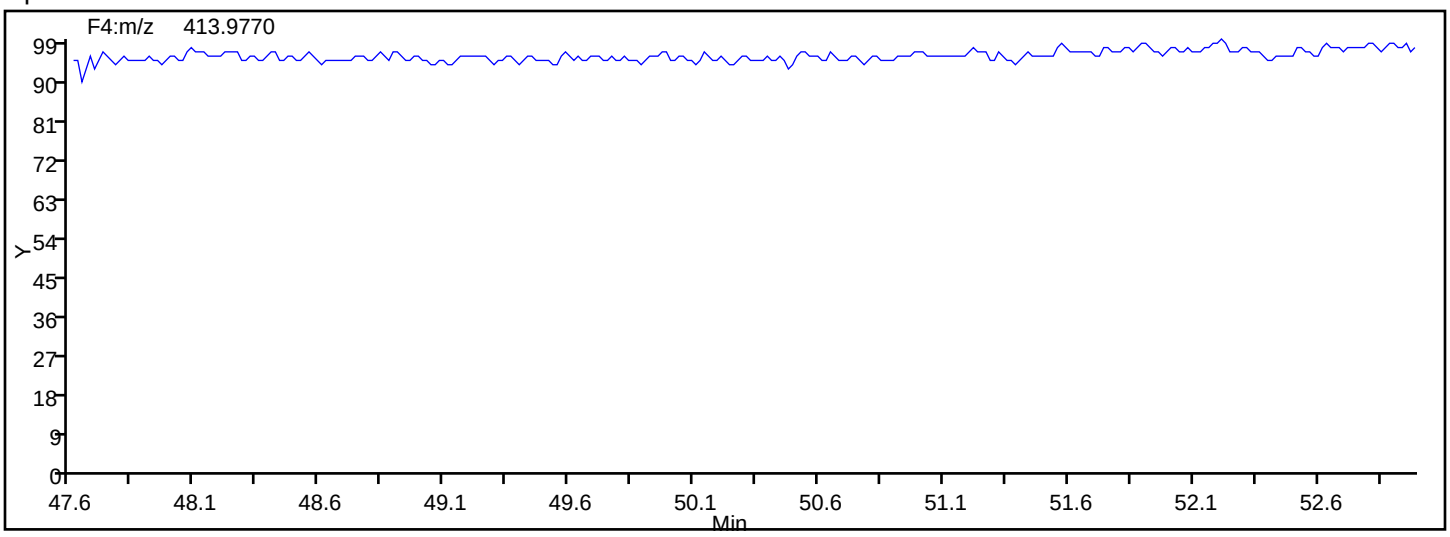
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HpCDD




HpCDD Lock Mass



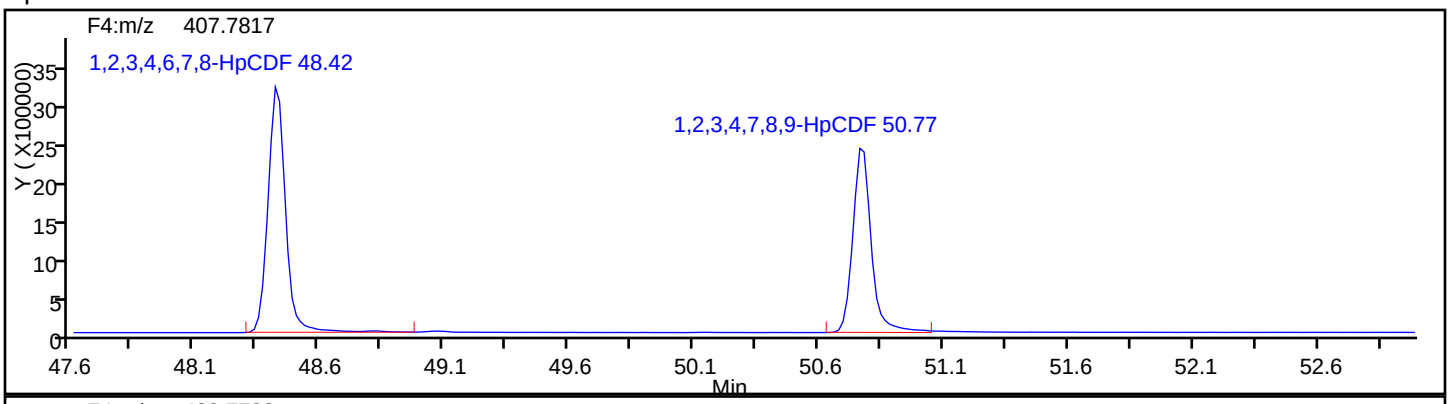
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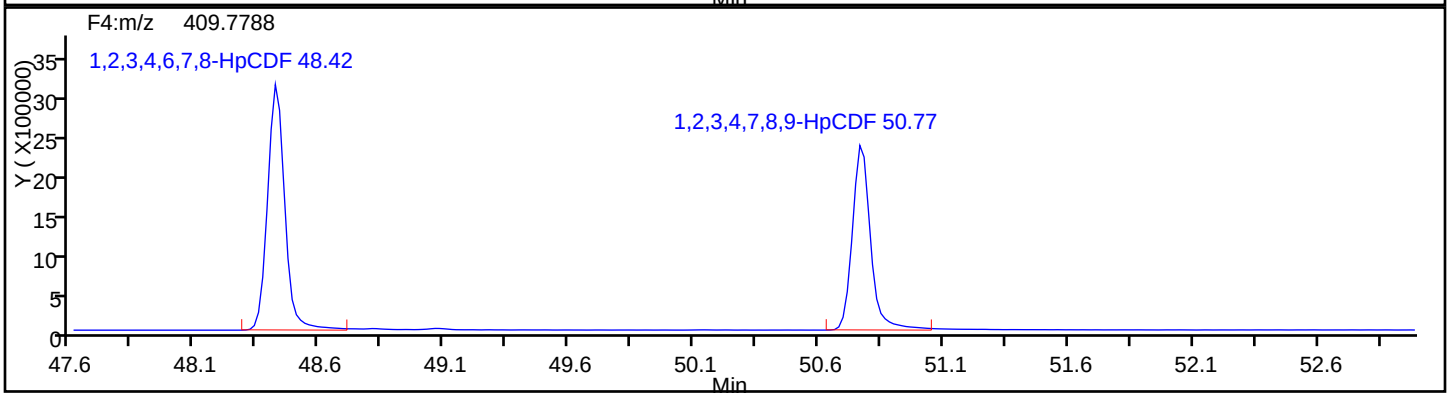
TestAmerica Knoxville

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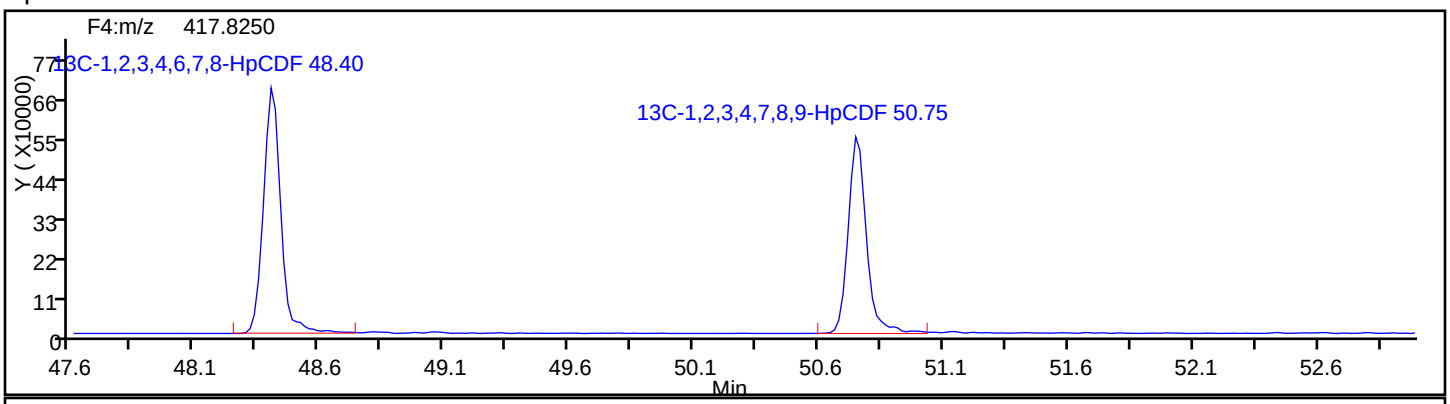
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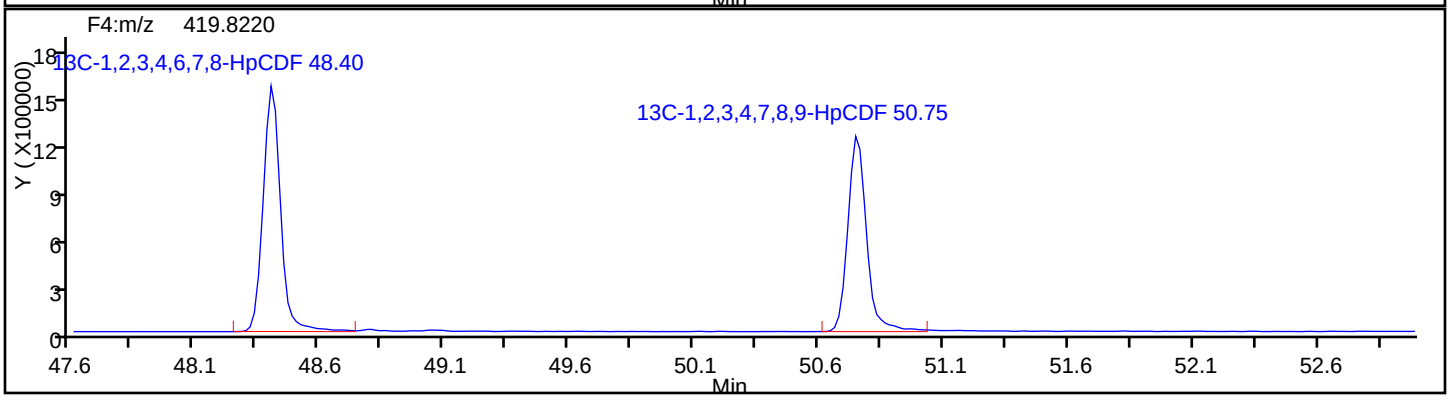
HpCDF




HpCDF Standards



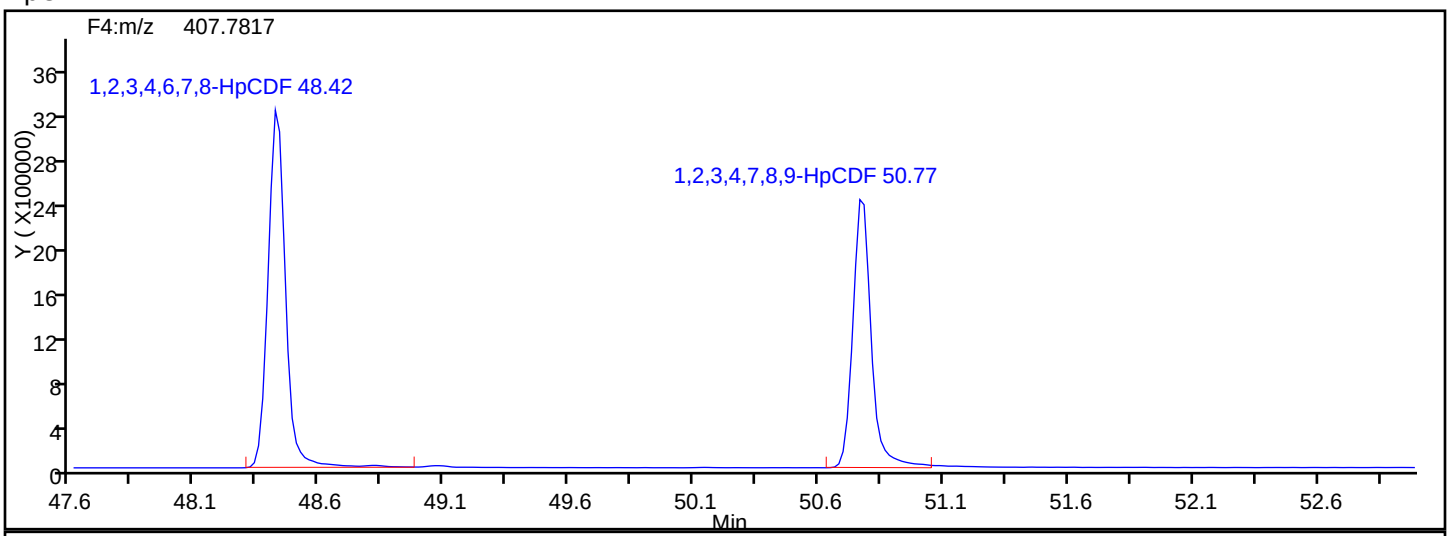
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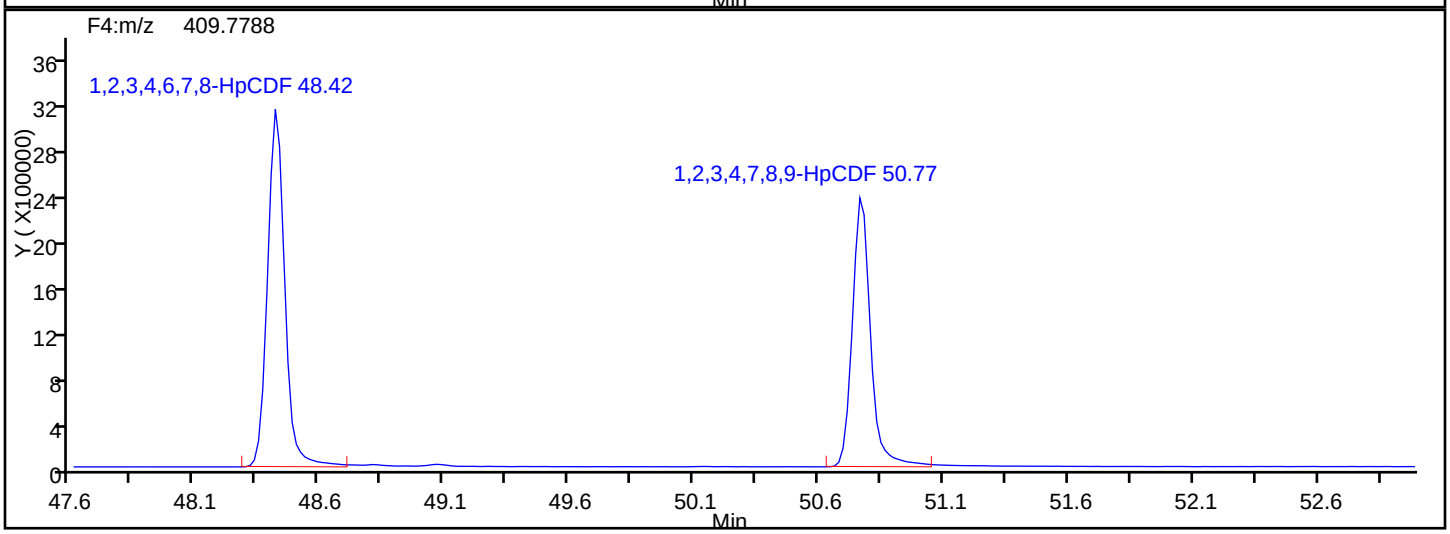
TestAmerica Knoxville

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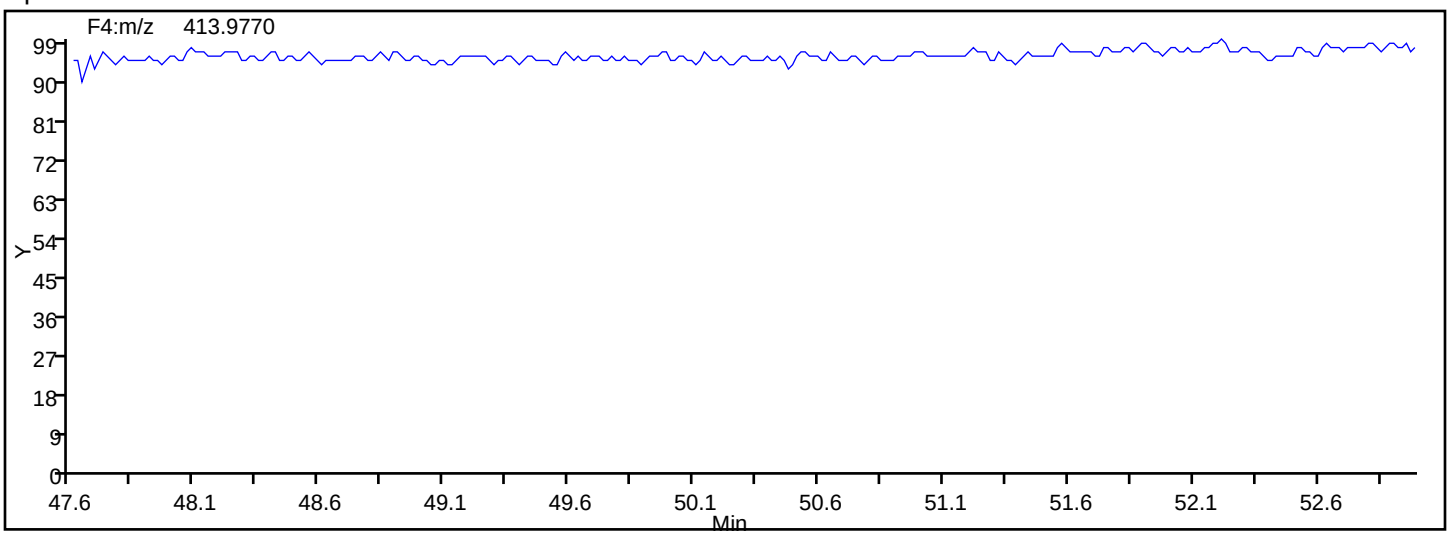
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| Column Type: | | Column Dia: | |

HpCDF




HpCDF Lock Mass



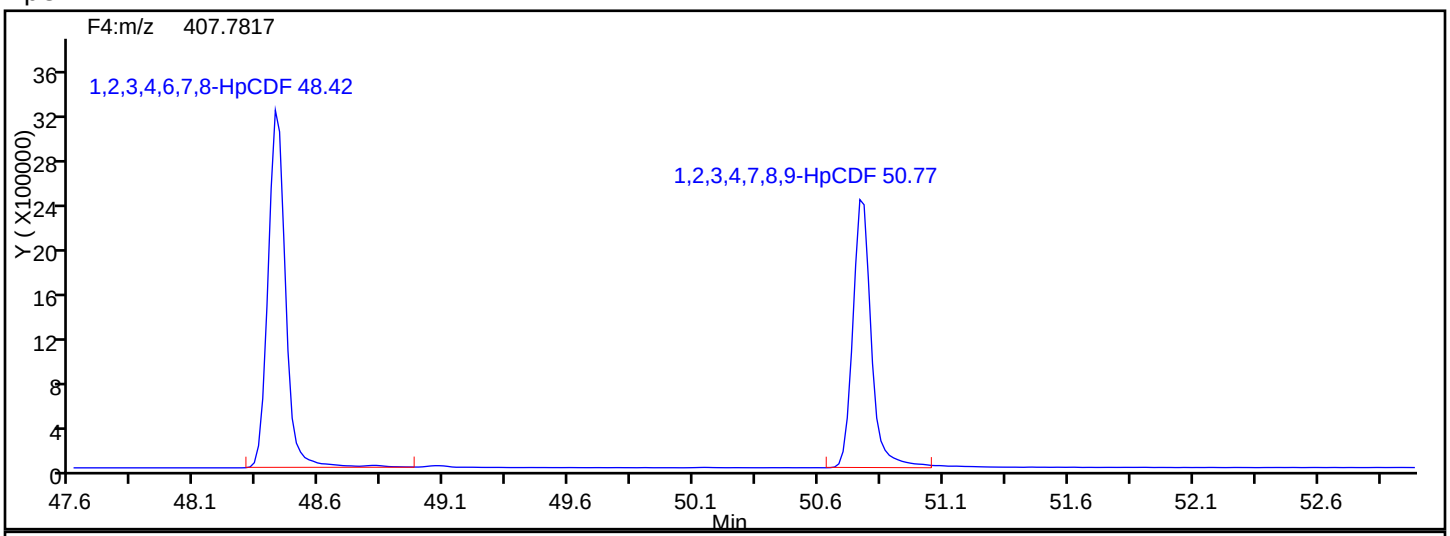
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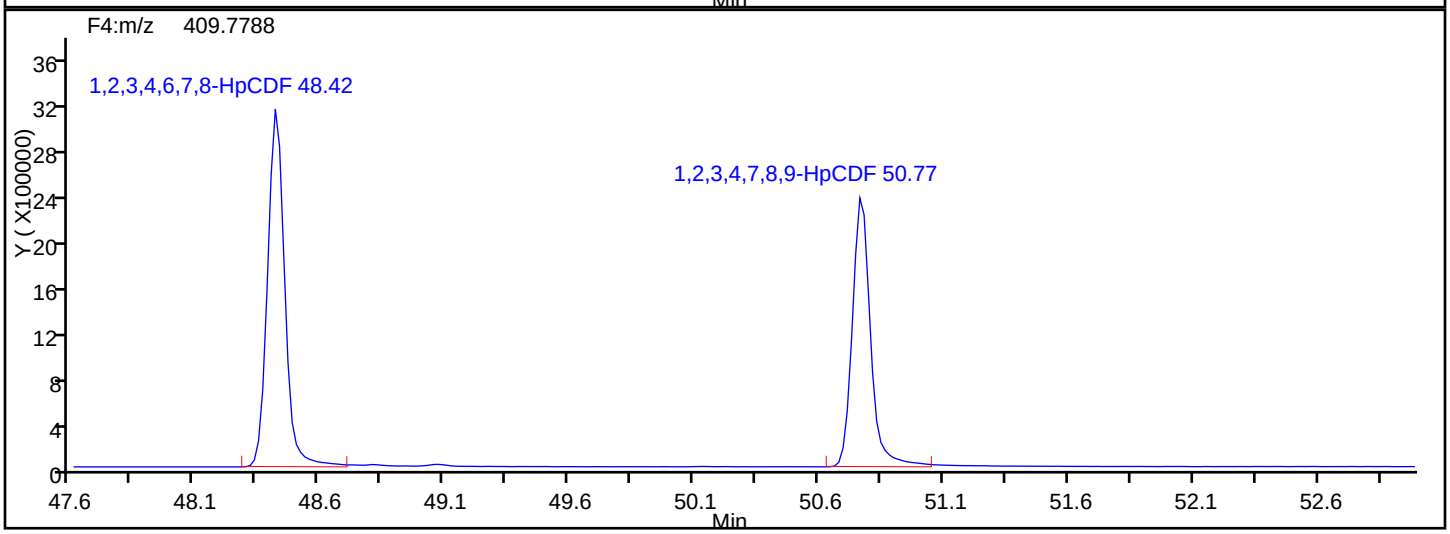
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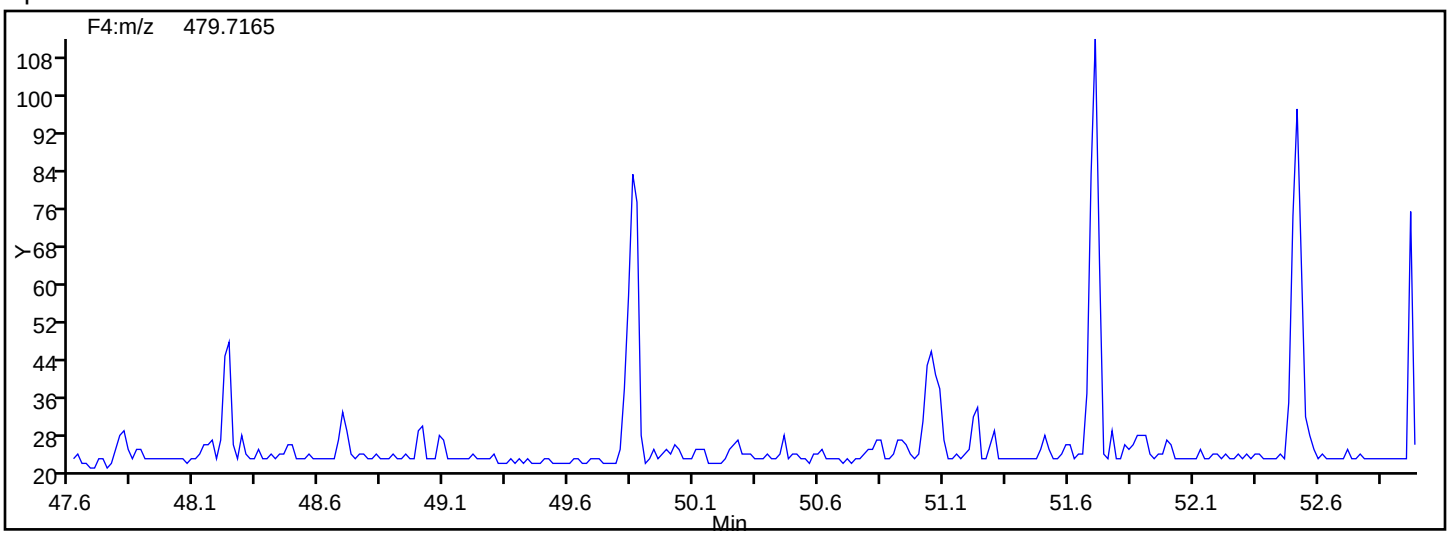
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| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

HpCDF




HpCDF Interference Mass



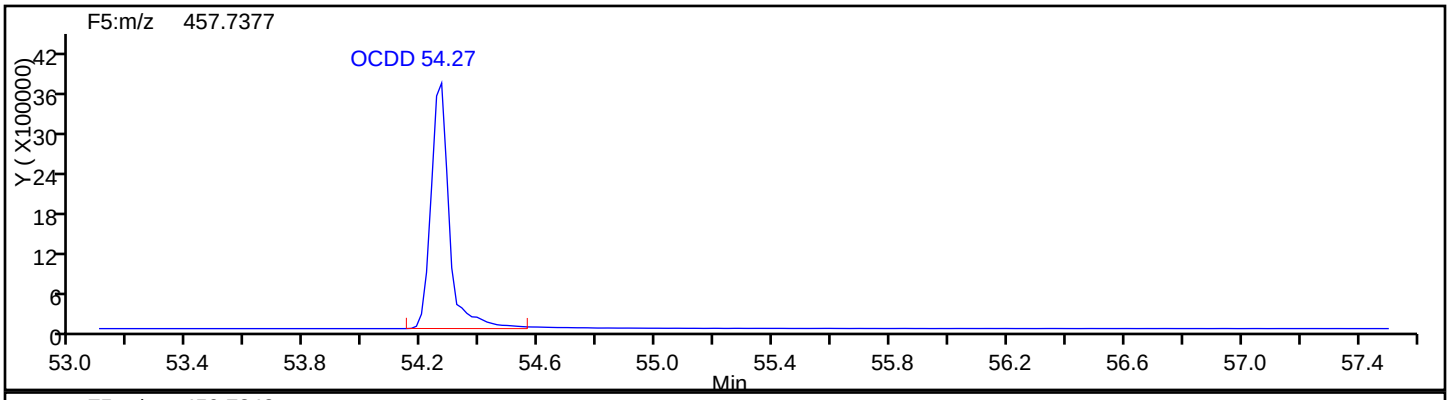
Report Date: 12-Jan-2017 08:09:36 Chrom Revision: 2.2 10-Jan-2017 11:26:10

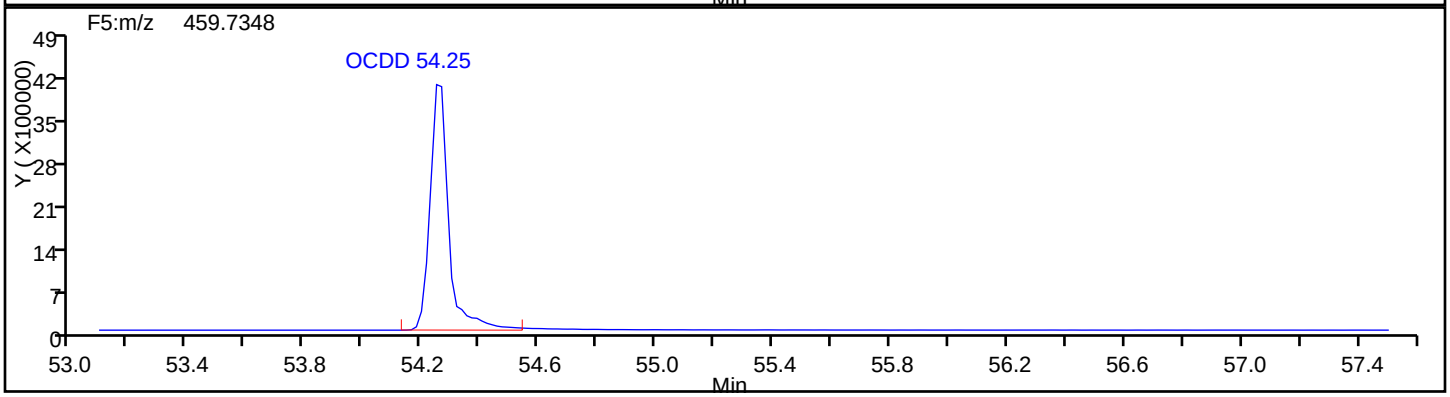
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i4.d

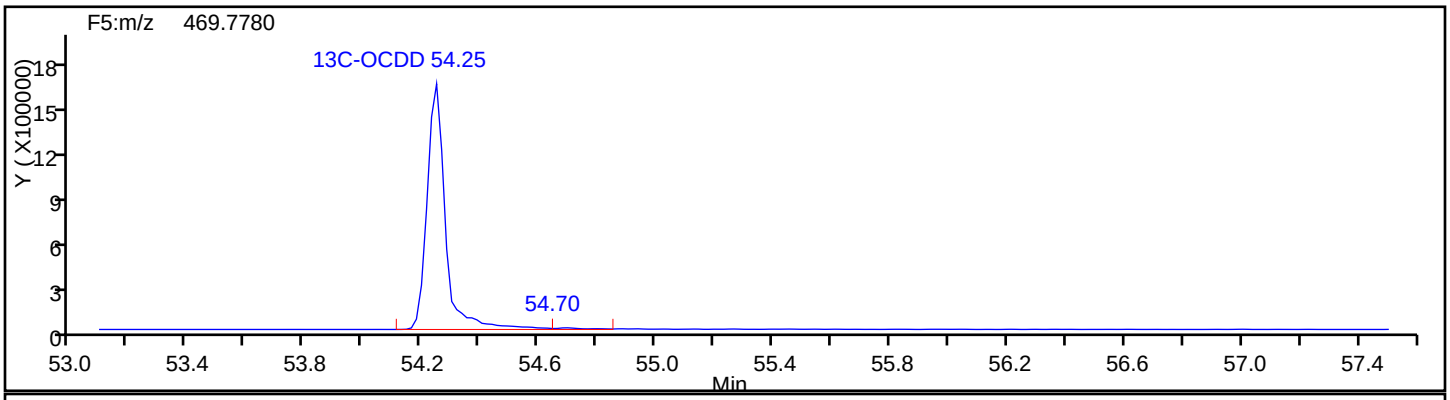
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 17:29:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

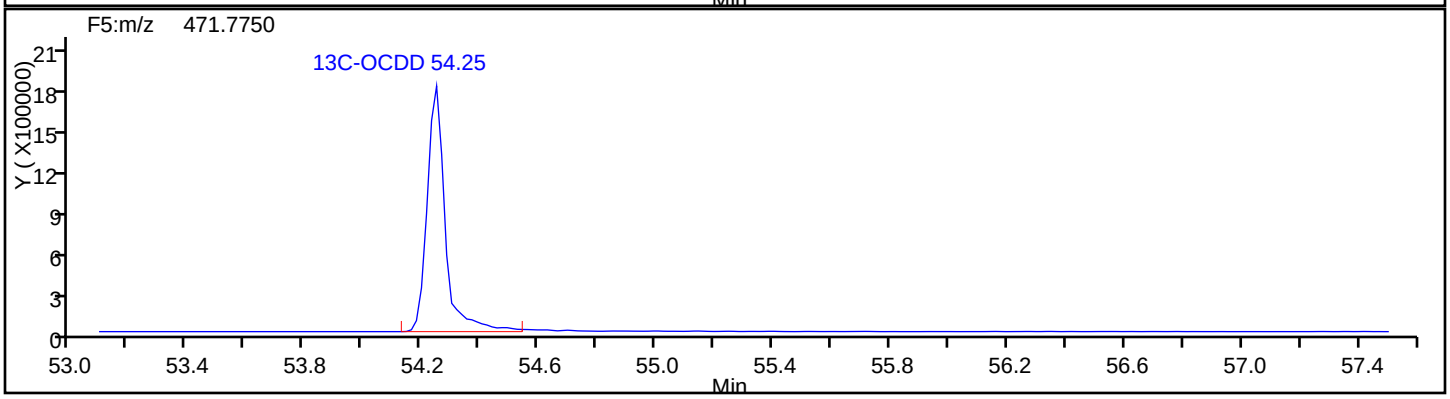
OCDD




OCDD Standards



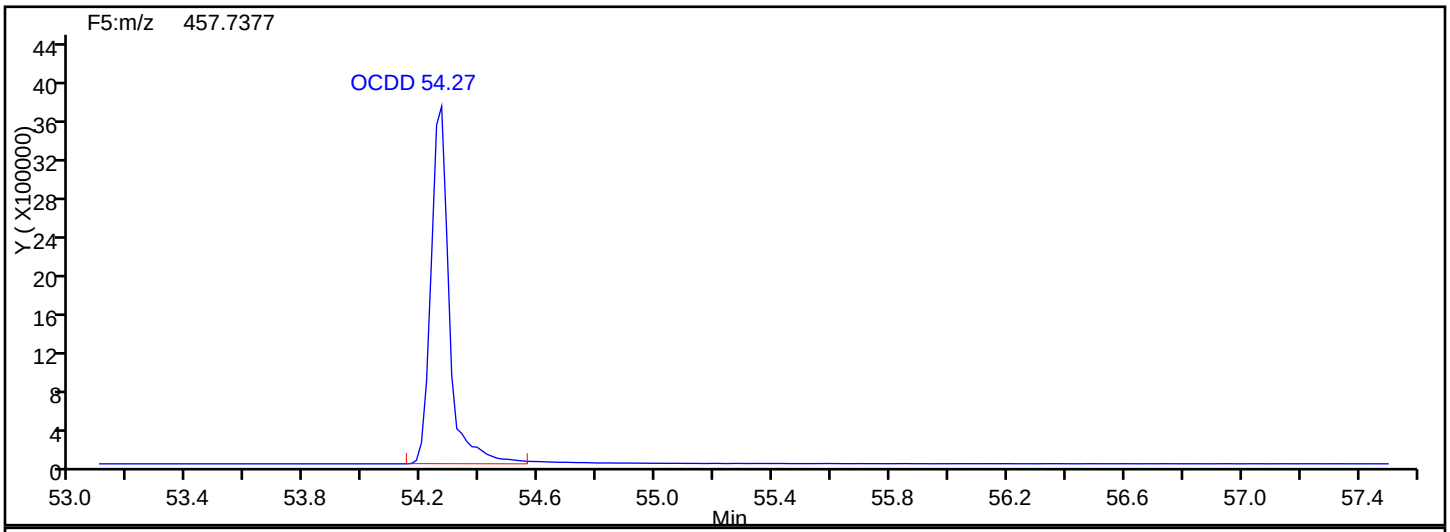
Report Date: 12-Jan-2017 08:09:36 Chrom Revision: 2.2 10-Jan-2017 11:26:10

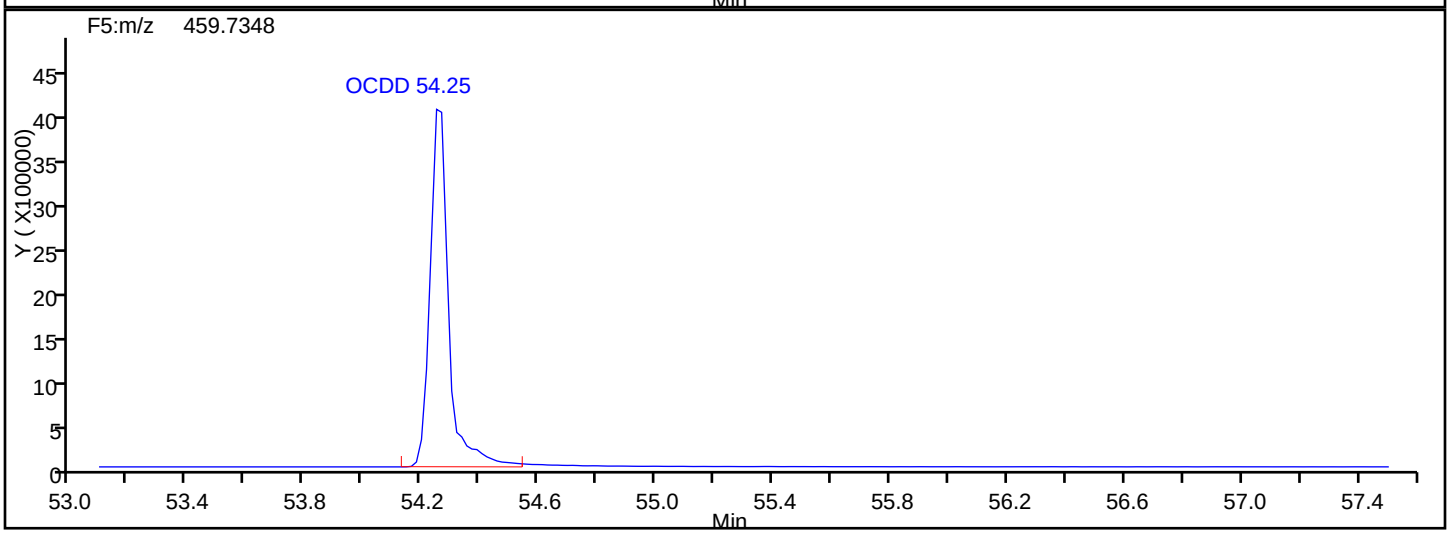
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i4.d

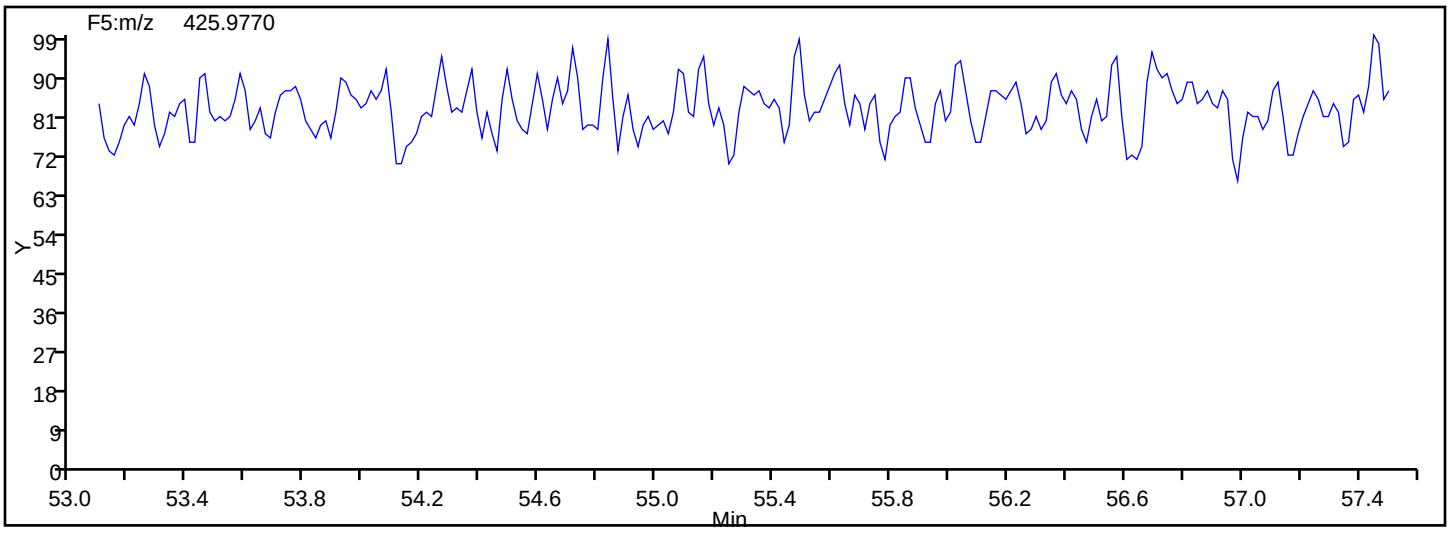
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 17:29:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

OCDD




OCDD Lock Mass



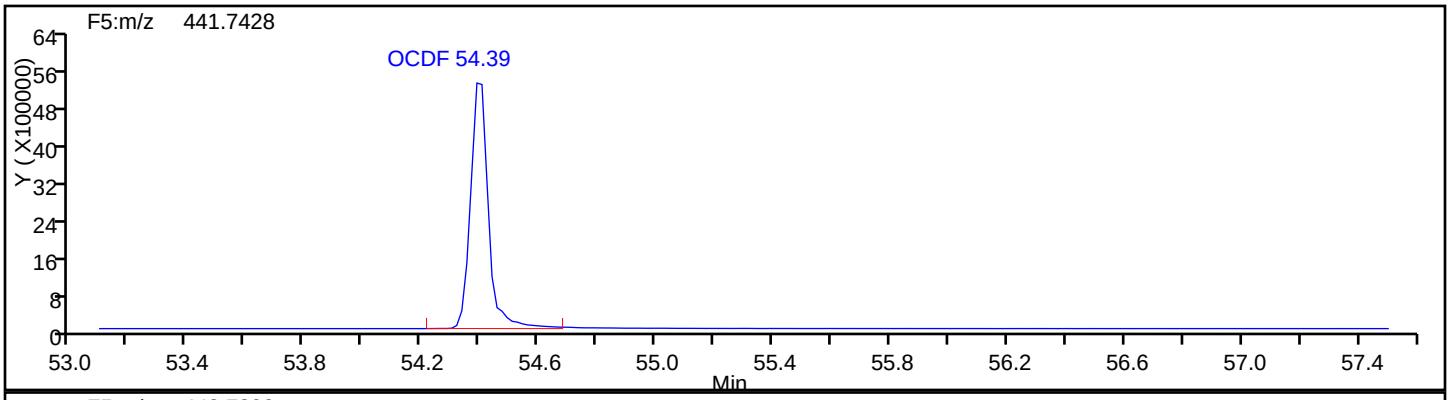
Report Date: 12-Jan-2017 08:09:36 Chrom Revision: 2.2 10-Jan-2017 11:26:10

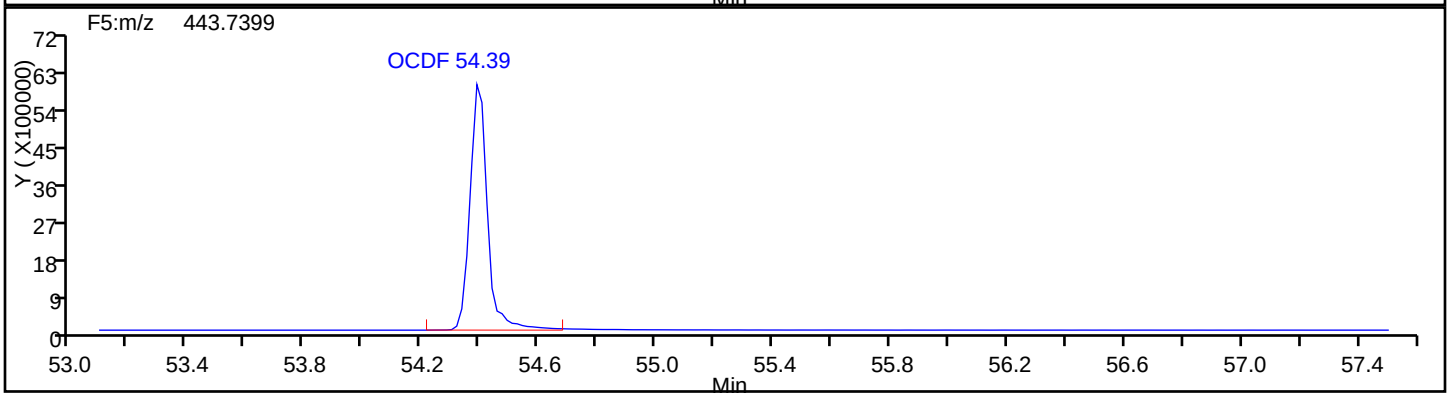
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i4.d

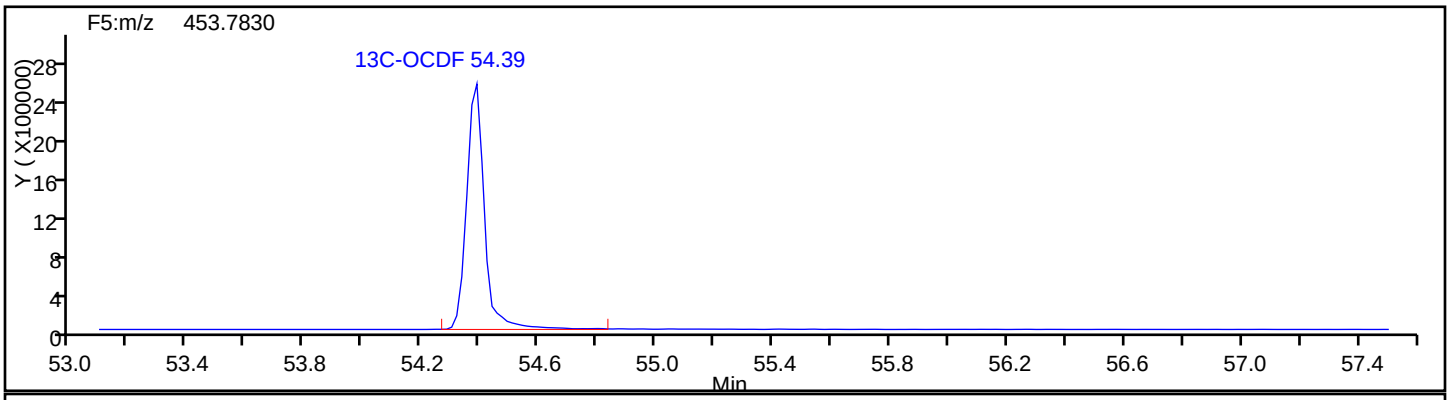
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 17:29:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

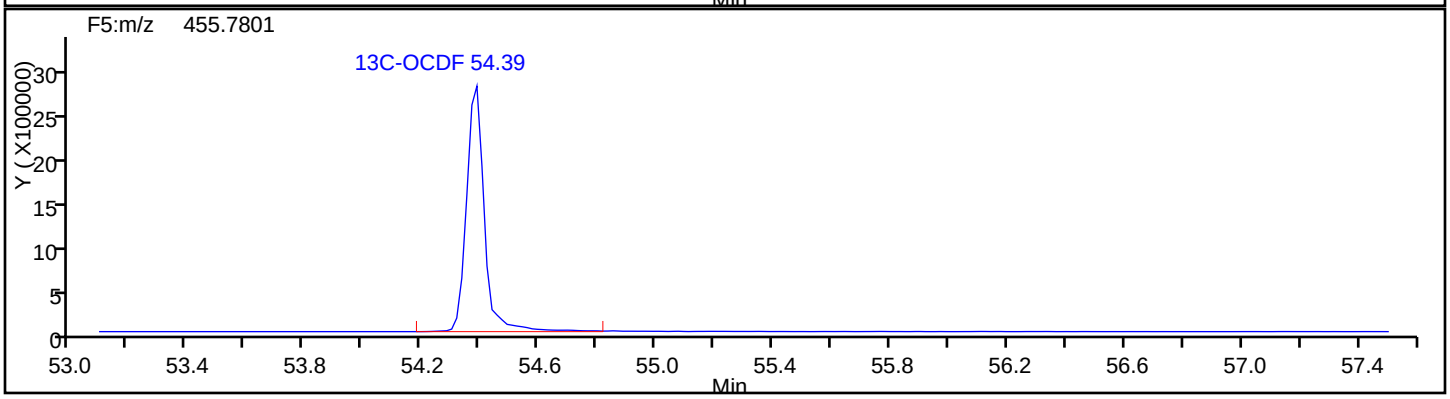
OCDF




OCDF Standards



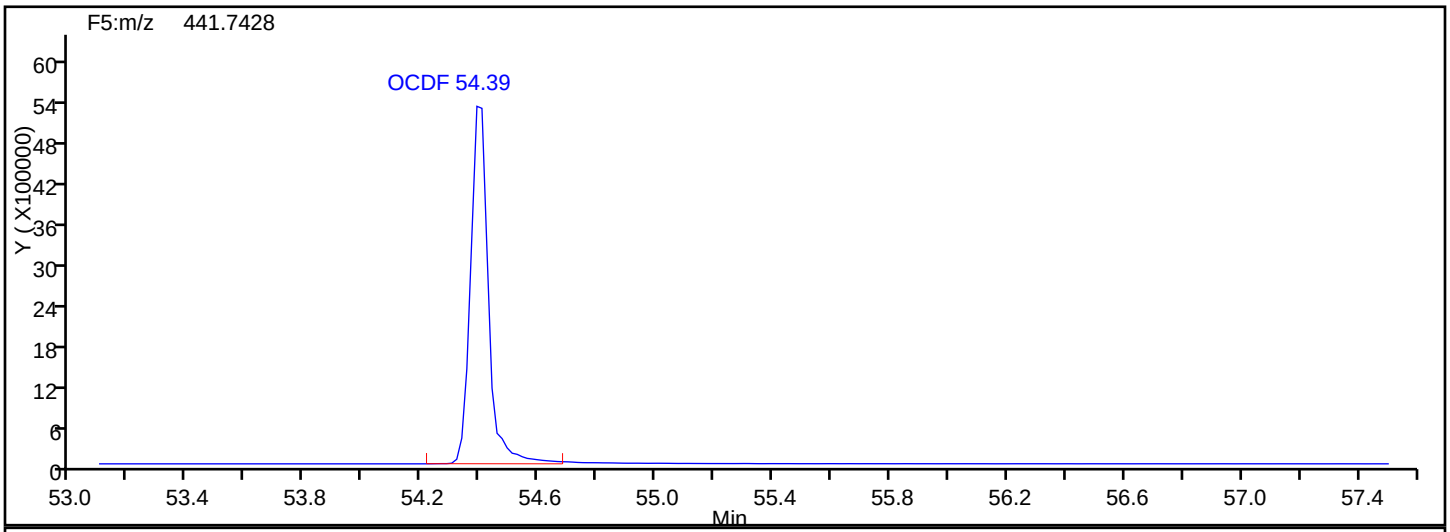
Report Date: 12-Jan-2017 08:09:36 Chrom Revision: 2.2 10-Jan-2017 11:26:10

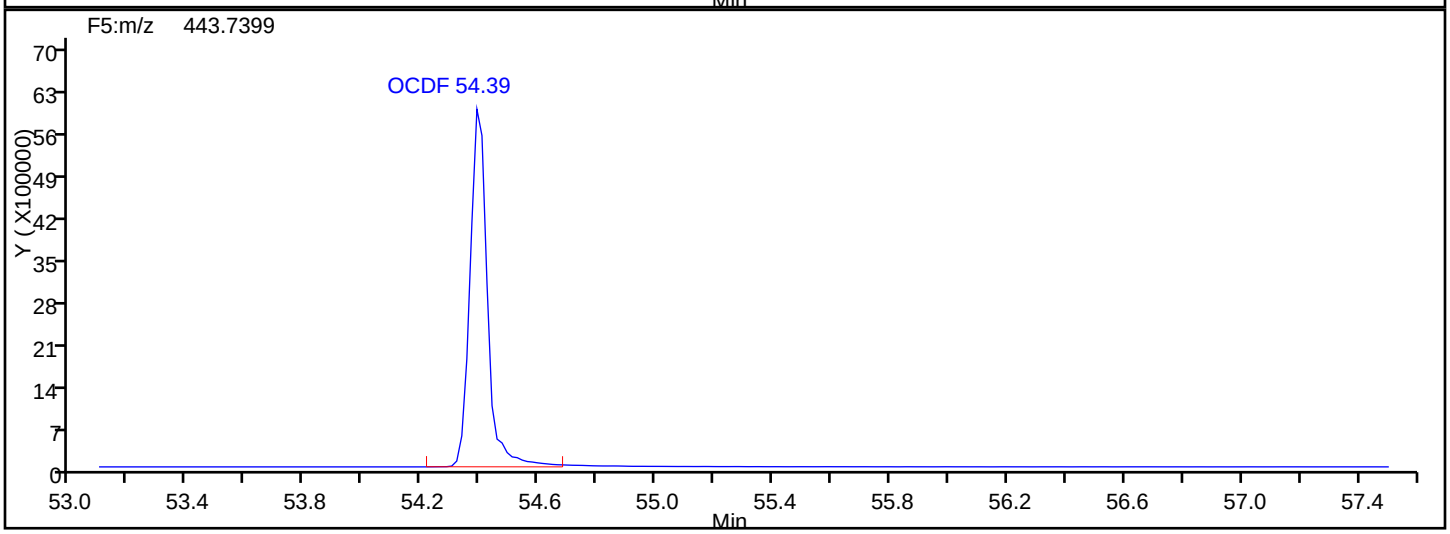
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i4.d

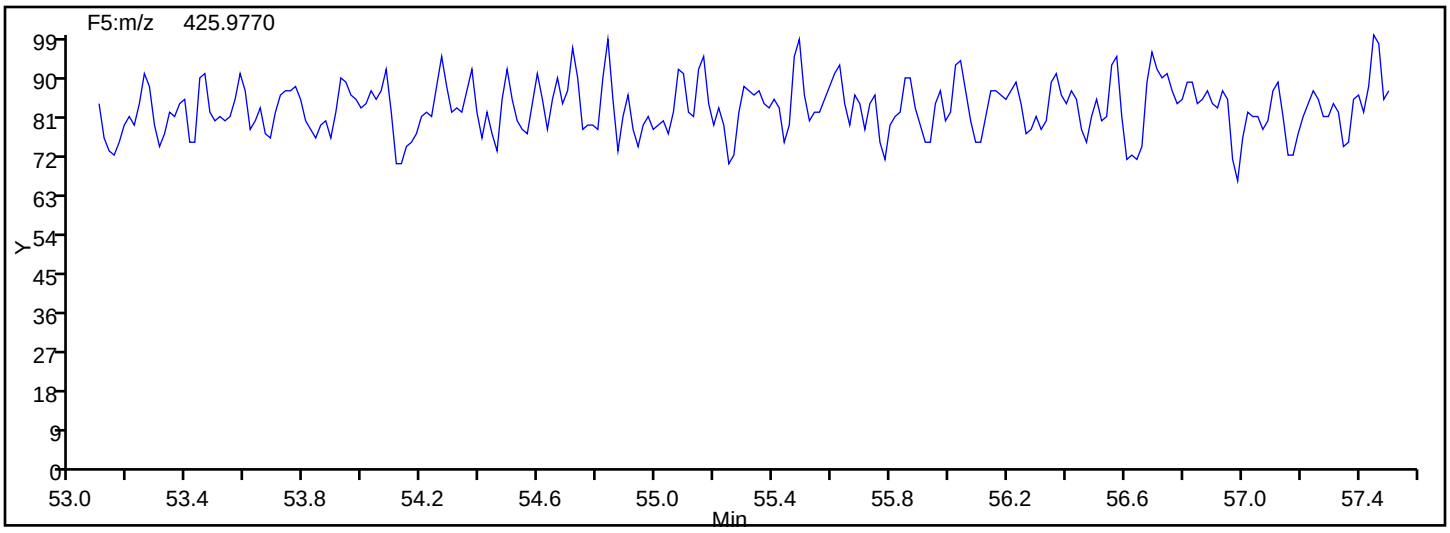
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 17:29:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Lock Mass



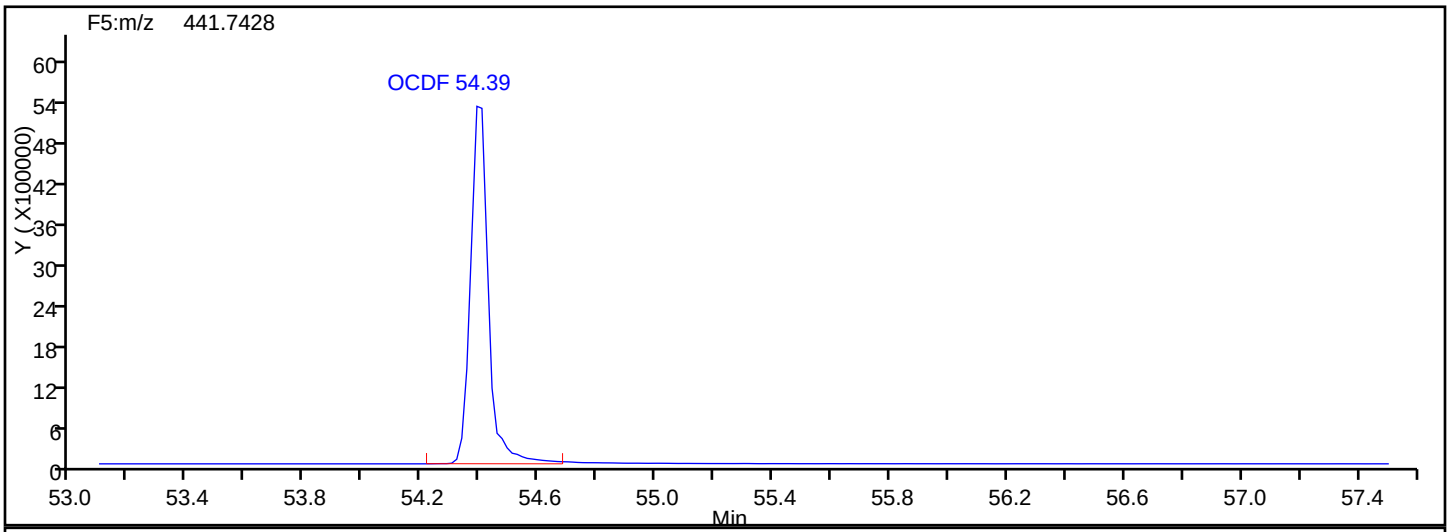
Report Date: 12-Jan-2017 08:09:36 Chrom Revision: 2.2 10-Jan-2017 11:26:10

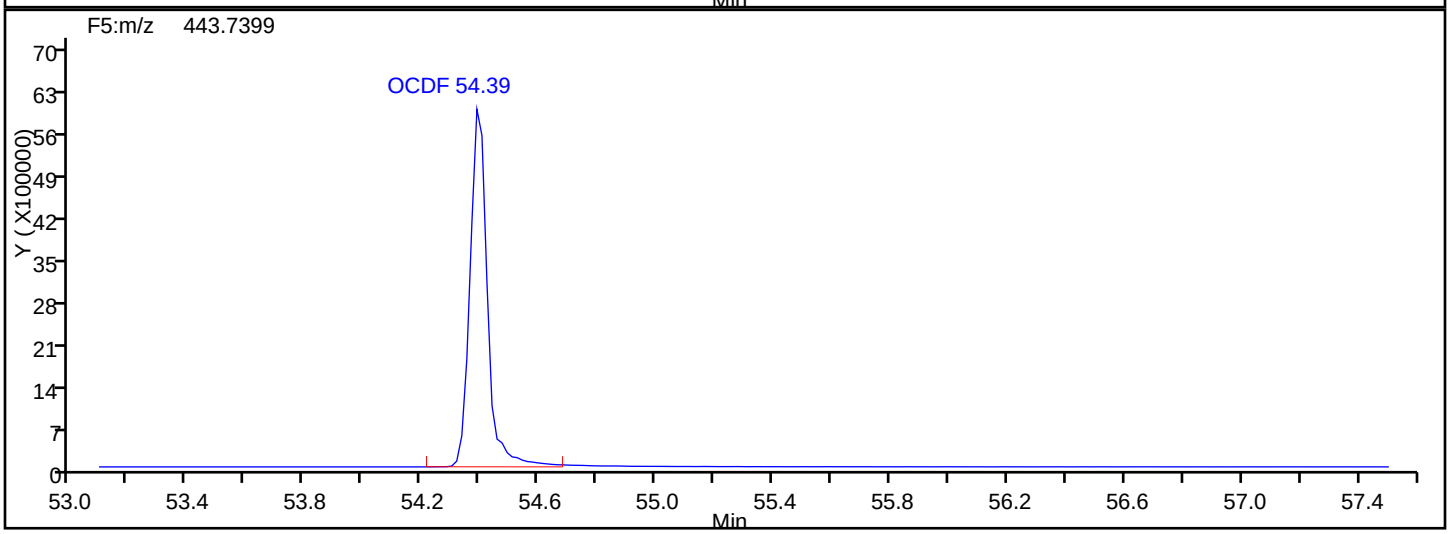
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i4.d

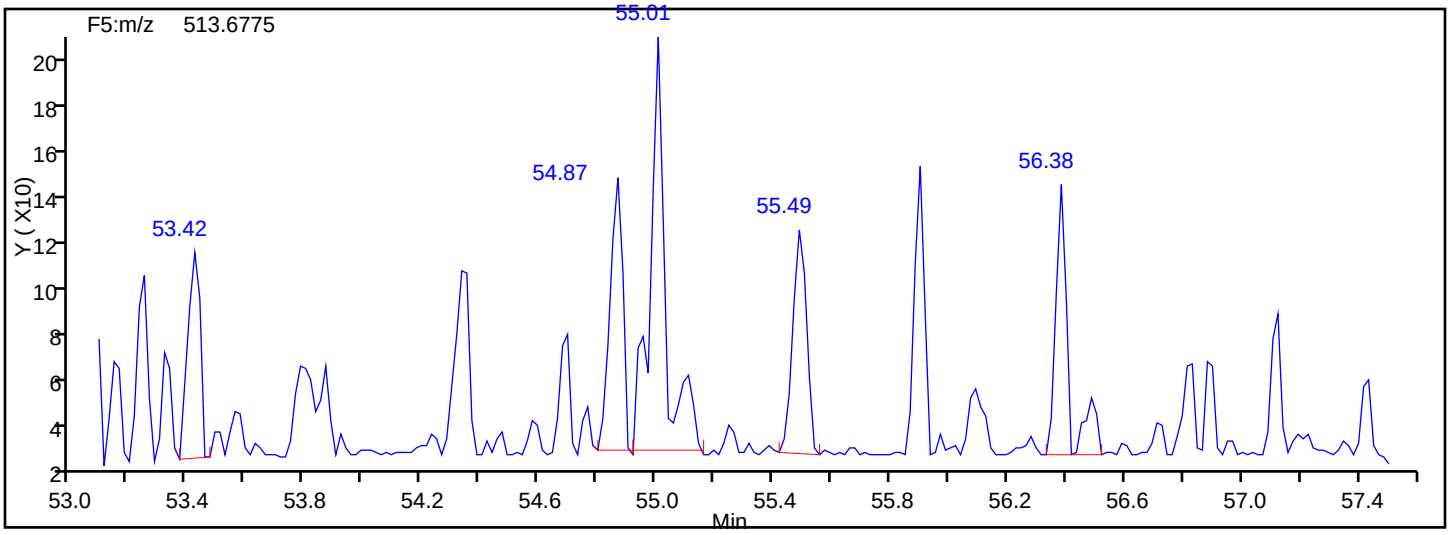
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 17:29:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 5 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Interference Mass



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 16-May-2014 18:31:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:74cs5 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 12-Jan-2017 08:09:42 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK029

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:23:41

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 31.832 | 23916178 | 0.80 | 1.1733 | 196.5 | 196.5 | 0.1046 | 0.1046 | 98.23 | |
| A Non-2,3,7,8-sub-TCDD | 30.308 | 20556 | 0.87 | 0.0000 | | | | | | |
| S Total TCDD | | | | | 196.5 | 196.5 | 0.1046 | 0.1046 | | |
| 2,3,7,8-TCDF | 29.771 | 35566472 | 0.79 | 1.0881 | 194.4 | 194.4 | 0.1061 | 0.1061 | 97.18 | |
| A Non-2,3,7,8-sub-TCDF | 28.995 | 285679 | 0.84 | 0.0000 | | | | | | |
| S Total TCDF | | | | | 194.4 | 194.4 | 0.1061 | 0.1061 | | |
| 1,2,3,7,8-PeCDD | 41.009 | 97828013 | 1.59 | 1.0434 | 1000.1 | 1000.1 | 0.3428 | 0.3428 | 100 | |
| A Non-2,3,7,8-sub-PeCDD | 39.915 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDD | | | | | 1000.1 | 1000.1 | 0.3428 | 0.3428 | | |
| 1,2,3,7,8-PeCDF | 39.288 | 172459555 | 1.60 | 1.1898 | 1017.5 | 1017.5 | 3.025 | 3.025 | 102 | |
| 2,3,4,7,8-PeCDF | 40.493 | 162647050 | 1.60 | 1.1095 | 1026.5 | 1026.5 | 2.864 | 2.864 | 103 | |
| A Non-2,3,7,8-sub-PeCDF | 38.623 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDF | | | | | 2043.9 | 2043.9 | 2.945 | 2.945 | | |
| 1,2,3,4,7,8-HxCDD | 45.245 | 125745795 | 1.26 | 1.1409 | 995.8 | 995.8 | 1.575 | 1.575 | 99.58 | |
| 1,2,3,6,7,8-HxCDD | 45.363 | 129376084 | 1.27 | 1.1481 | 989.2 | 989.2 | 1.608 | 1.608 | 98.92 | |
| 1,2,3,7,8,9-HxCDD | 45.751 | 139413717 | 1.26 | 1.2212 | 1016.6 | 1016.6 | 1.491 | 1.491 | 102 | |
| A Non-2,3,7,8-sub-HxCDD | 44.687 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDD | | | | | 3001.6 | 3001.6 | 1.558 | 1.558 | | |
| 1,2,3,4,7,8-HxCDF | 44.199 | 205245281 | 1.25 | 1.3629 | 1028.0 | 1028.0 | 2.022 | 2.022 | 103 | |
| 1,2,3,6,7,8-HxCDF | 44.334 | 230766405 | 1.25 | 1.2762 | 989.4 | 989.4 | 1.847 | 1.847 | 98.94 | |
| 2,3,4,6,7,8-HxCDF | 45.059 | 207212834 | 1.25 | 1.2654 | 1013.7 | 1013.7 | 2.076 | 2.076 | 101 | |
| 1,2,3,7,8,9-HxCDF | 46.038 | 192682603 | 1.26 | 1.2573 | 1002.8 | 1002.8 | 2.485 | 2.485 | 100 | |
| A Non-2,3,7,8-sub-HxCDF | 44.552 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDF | | | | | 4033.9 | 4033.9 | 2.107 | 2.107 | | |
| 1,2,3,4,6,7,8-HpCDD | 50.192 | 114386892 | 1.05 | 1.1204 | 995.3 | 995.3 | 1.902 | 1.902 | 99.53 | |
| A Non-2,3,7,8-sub-HpCDD | 49.566 | | | | | | 0.0 | 0.0 | | |
| S Total HpCDD | | | | | 995.3 | 995.3 | 1.902 | 1.902 | | |
| 1,2,3,4,6,7,8-HpCDF | 48.471 | 196710947 | 1.03 | 1.4984 | 983.2 | 983.2 | 2.194 | 2.194 | 98.32 | |
| 1,2,3,4,7,8,9-HpCDF | 50.816 | 160075574 | 1.04 | 1.3807 | 1006.3 | 1006.3 | 2.965 | 2.965 | 101 | |

Report Date: 12-Jan-2017 08:09:43 Chrom Revision: 2.2 10-Jan-2017 11:26:10
Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HpCDF | 49.625 | | | | | | 0.0 | 0.0 | | |
| S Total HpCDF | | | | | 1989.5 | 1989.5 | 2.579 | 2.579 | | |
| OCDD | 54.304 | 231071676 | 0.89 | 1.2073 | 2026.8 | 2026.8 | 0.8181 | 0.8181 | 101 | |
| OCDF | 54.442 | 328275681 | 0.90 | 1.1162 | 2062.9 | 2062.9 | 0.7552 | 0.7552 | 103 | |
| D 13C-2,3,7,8-TCDD | 31.799 | 10375862 | 0.80 | 1.0709 | 102.1 | 102.1 | 0.2605 | 0.2605 | 102 | |
| D 13C-2,3,7,8-TCDF | 29.721 | 16816585 | 0.79 | 1.7545 | 101.0 | 101.0 | 0.1119 | 0.1119 | 101 | |
| D 13C-1,2,3,7,8-PeCDD | 40.992 | 9374768 | 1.62 | 0.8743 | 113.0 | 113.0 | 0.4333 | 0.4333 | 113 | |
| D 13C-1,2,3,7,8-PeCDF | 39.271 | 14246063 | 1.59 | 1.3704 | 109.5 | 109.5 | 0.1736 | 0.1736 | 110 | |
| D 13C-2,3,4,7,8-PeCDF | 40.476 | 14282105 | 1.62 | 1.3837 | 108.8 | 108.8 | 0.1720 | 0.1720 | 109 | |
| D 13C-1,2,3,4,7,8-HxCDD | 45.228 | 11068991 | 1.26 | 0.8772 | 98.9 | 98.9 | 0.1314 | 0.1314 | 98.89 | |
| D 13C-1,2,3,6,7,8-HxCDD | 45.346 | 11391028 | 1.28 | 0.9171 | 97.3 | 97.3 | 0.1256 | 0.1256 | 97.34 | |
| D 13C-1,2,3,4,7,8-HxCDF | 44.182 | 14649659 | 0.54 | 1.1892 | 96.5 | 96.5 | 0.1158 | 0.1158 | 96.54 | |
| D 13C-1,2,3,6,7,8-HxCDF | 44.317 | 18275058 | 0.54 | 1.4625 | 97.9 | 97.9 | 0.0942 | 0.0942 | 97.93 | |
| D 13C-2,3,4,6,7,8-HxCDF | 45.042 | 16154097 | 0.53 | 1.3197 | 95.9 | 95.9 | 0.1043 | 0.1043 | 95.93 | |
| D 13C-1,2,3,7,8,9-HxCDF | 46.021 | 15282343 | 0.54 | 1.2001 | 99.8 | 99.8 | 0.1147 | 0.1147 | 99.80 | |
| D 13C-1,2,3,4,6,7,8-HpCDD | 50.175 | 10257853 | 1.05 | 0.8155 | 98.6 | 98.6 | 0.1427 | 0.1427 | 98.58 | |
| D 13C-1,2,3,4,6,7,8-HpCDF | 48.454 | 13352459 | 0.46 | 1.0496 | 99.7 | 99.7 | 0.1096 | 0.1096 | 99.70 | |
| D 13C-1,2,3,4,7,8,9-HpCDF | 50.799 | 11521506 | 0.46 | 0.8947 | 100.9 | 100.9 | 0.1286 | 0.1286 | 101 | |
| D 13C-OCDD | 54.287 | 18887158 | 0.92 | 0.7044 | 210.1 | 210.1 | 0.0872 | 0.0872 | 105 | |
| D 13C-OCDF | 54.425 | 28514559 | 0.90 | 1.0615 | 210.5 | 210.5 | 0.0642 | 0.0642 | 105 | |
| $ 37Cl4-2,3,7,8-TCDD | 31.832 | 23452691 | | 1.2266 | 201.5 | 201.5 | 0.0283 | 0.0283 | 101 | |
| * 13C-1,2,3,4-TCDD | 31.267 | 9489667 | 0.81 | 9.1E+04 | 100.0 | 100.0 | | | | |
| * 13C-1,2,3,7,8,9-HxCDD | 45.734 | 12759843 | 1.30 | 1E+05 | 100.0 | 100.0 | | | | |

## Reagents:

61L51613OP_00001 Amount Added: 20.00 Units: uL

Report Date: 12-Jan-2017 08:09:43 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 16-May-2014 18:31:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:74cs5 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 12-Jan-2017 08:09:42 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK029

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:23:41

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | |
| 319.8965 | 31.832 | 31.838 | 0 | 1.001 | 10665390 | 1108150 | 219 | 547 | 5060 | | |
| 321.8936 | 31.849 | 31.838 | 1 | 1.002 | 13250788 | 1366893 | 303 | 757 | 4511 | 0.80(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | |
| 319.8965 | 28.708 | 30.308 | -96 | | 9544 | 1291 | 219 | 547 | 6 | | |
| 321.8936 | 28.741 | 30.308 | -94 | | 11012 | 1474 | 303 | 757 | 5 | 0.87(0.65-0.89) | |
| 2,3,7,8-TCDF | | | | | | | | | | | |
| 303.9016 | 29.771 | 29.760 | 1 | 1.002 | 15694011 | 1738934 | 454 | 1135 | 3830 | | |
| 305.8987 | 29.771 | 29.760 | 1 | 1.002 | 19872461 | 2216741 | 412 | 1030 | 5380 | 0.79(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | |
| 303.9016 | 28.625 | 28.995 | -22 | | 130826 | 15367 | 454 | 1135 | 34 | | |
| 305.8987 | 28.641 | 28.995 | -21 | | 154853 | 16581 | 412 | 1030 | 40 | 0.84(0.65-0.89) | |
| 1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 355.8546 | 41.009 | 41.015 | 0 | 1.000 | 60075873 | 14997294 | 1824 | 4560 | 8222 | | |
| 357.8516 | 41.009 | 41.015 | 0 | 1.000 | 37752140 | 9486986 | 1446 | 3615 | 6561 | 1.59(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | |
| 355.8546 | 39.915 | | | | | | 1824 | 4560 | | | |
| 357.8516 | 39.915 | | | | | | 1446 | 3615 | | | |
| 1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 39.288 | 39.293 | 0 | 1.000 | 106202805 | 22324573 | 27008 | 67520 | 827 | | |
| 341.8567 | 39.288 | 39.293 | 0 | 1.000 | 66256750 | 14051069 | 15663 | 39157 | 897 | 1.60(1.32-1.78) | |
| 2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 40.493 | 40.499 | 0 | 1.000 | 100191913 | 24210618 | 27008 | 67520 | 896 | | |
| 341.8567 | 40.493 | 40.499 | 0 | 1.000 | 62455137 | 15041234 | 15663 | 39157 | 960 | 1.60(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | |
| 339.8597 | 38.623 | | | | | | 27008 | 67520 | | | |
| 341.8567 | 38.623 | | | | | | 15663 | 39157 | | | |
| 1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.245 | 45.248 | 0 | 1.000 | 70196193 | 19067753 | 12408 | 31020 | 1537 | | |
| 391.8127 | 45.245 | 45.248 | 0 | 1.000 | 55549602 | 14654681 | 8468 | 21170 | 1731 | 1.26(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.363 | 45.366 | 0 | 1.000 | 72331523 | 18520681 | 12408 | 31020 | 1493 | | |
| 391.8127 | 45.363 | 45.366 | 0 | 1.000 | 57044561 | 14423769 | 8468 | 21170 | 1703 | 1.27(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 45.751 | 45.754 | 0 | 1.012 | 77766034 | 18943593 | 12408 | 31020 | 1527 | | |
| 391.8127 | 45.751 | 45.754 | 0 | 1.012 | 61647683 | 15150297 | 8468 | 21170 | 1789 | 1.26(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | |
| 389.8158 | 44.687 | | | | | | 12408 | 31020 | | | |
| 391.8127 | 44.687 | | | | | | 8468 | 21170 | | | |
| 1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.199 | 44.202 | 0 | 1.000 | 114161862 | 31685533 | 23050 | 57625 | 1375 | | |
| 375.8178 | 44.199 | 44.202 | 0 | 1.000 | 91083419 | 24447023 | 20666 | 51665 | 1183 | 1.25(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.334 | 44.337 | 0 | 1.000 | 128418736 | 33333661 | 23050 | 57625 | 1446 | | |
| 375.8178 | 44.317 | 44.337 | -1 | 1.000 | 102347669 | 26127663 | 20666 | 51665 | 1264 | 1.25(1.05-1.43) | |
| 2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 45.059 | 45.063 | 0 | 1.000 | 115056569 | 30171058 | 23050 | 57625 | 1309 | | |
| 375.8178 | 45.059 | 45.063 | 0 | 1.000 | 92156265 | 24362204 | 20666 | 51665 | 1179 | 1.25(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 46.038 | 46.024 | 1 | 1.000 | 107301541 | 25727683 | 23050 | 57625 | 1116 | | |
| 375.8178 | 46.021 | 46.024 | 0 | 1.000 | 85381062 | 19976892 | 20666 | 51665 | 967 | 1.26(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44.552 | | | | | | 23050 | 57625 | | | |
| 375.8178 | 44.552 | | | | | | 20666 | 51665 | | | |
| 1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 423.7767 | 50.192 | 50.178 | 1 | 1.000 | 58686063 | 11601434 | 8826 | 22065 | 1314 | | |
| 425.7737 | 50.175 | 50.178 | 0 | 1.000 | 55700829 | 11195120 | 8090 | 20225 | 1384 | 1.05(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | |
| 423.7767 | 49.566 | | | | | | 8826 | 22065 | | | |
| 425.7737 | 49.566 | | | | | | 8090 | 20225 | | | |
| 1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 407.7817 | 48.471 | 48.458 | 1 | 1.000 | 100031303 | 22111953 | 20119 | 50297 | 1099 | | |
| 409.7788 | 48.471 | 48.458 | 1 | 1.000 | 96679644 | 21209513 | 17872 | 44680 | 1187 | 1.03(0.88-1.20) | |
| 1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 407.7817 | 50.816 | 50.819 | 0 | 1.000 | 81724701 | 17482751 | 20119 | 50297 | 869 | | |
| 409.7788 | 50.816 | 50.819 | 0 | 1.000 | 78350873 | 16747345 | 17872 | 44680 | 937 | 1.04(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | |
| 407.7817 | 49.625 | | | | | | 20119 | 50297 | | | |
| 409.7788 | 49.625 | | | | | | 17872 | 44680 | | | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCDD | | | | | | | | | | | |
| 457.7377 | 54.304 | 54.290 | 1 | 1.000 | 108733609 | 27926856 | 5675 | 14187 | 4921 | | |
| 459.7348 | 54.304 | 54.290 | 1 | 1.000 | 122338067 | 31462370 | 3359 | 8397 | 9367 | 0.89(0.76-1.02) | |
| OCDF | | | | | | | | | | | |
| 441.7428 | 54.442 | 54.428 | 1 | 1.000 | 155863517 | 41040943 | 7156 | 17890 | 5735 | | |
| 443.7399 | 54.442 | 54.428 | 1 | 1.000 | 172412164 | 44868657 | 4979 | 12447 | 9012 | 0.90(0.76-1.02) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 31.799 | 31.788 | 1 | 1.017 | 4607334 | 473651 | 592 | 1480 | 800 | | |
| 333.9338 | 31.782 | 31.788 | 0 | 1.016 | 5768528 | 589511 | 550 | 1375 | 1072 | 0.80(0.65-0.89) | |
| 13C-2,3,7,8-TCDF | | | | | | | | | | | |
| 315.9419 | 29.721 | 29.727 | 0 | 0.951 | 7427403 | 841116 | 547 | 1367 | 1538 | | |
| 317.9389 | 29.721 | 29.727 | 0 | 0.951 | 9389182 | 1034816 | 257 | 642 | 4027 | 0.79(0.65-0.89) | |
| 13C-1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 367.8949 | 40.992 | 40.998 | 0 | 1.311 | 5796310 | 1417798 | 1141 | 2852 | 1243 | | |
| 369.8919 | 40.992 | 40.998 | 0 | 1.311 | 3578458 | 867632 | 410 | 1025 | 2116 | 1.62(1.32-1.78) | |
| 13C-1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 39.271 | 39.276 | 0 | 1.256 | 8743681 | 1824863 | 607 | 1517 | 3006 | | |
| 353.8970 | 39.271 | 39.276 | 0 | 1.256 | 5502382 | 1138709 | 367 | 917 | 3103 | 1.59(1.32-1.78) | |
| 13C-2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 40.476 | 40.481 | 0 | 1.295 | 8822327 | 2063105 | 607 | 1517 | 3399 | | |
| 353.8970 | 40.476 | 40.481 | 0 | 1.295 | 5459778 | 1294562 | 367 | 917 | 3527 | 1.62(1.32-1.78) | |
| 13C-1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.228 | 45.231 | 0 | 0.989 | 6164898 | 1616312 | 842 | 2105 | 1920 | | |
| 403.8529 | 45.228 | 45.231 | 0 | 0.989 | 4904093 | 1287517 | 532 | 1330 | 2420 | 1.26(1.05-1.43) | |
| 13C-1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.346 | 45.350 | 0 | 0.992 | 6401259 | 1595923 | 842 | 2105 | 1895 | | |
| 403.8529 | 45.346 | 45.350 | 0 | 0.992 | 4989769 | 1231785 | 532 | 1330 | 2315 | 1.28(1.05-1.43) | |
| 13C-1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44.182 | 44.185 | 0 | 0.966 | 5120432 | 1381755 | 832 | 2080 | 1661 | | |
| 385.8610 | 44.182 | 44.185 | 0 | 0.966 | 9529227 | 2585041 | 810 | 2025 | 3191 | 0.54(0.43-0.59) | |
| 13C-1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44.317 | 44.320 | 0 | 0.969 | 6409287 | 1630605 | 832 | 2080 | 1960 | | |
| 385.8610 | 44.317 | 44.320 | 0 | 0.969 | 11865771 | 3006925 | 810 | 2025 | 3712 | 0.54(0.43-0.59) | |
| 13C-2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 45.042 | 45.046 | 0 | 0.985 | 5600324 | 1449599 | 832 | 2080 | 1742 | | |
| 385.8610 | 45.042 | 45.046 | 0 | 0.985 | 10553773 | 2710750 | 810 | 2025 | 3347 | 0.53(0.43-0.59) | |
| 13C-1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 383.8639 | 46.021 | 46.007 | 1 | 1.006 | 5386117 | 1234214 | 832 | 2080 | 1483 | | |
| 385.8610 | 46.021 | 46.007 | 1 | 1.006 | 9896226 | 2263801 | 810 | 2025 | 2795 | 0.54(0.43-0.59) | |
| 13C-1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 435.8169 | 50.175 | 50.161 | 1 | 1.097 | 5249997 | 1019447 | 2 | 5 | 509724 | | |
| 437.8140 | 50.158 | 50.161 | 0 | 1.097 | 5007856 | 965323 | 1386 | 3465 | 696 | 1.05(0.88-1.20) | |
| 13C-1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 417.8250 | 48.454 | 48.441 | 1 | 1.059 | 4191950 | 918491 | 651 | 1627 | 1411 | | |
| 419.8220 | 48.454 | 48.441 | 1 | 1.059 | 9160509 | 1970766 | 721 | 1802 | 2733 | 0.46(0.51-0.37) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 417.8250 | 50.799 | 50.786 | 1 | 1.111 | 3608112 | 723202 | 651 | 1627 | 1111 | | |
| 419.8220 | 50.799 | 50.786 | 1 | 1.111 | 7913394 | 1597054 | 721 | 1802 | 2215 | 0.46(0.37-0.51) | |
| 13C-OCDD | | | | | | | | | | | |
| 469.7780 | 54.287 | 54.290 | 0 | 1.187 | 9055141 | 2191452 | 401 | 1002 | 5465 | | |
| 471.7750 | 54.287 | 54.290 | 0 | 1.187 | 9832017 | 2381855 | 332 | 830 | 7174 | 0.92(0.76-1.02) | |
| 13C-OCDF | | | | | | | | | | | |
| 453.7830 | 54.425 | 54.428 | 0 | 1.190 | 13541954 | 3402498 | 327 | 817 | 10405 | | |
| 455.7801 | 54.425 | 54.428 | 0 | 1.190 | 14972605 | 3795875 | 485 | 1212 | 7827 | 0.90(0.76-1.02) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31.832 | 31.838 | 0 | 1.018 | 23452691 | 2454284 | 142 | 355 | 17284 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 31.267 | 31.273 | 0 | | 4245924 | 455340 | 592 | 1480 | 769 | | |
| 333.9338 | 31.267 | 31.273 | 0 | | 5243743 | 567990 | 550 | 1375 | 1033 | 0.81(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45.734 | 45.737 | 0 | | 7200331 | 1668779 | 842 | 2105 | 1982 | | |
| 403.8529 | 45.734 | 45.737 | 0 | | 5559512 | 1312385 | 532 | 1330 | 2467 | 1.30(1.05-1.43) | |

## QC Flag Legend

Processing Flags

n - Failed Sig-To-Noise Test

## Reagents:

61L51613OP_00001 Amount Added: 20.00 Units: uL

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d
Lims ID: IC L5
Client ID:
Inject. Date: 16-May-2014 18:31:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 5
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 6
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDD, RT: 30.308

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 319.8965 Area | 319.8965 Height | 321.8936 Area | 321.8936 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 28.708 | 9544 | 1291 | 11012 | 1474 | | 0.87 | n |
| Signal Totals: | | | | | | | |
| | 9544 | 1291 | 11012 | 1474 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 20556 | 2765 | | | | 0.87 | |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (20556 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
n - Failed Sig-To-Noise Test

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d
Lims ID: IC L5
Client ID:
Inject. Date: 16-May-2014 18:31:00 Dil. Factor: 1.0000
Sample Type: IC, ICal Standard Calib Level: 5
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 6
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDF, RT: 28.995

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 303.9016 Area | 303.9016 Height | 305.8987 Area | 305.8987 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 28.625 | 130826 | 15367 | 154853 | 16581 | | 0.84 | |
| Signal Totals: | | | | | | | |
| | 130826 | 15367 | 154853 | 16581 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 285679 | 31948 | | | | 0.84 | |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (285679 * 0.0) / (0 * 0.000)

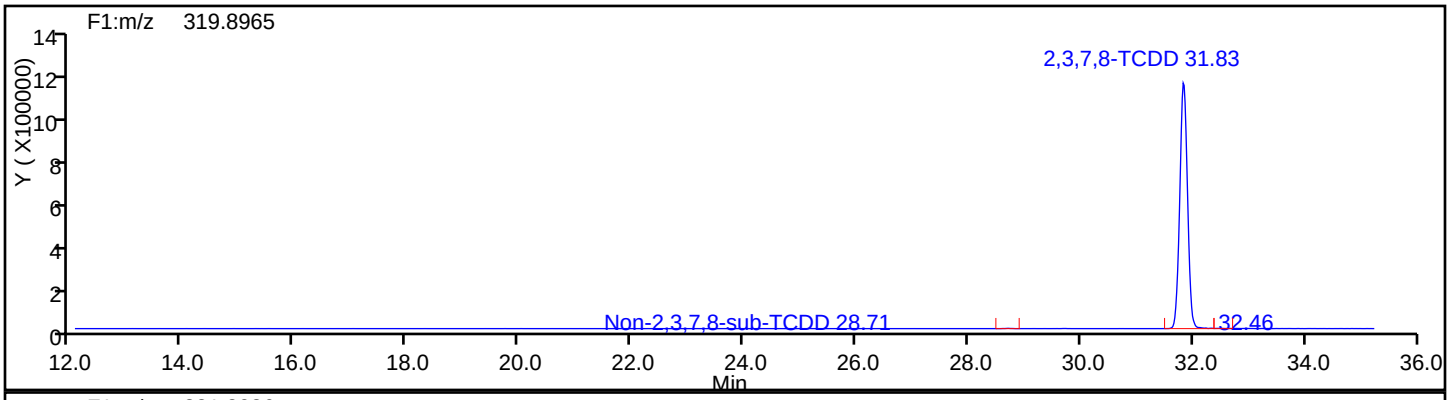
Report Date: 12-Jan-2017 08:09:43 Chrom Revision: 2.2 10-Jan-2017 11:26:10

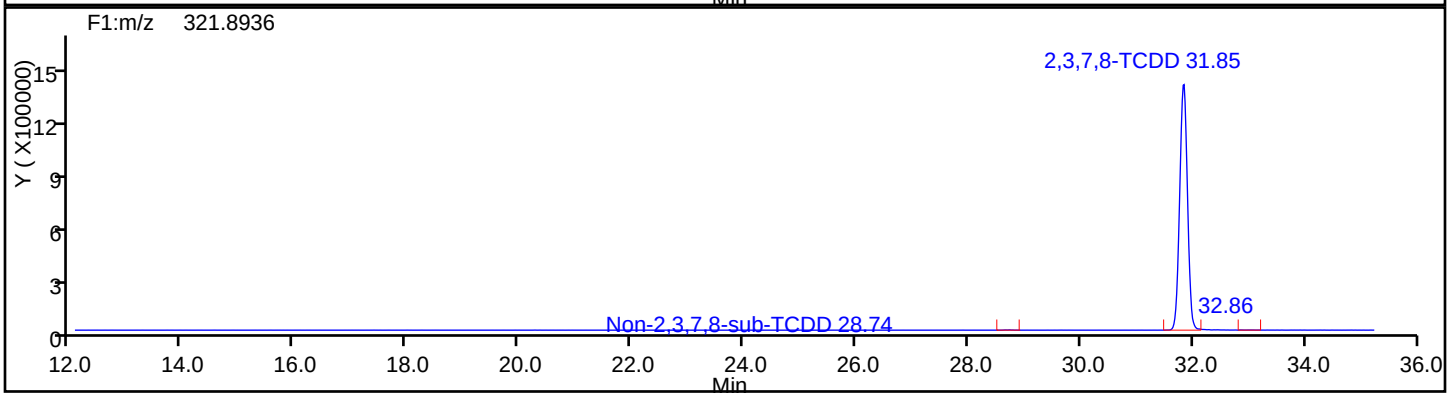
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

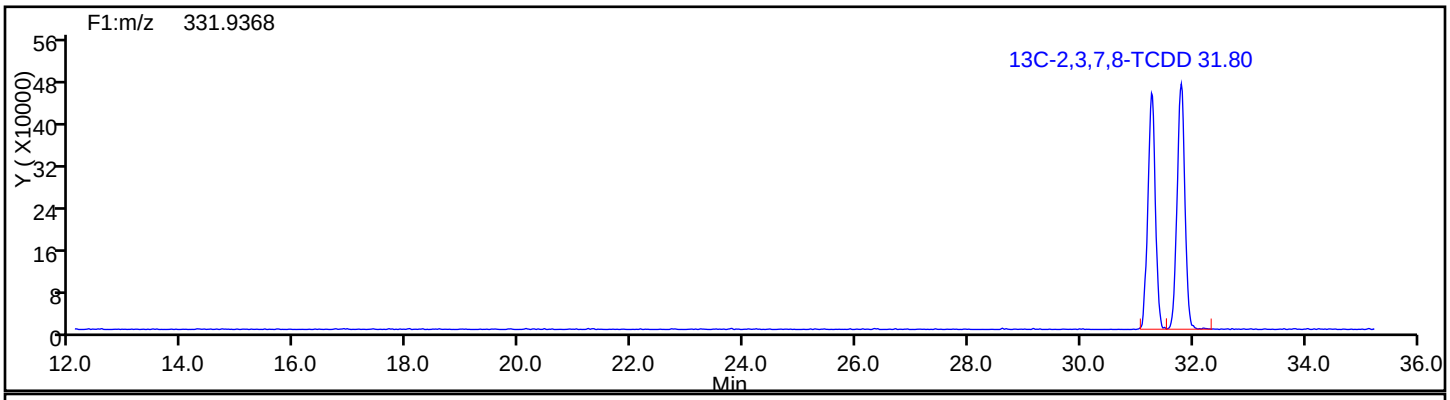
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 18:31:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

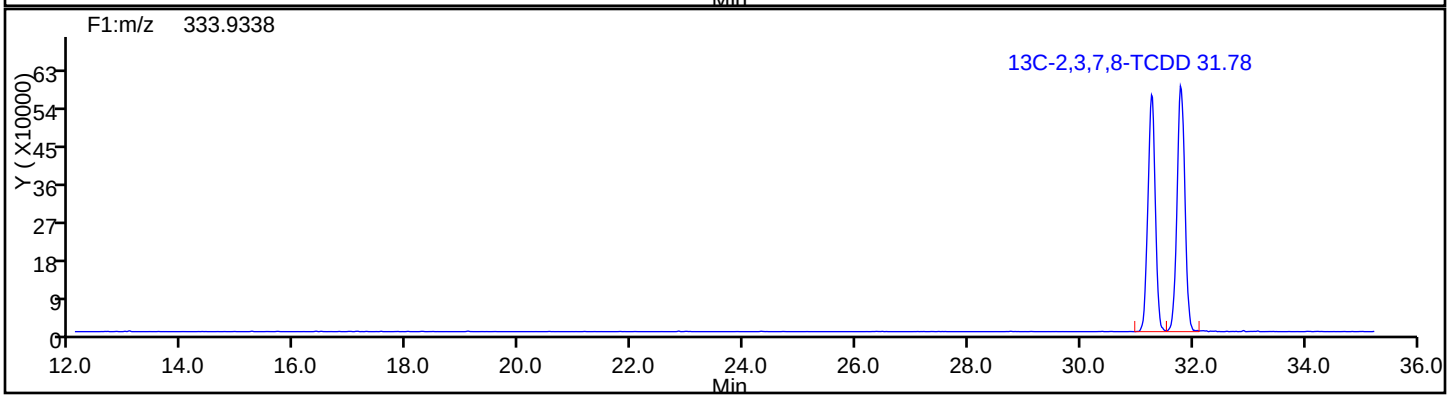
TCDD




TCDD Standards



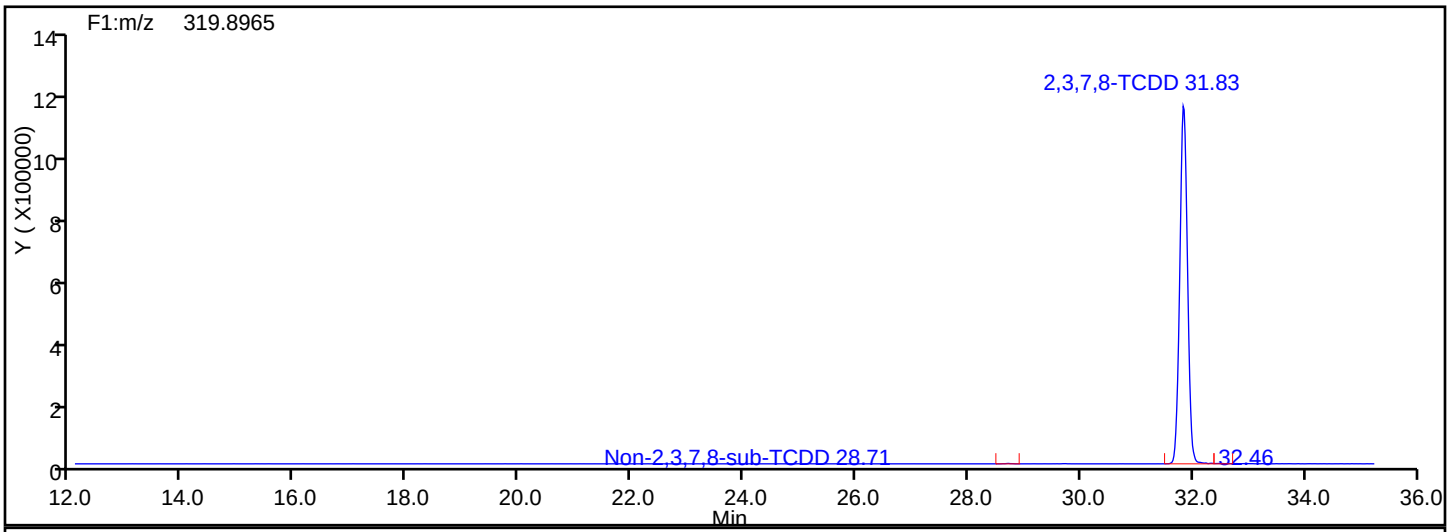
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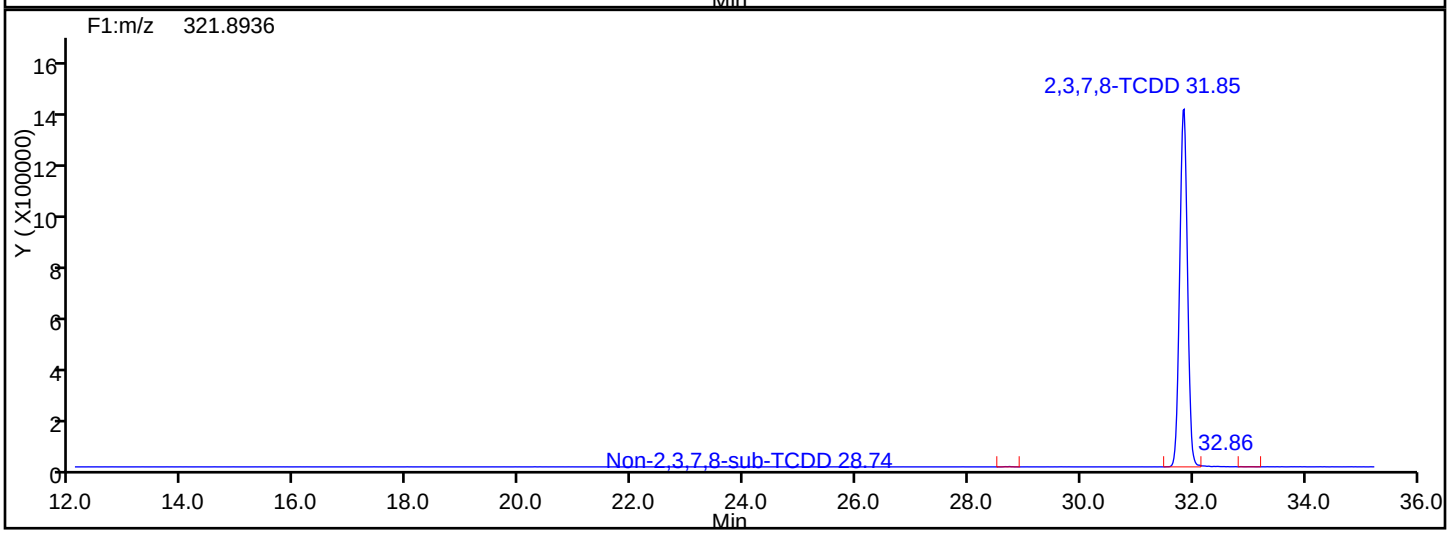
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

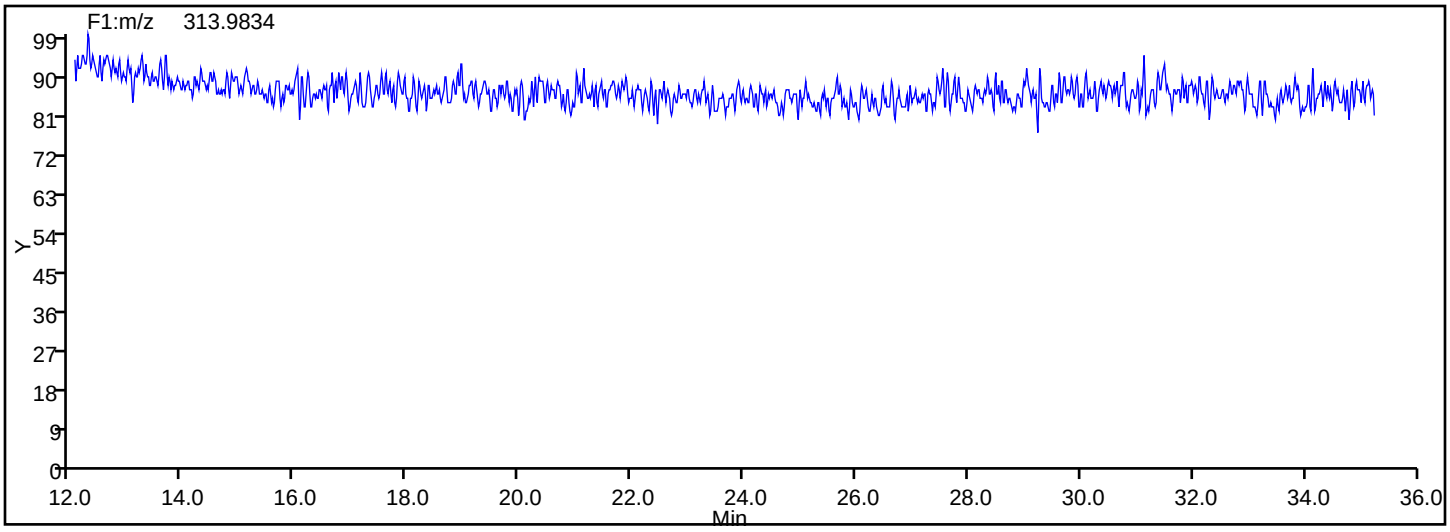
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 18:31:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



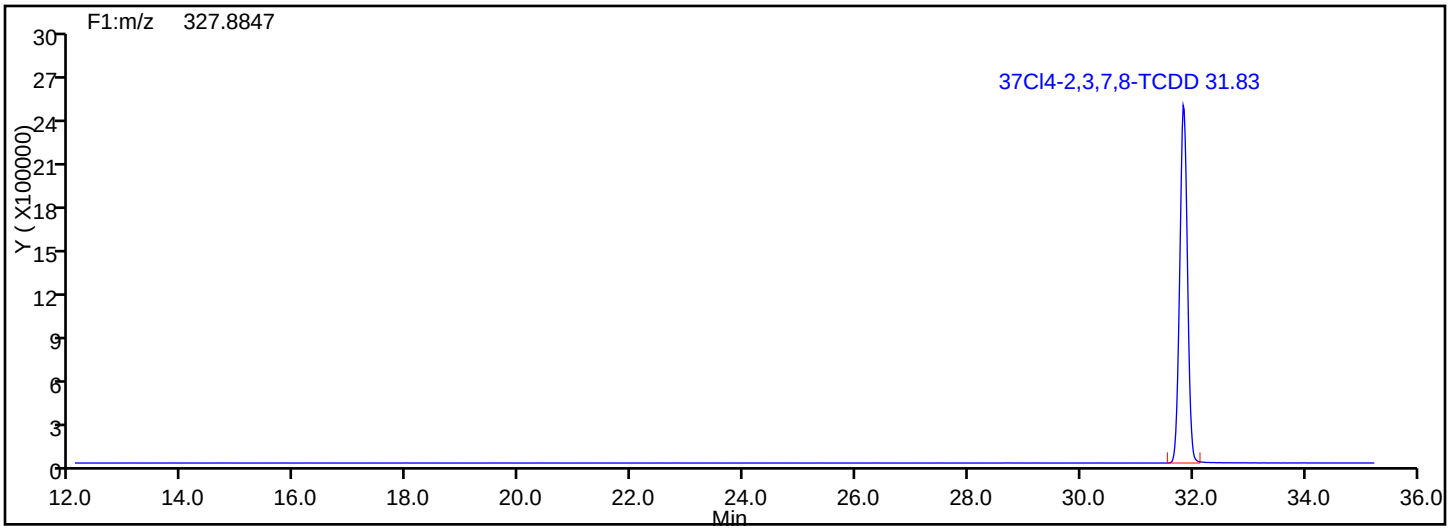
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TestAmerica Knoxville

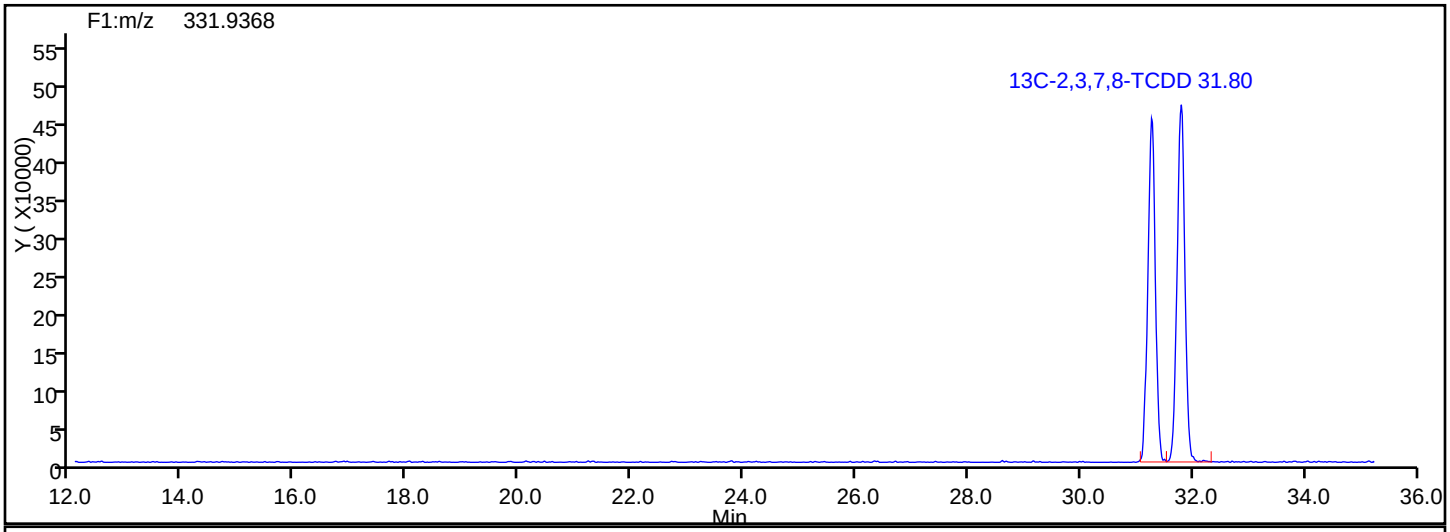
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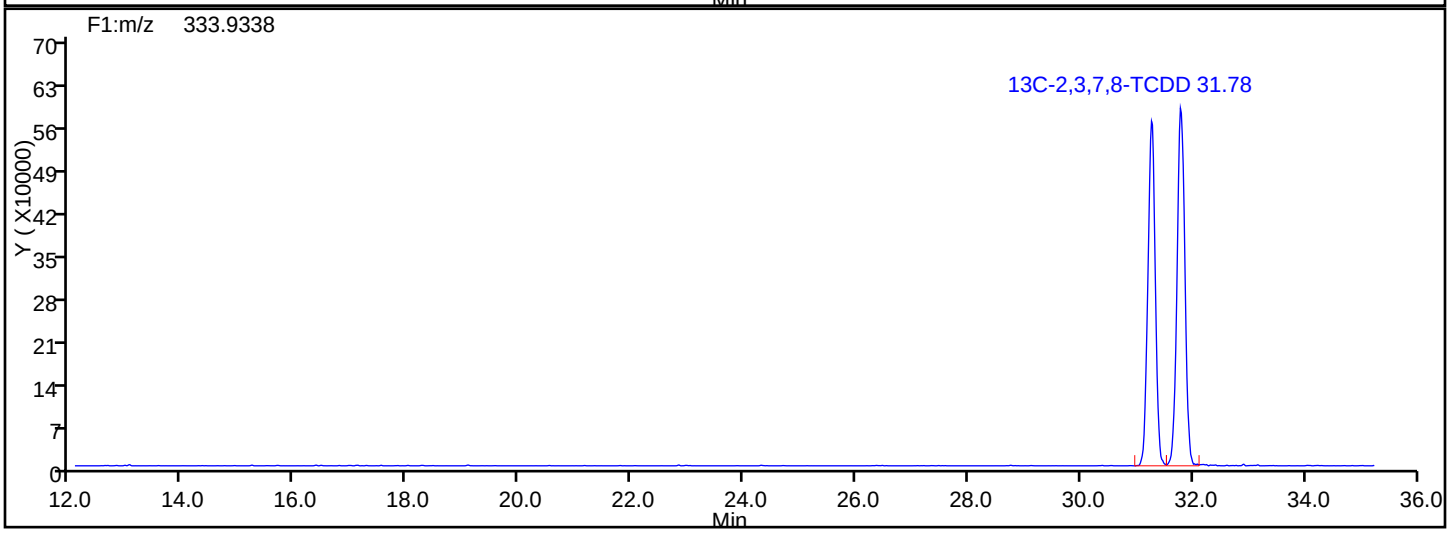
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 18:31:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



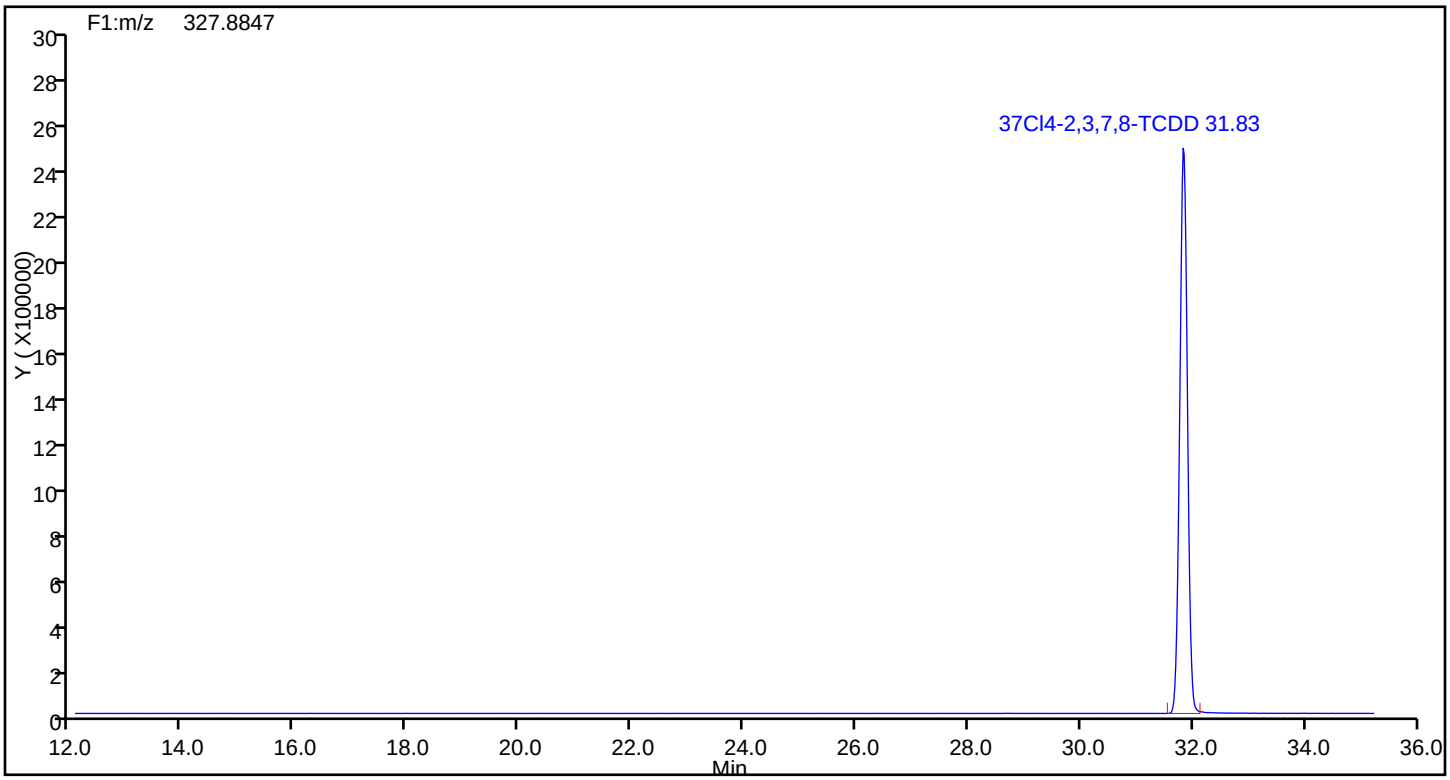
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TestAmerica Knoxville

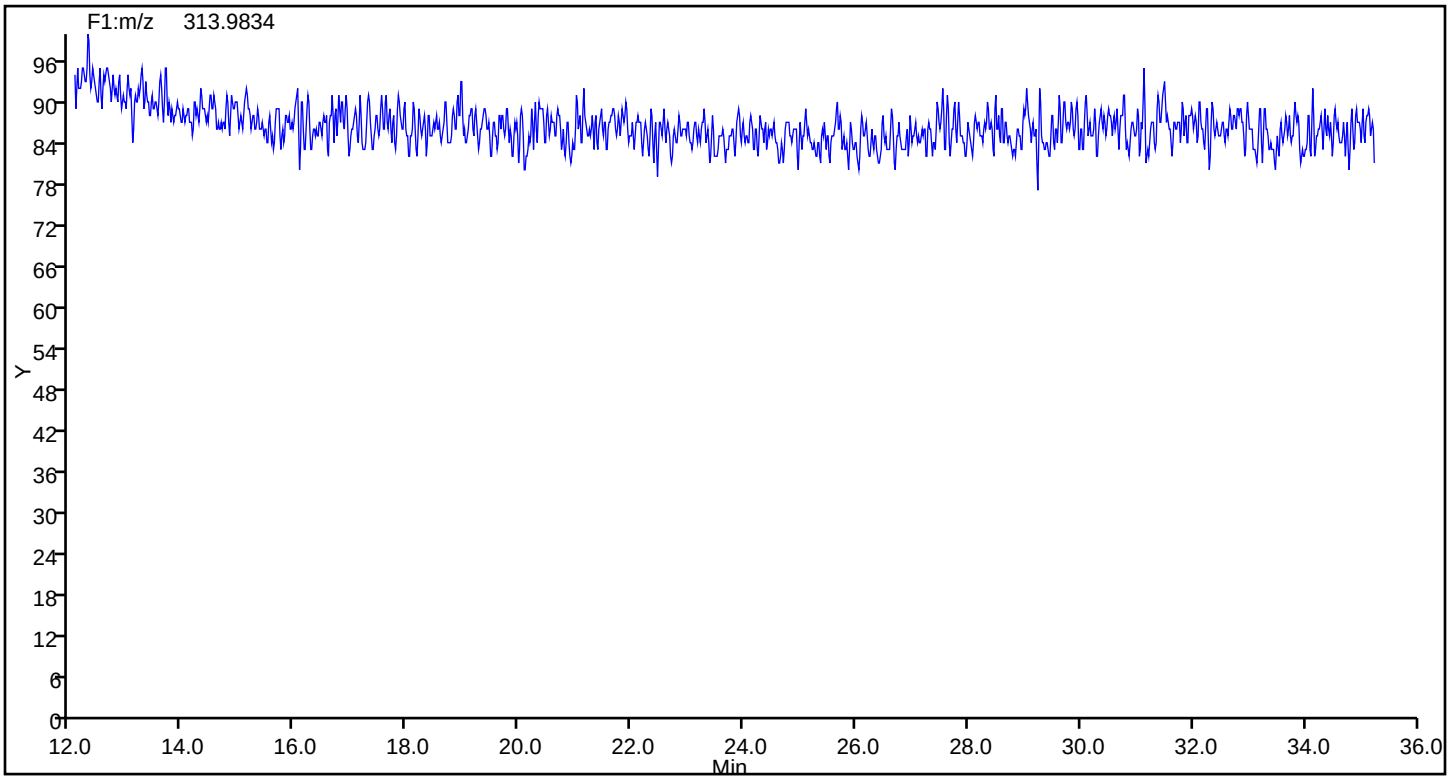
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| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 18:31:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Lock Mass



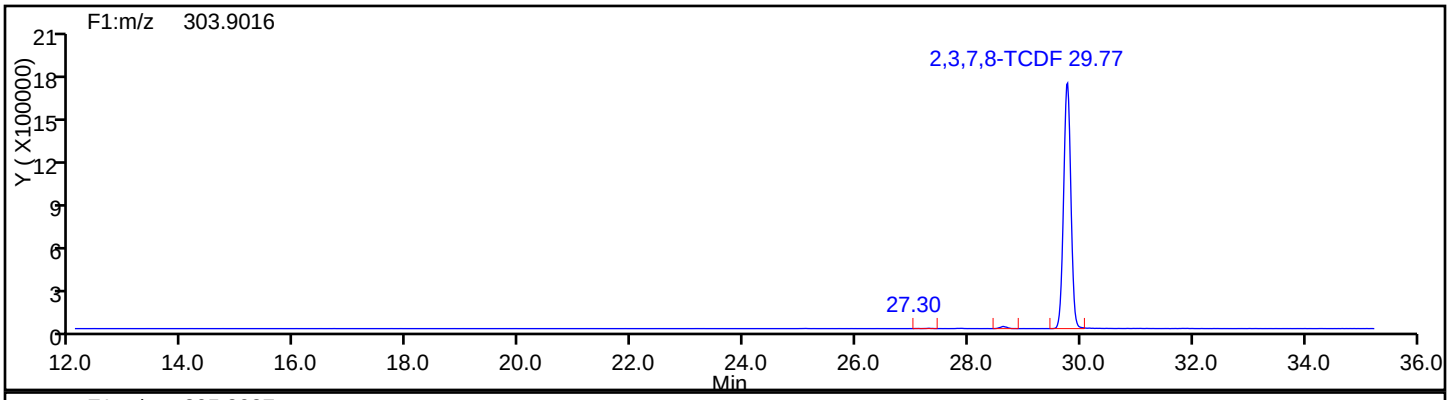
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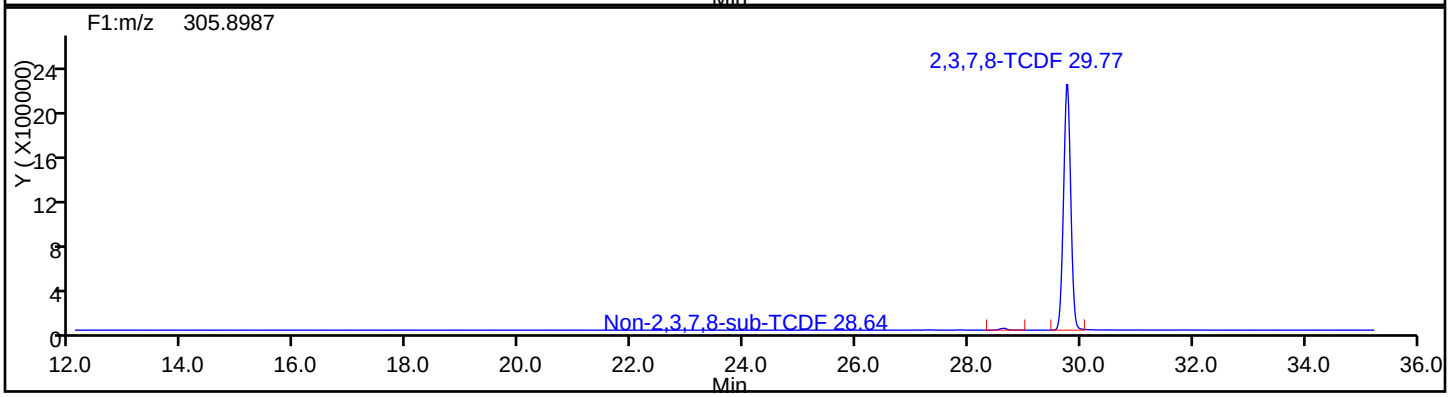
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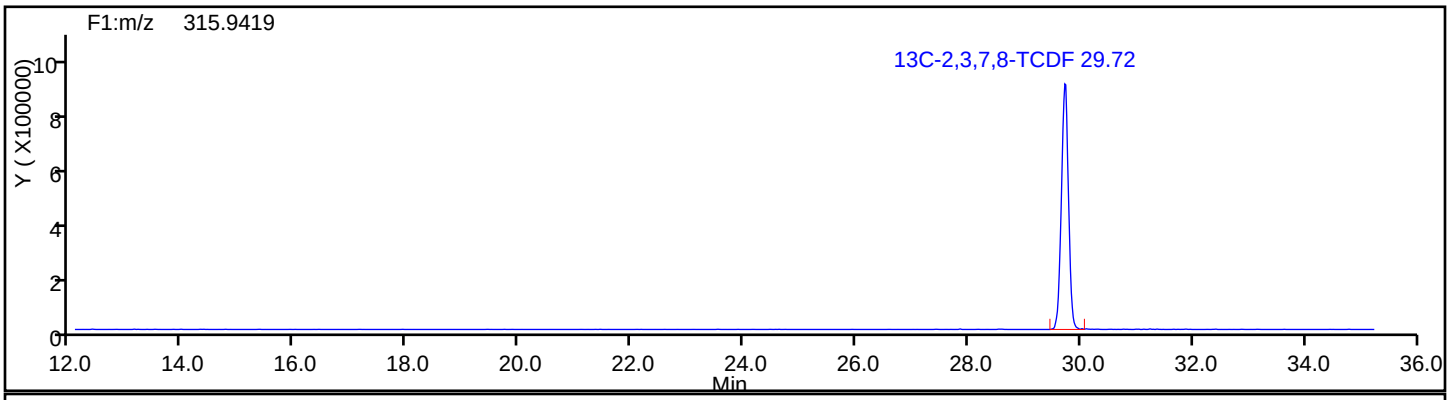
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| Injection Date: | 16-May-2014 18:31:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
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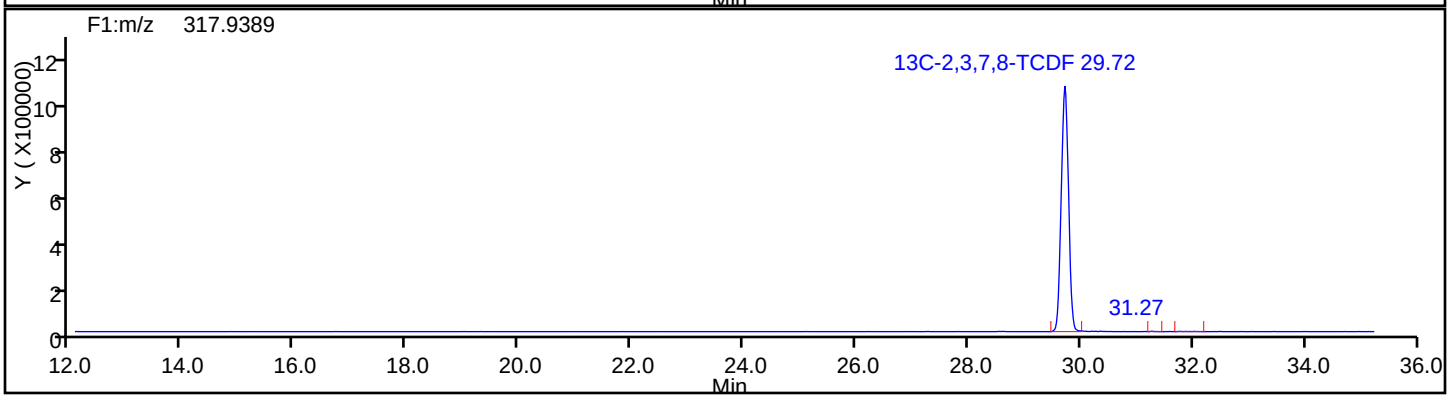
TCDF




TCDF Standards



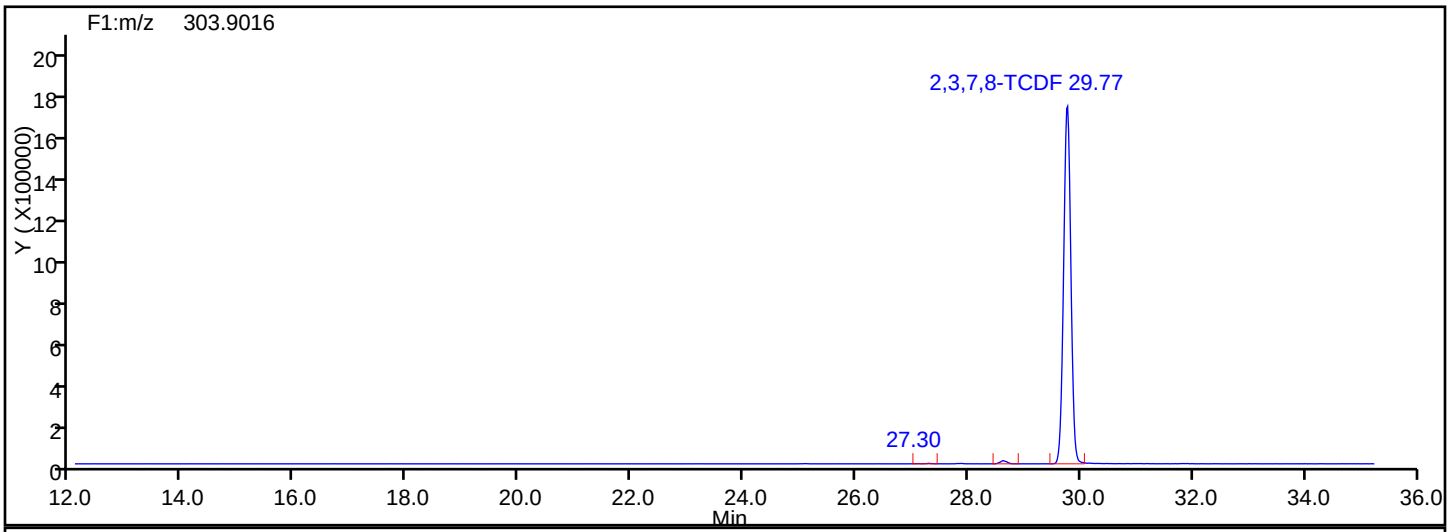
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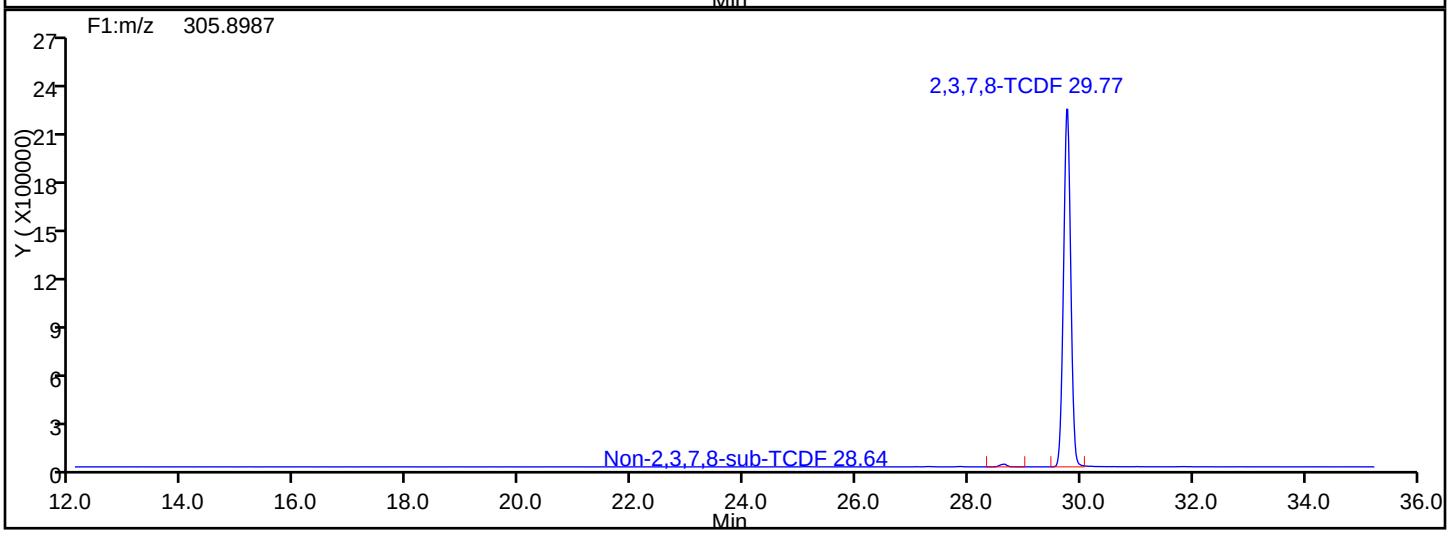
TestAmerica Knoxville

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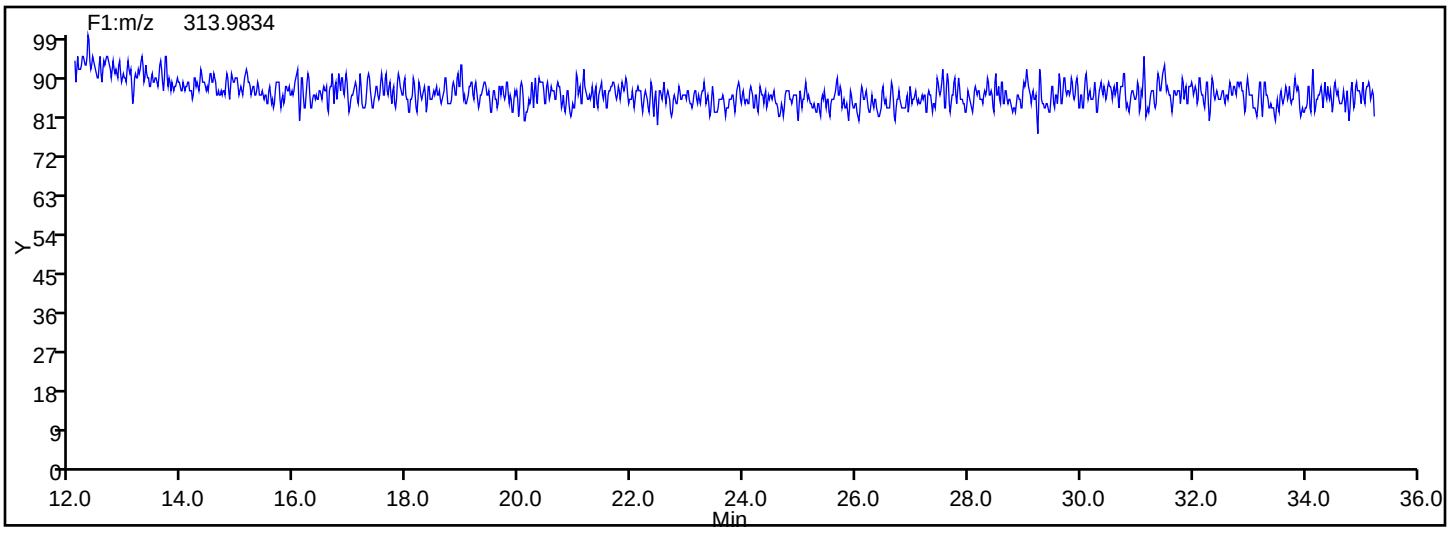
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

TCDF




TCDF Lock Mass



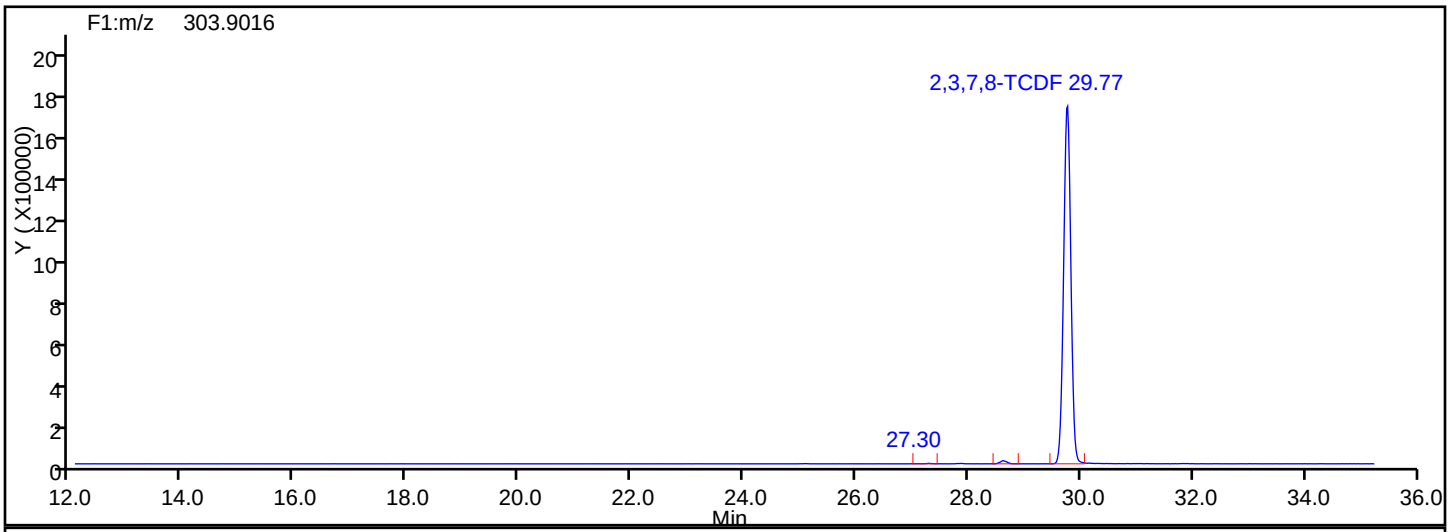
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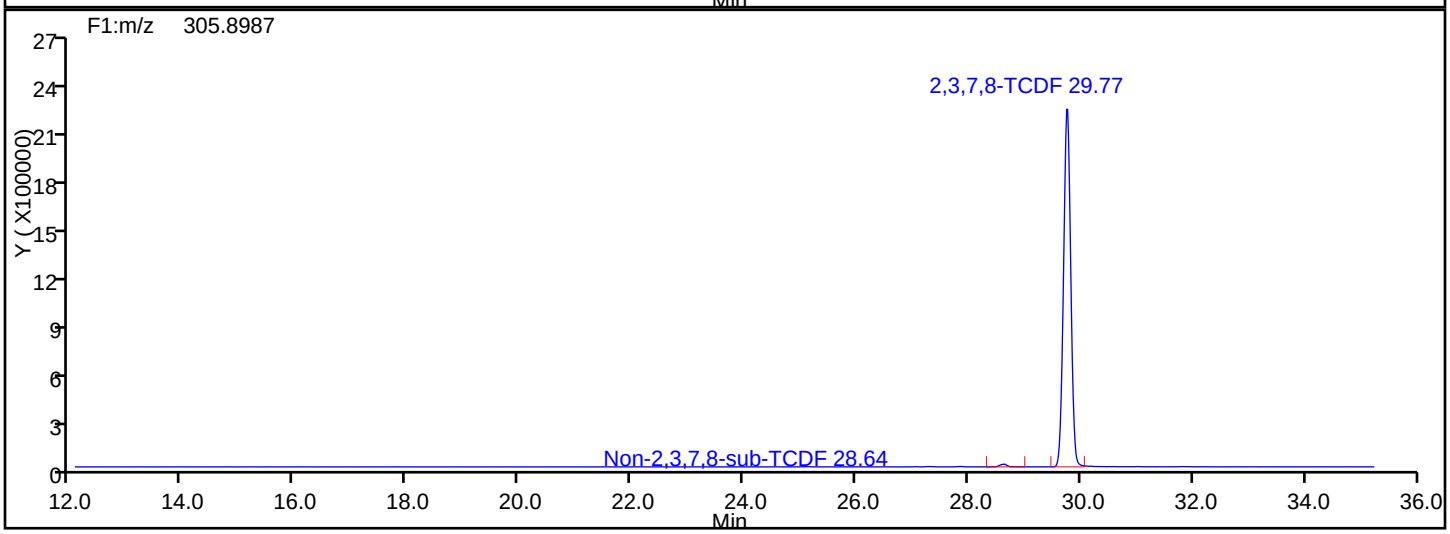
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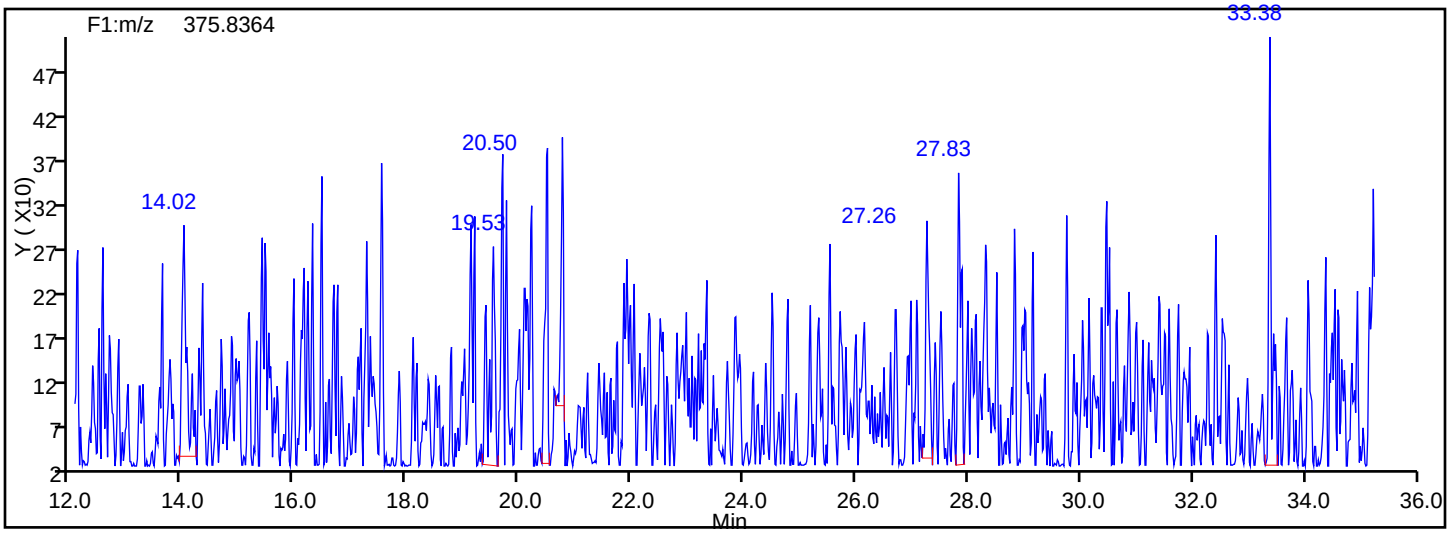
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

TCDF




TCDF Interference Mass



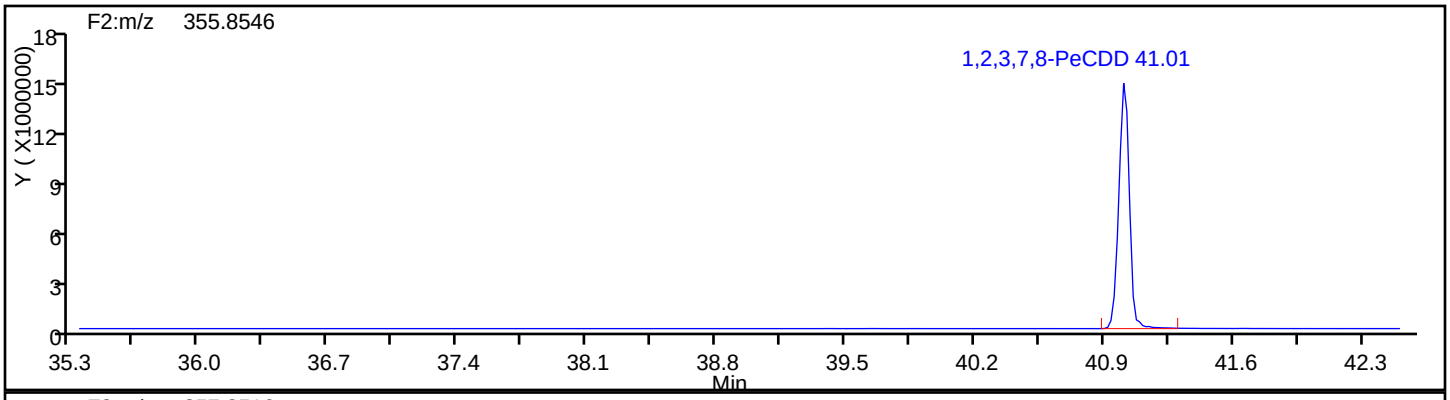
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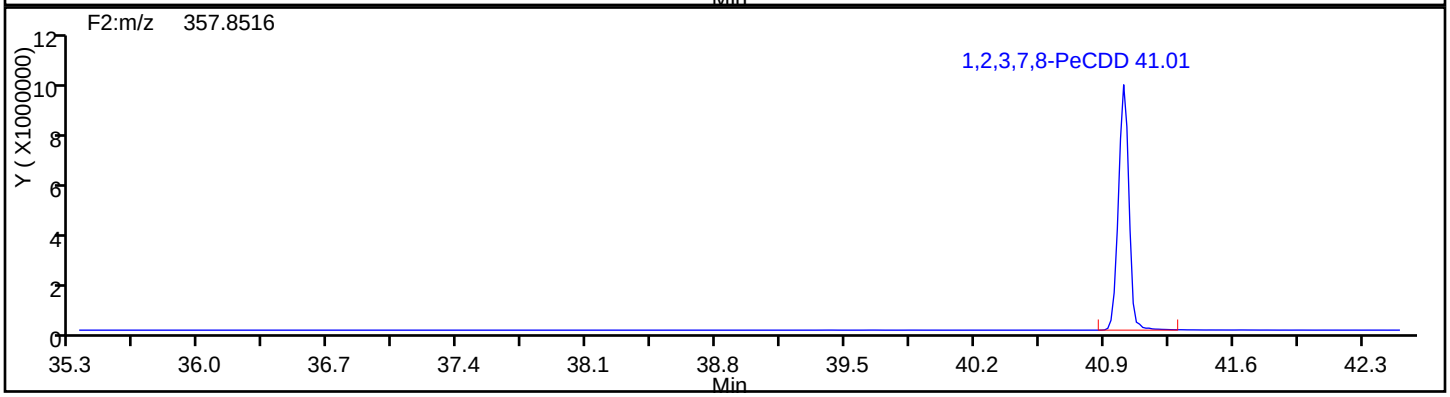
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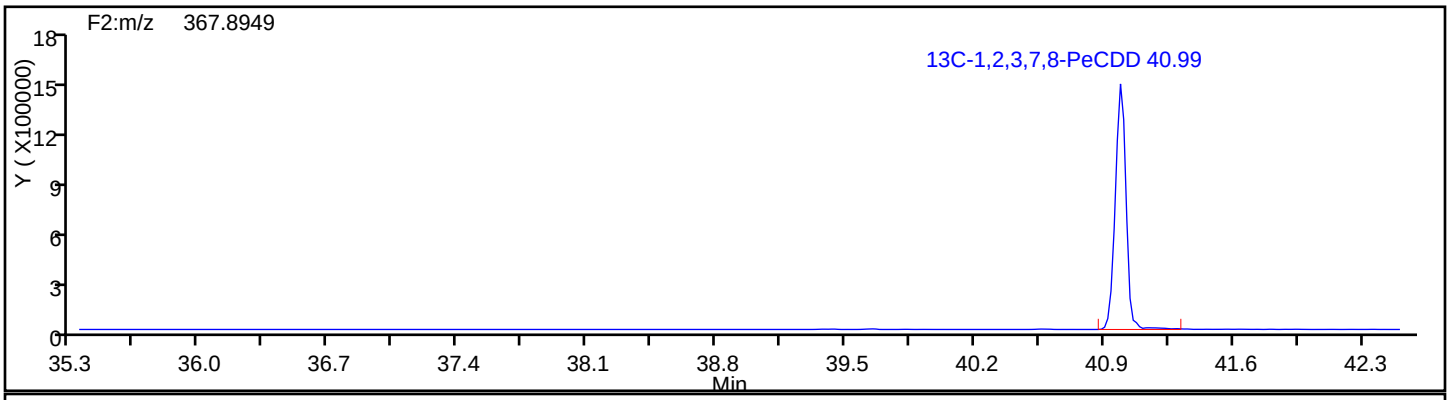
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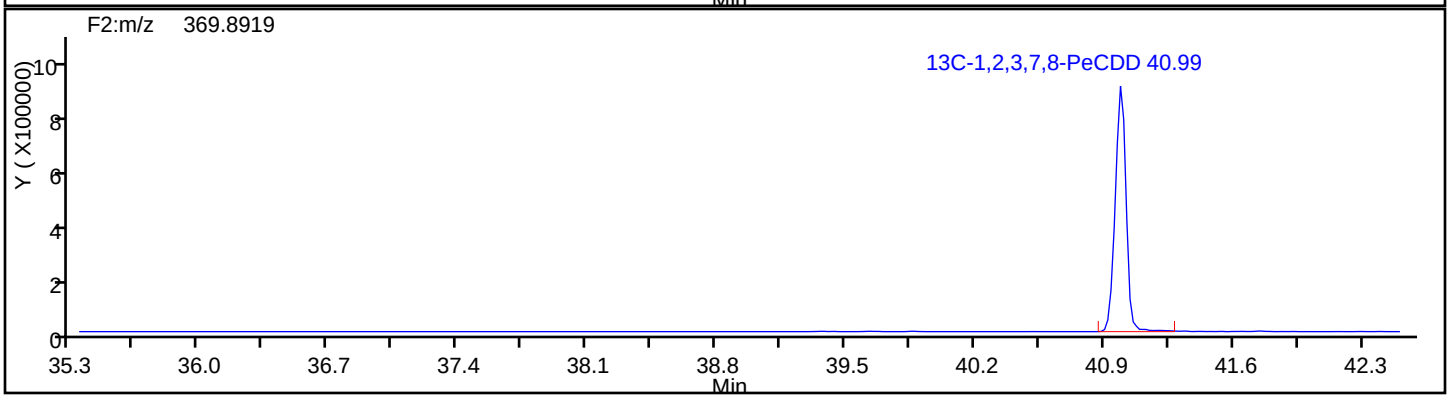
PeCDD




PeCDD Standards



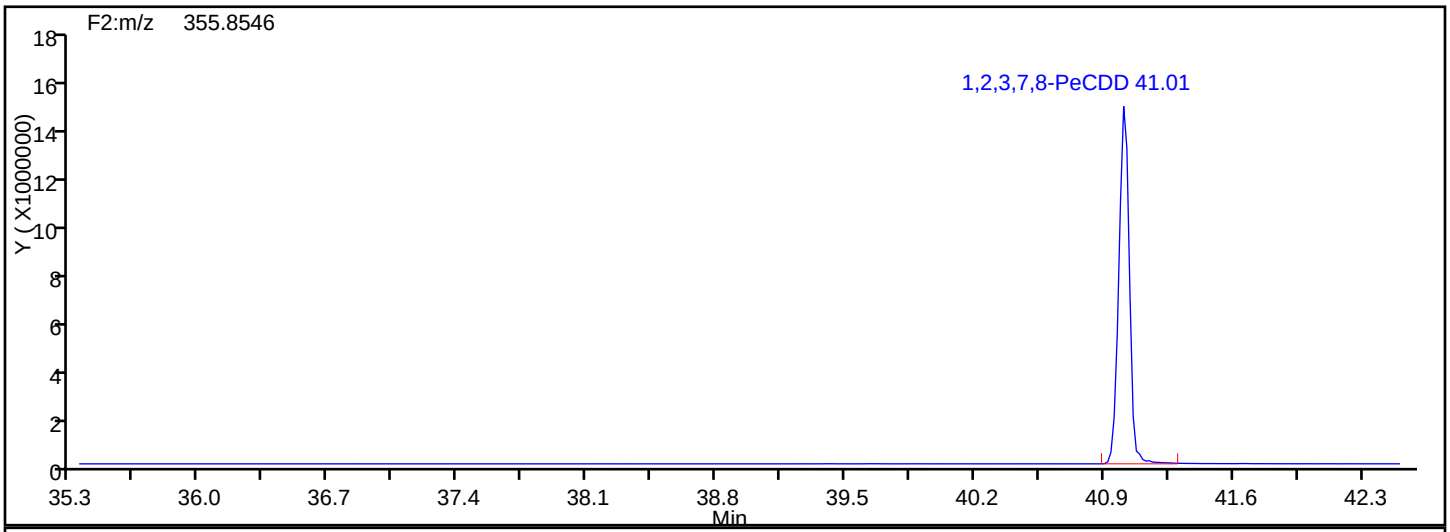
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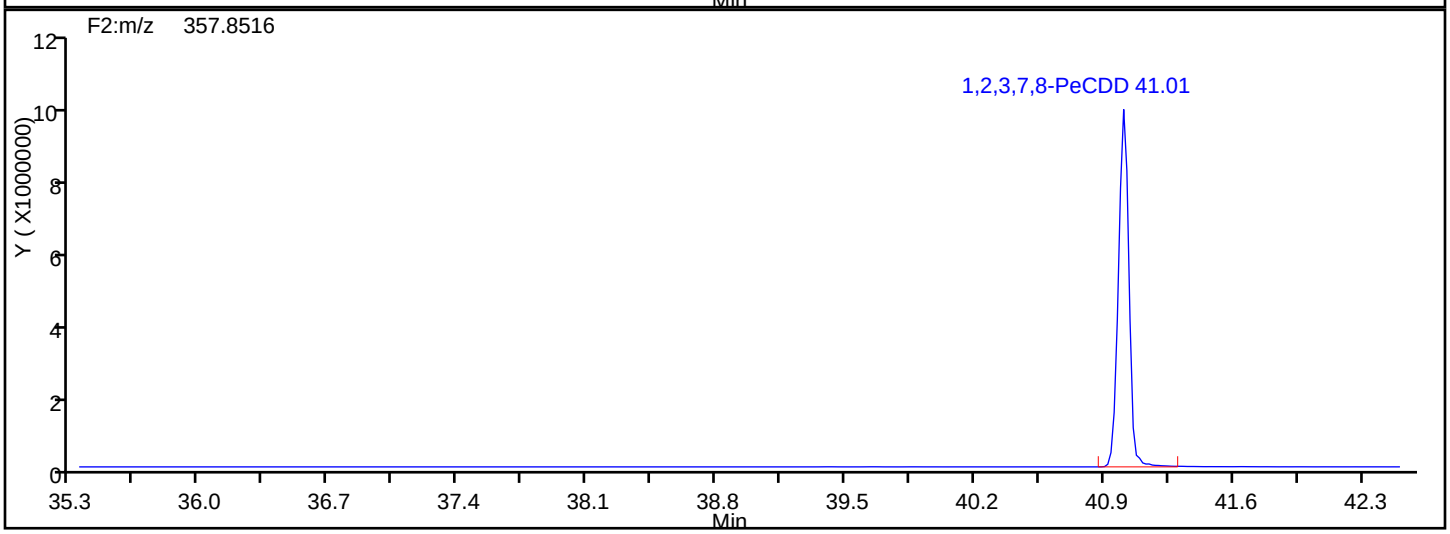
TestAmerica Knoxville

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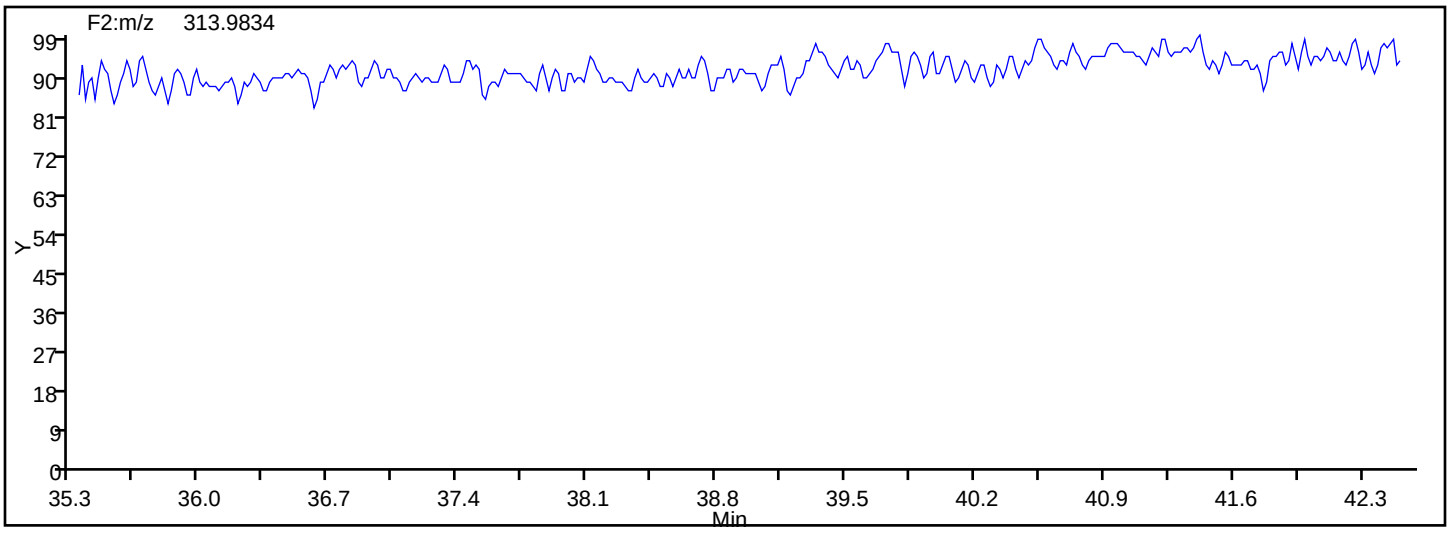
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| Column Type: | | Column Dia: | |

PeCDD




PeCDD Lock Mass



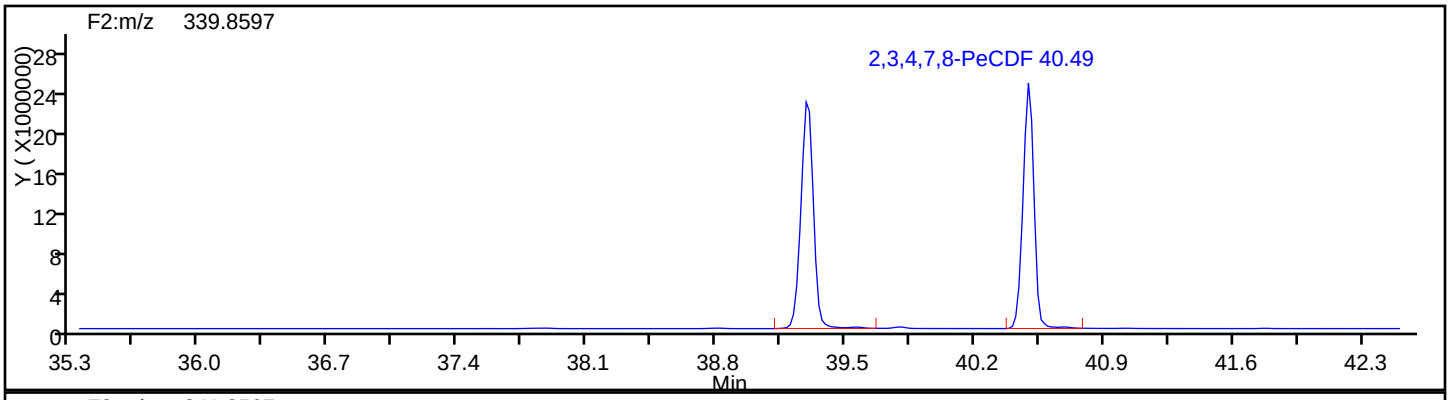
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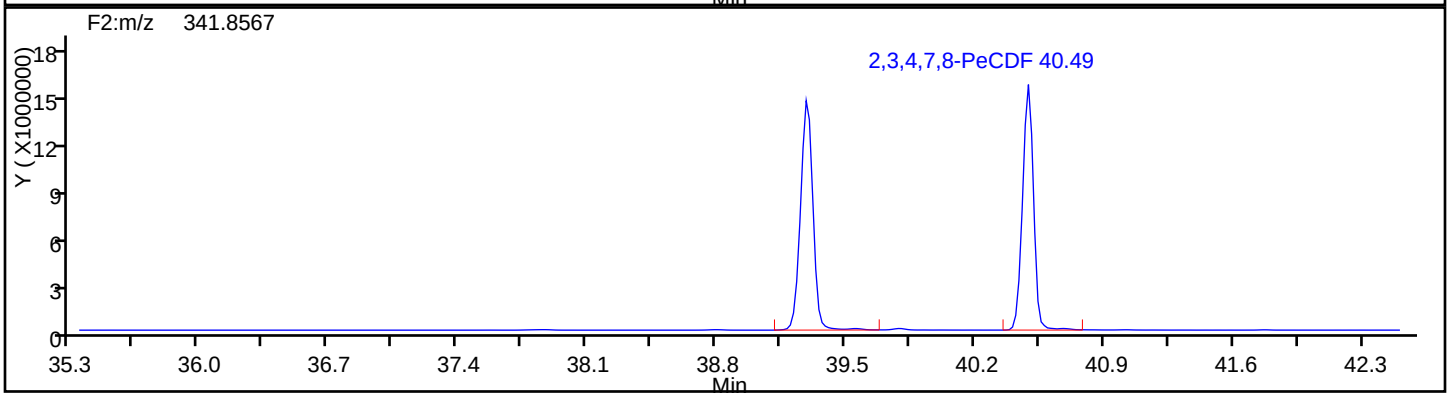
TestAmerica Knoxville

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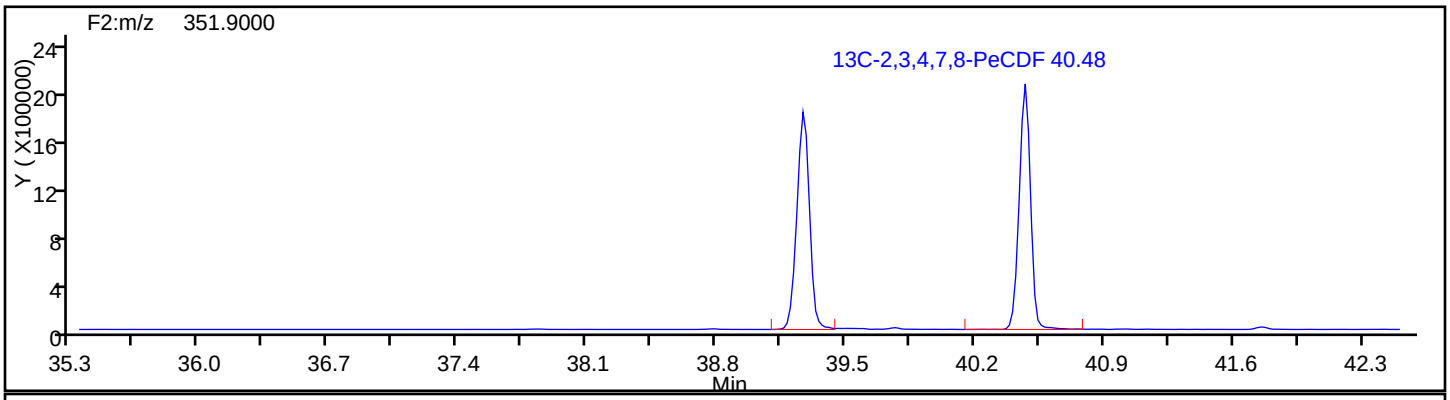
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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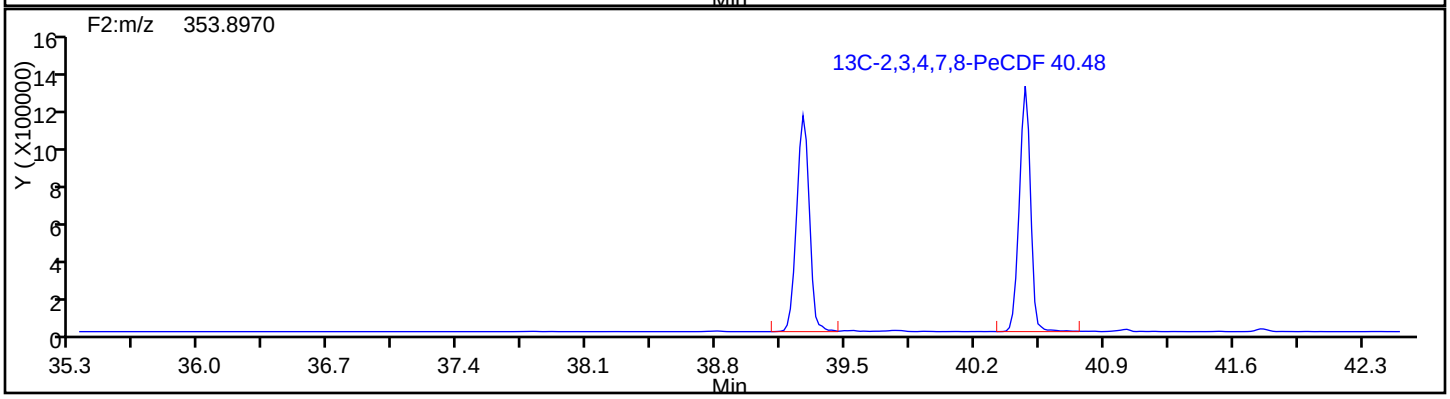
PeCDF




PeCDF Standards



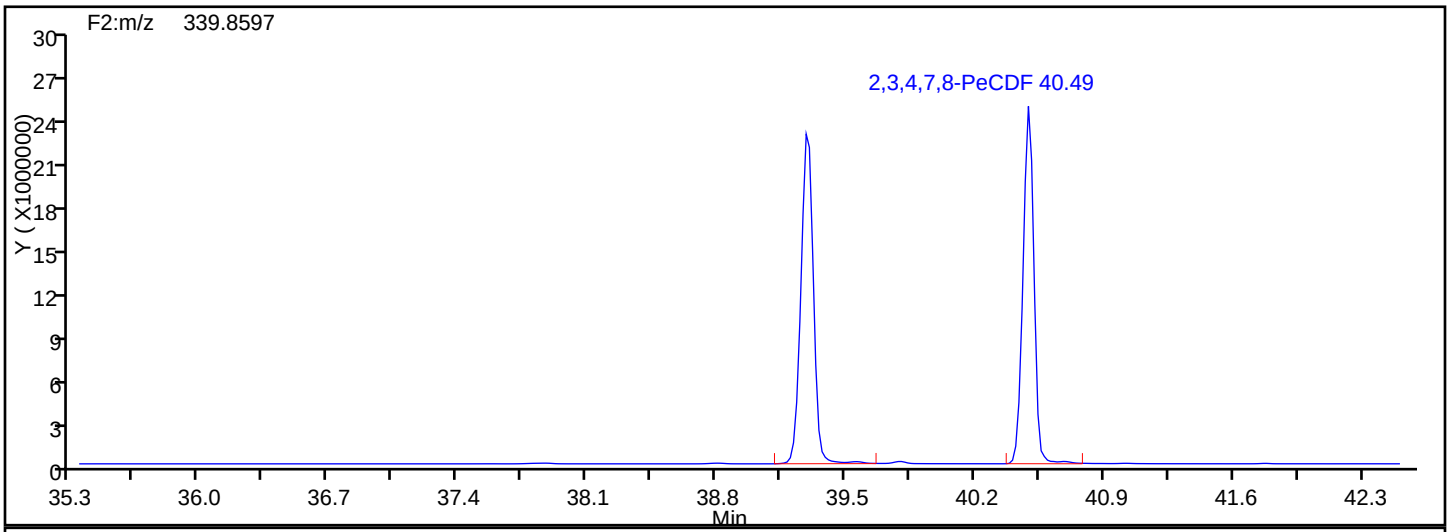
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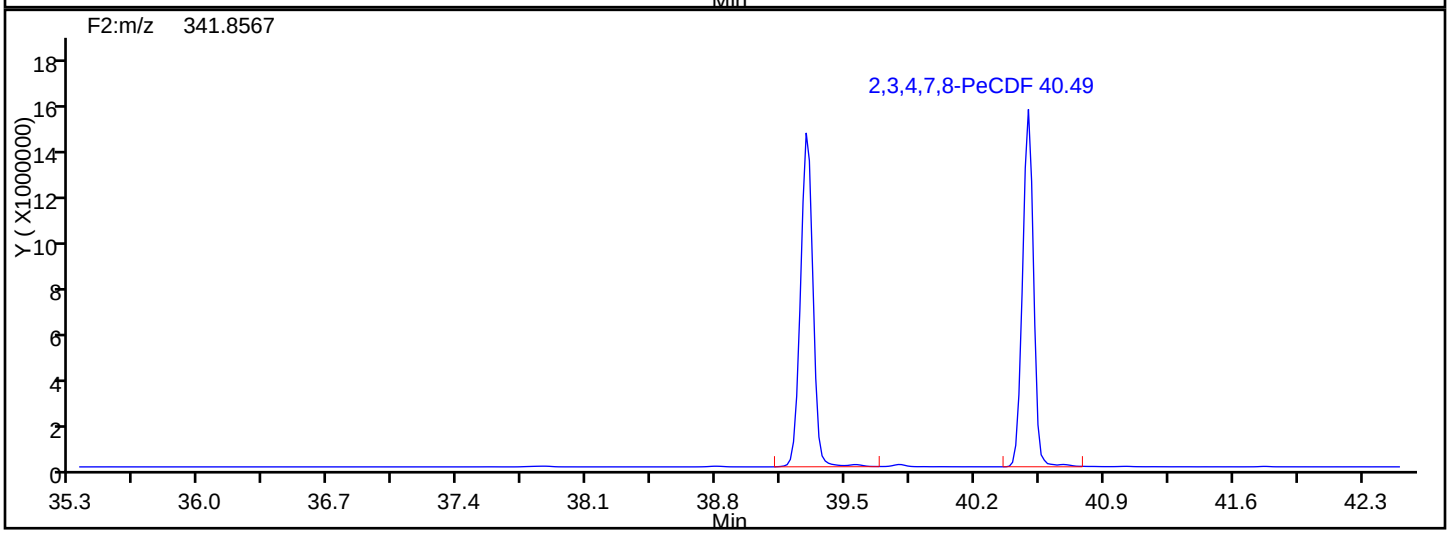
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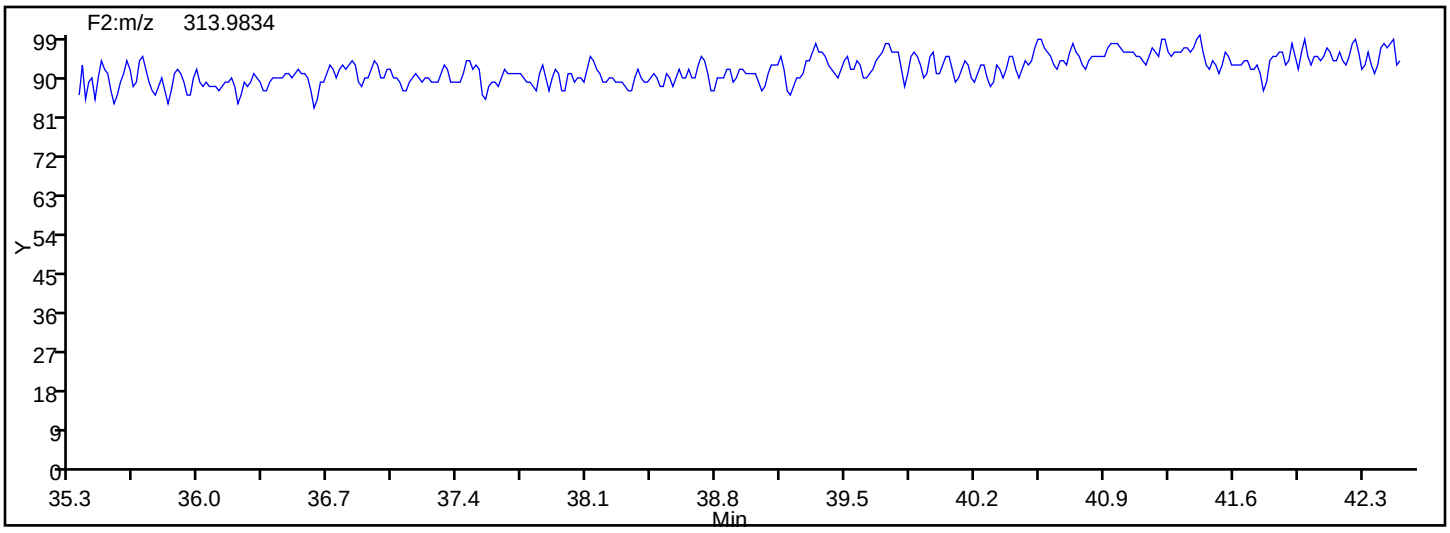
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| Column Type: | | Column Dia: | |

PeCDF




PeCDF Lock Mass



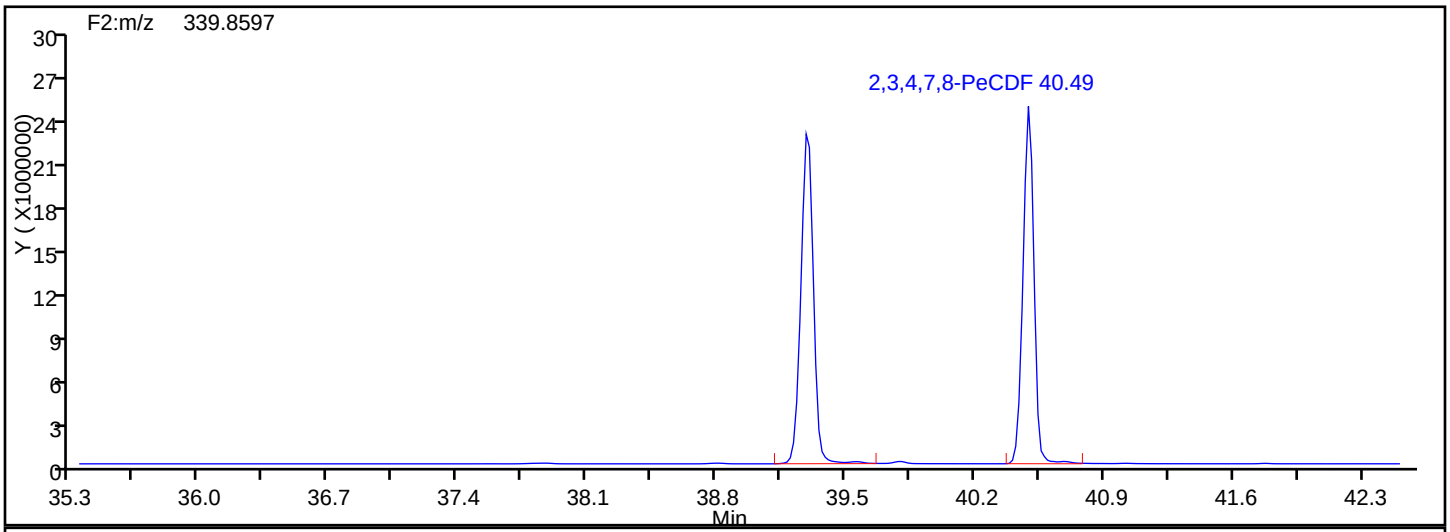
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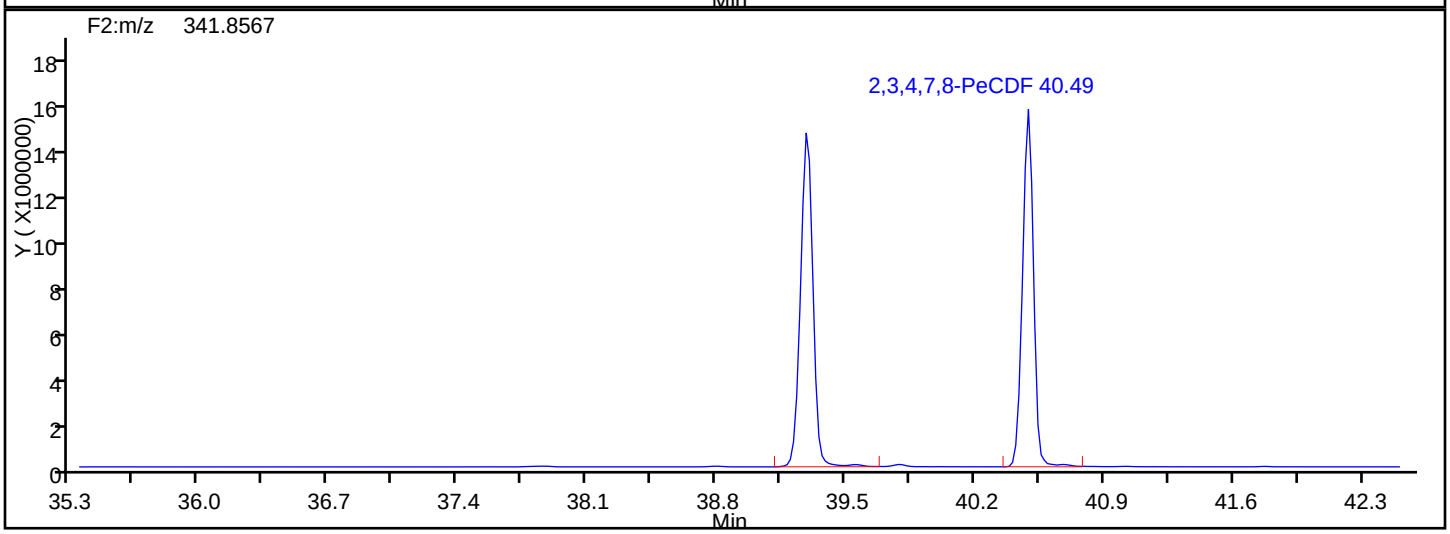
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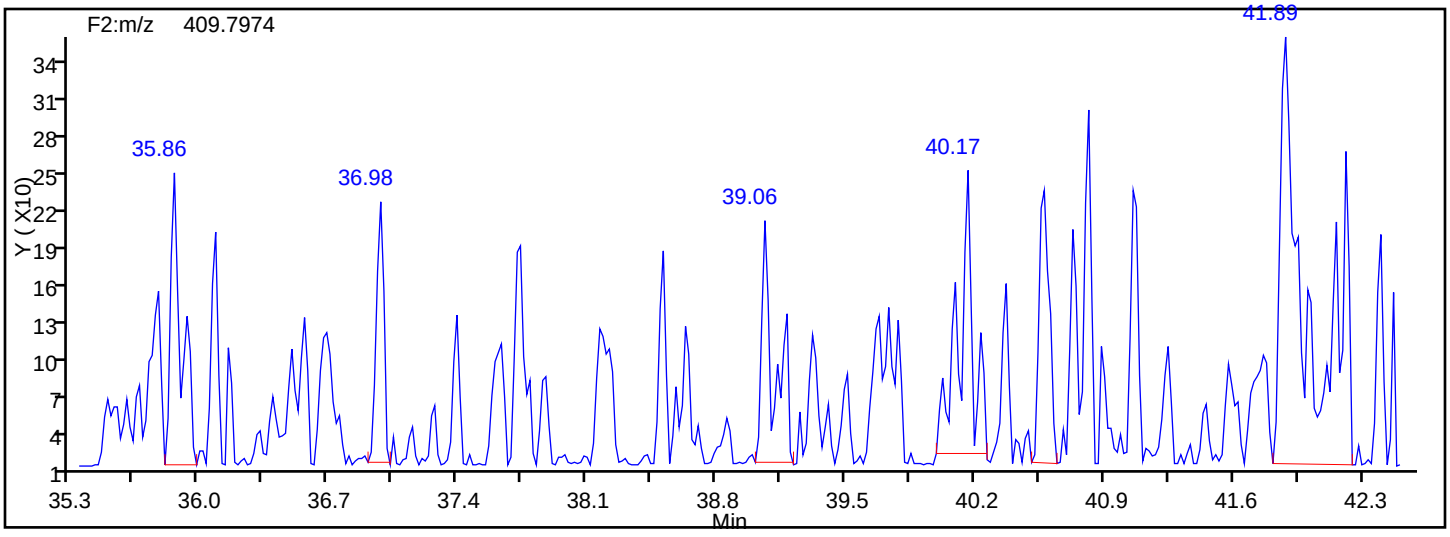
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PeCDF




PeCDF Interference Mass



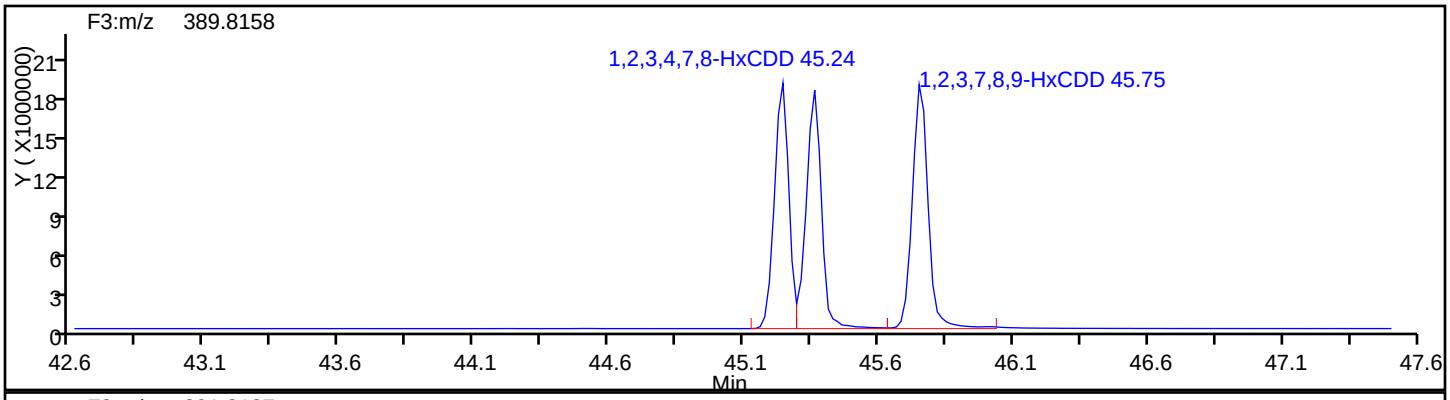
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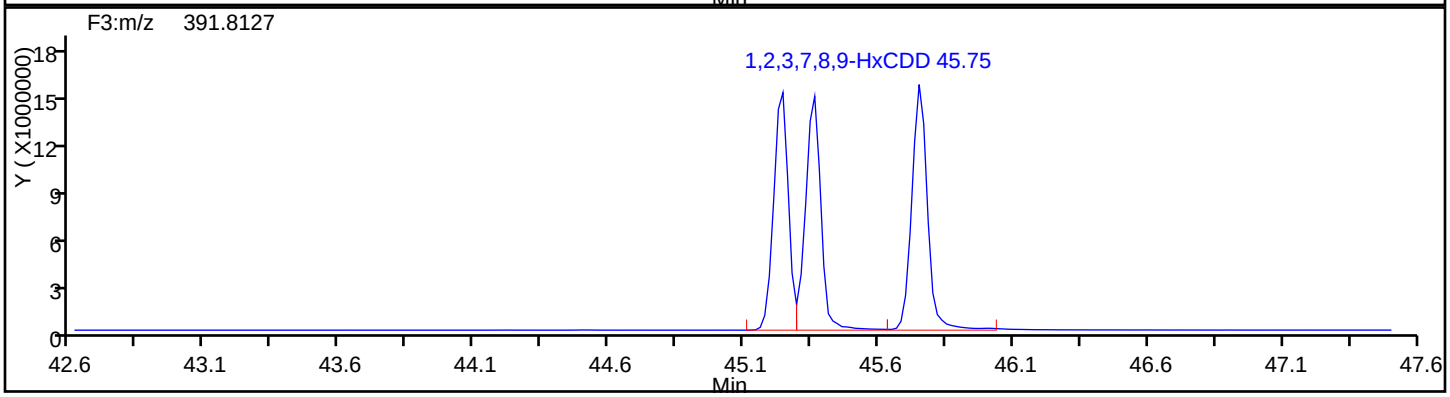
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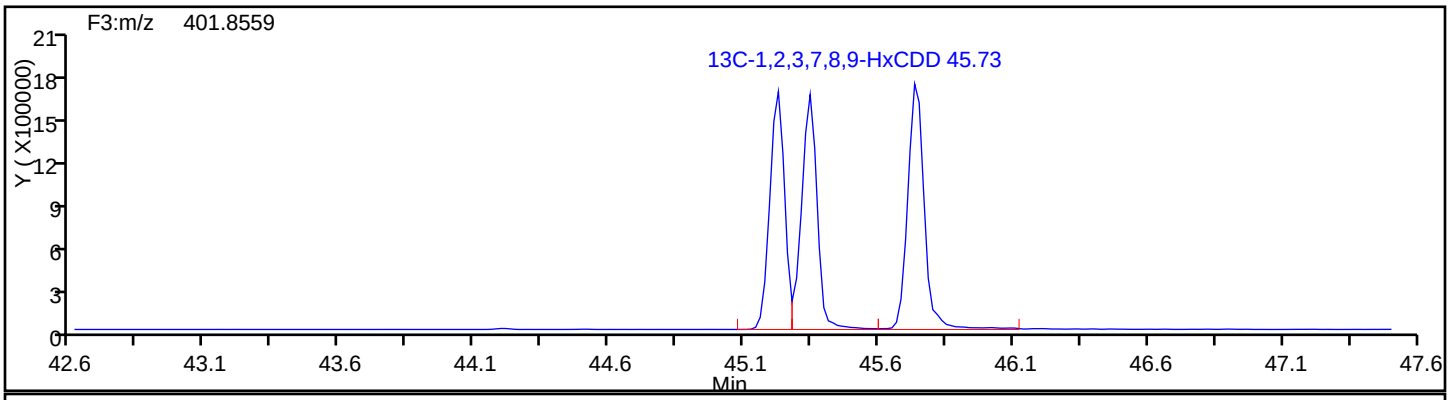
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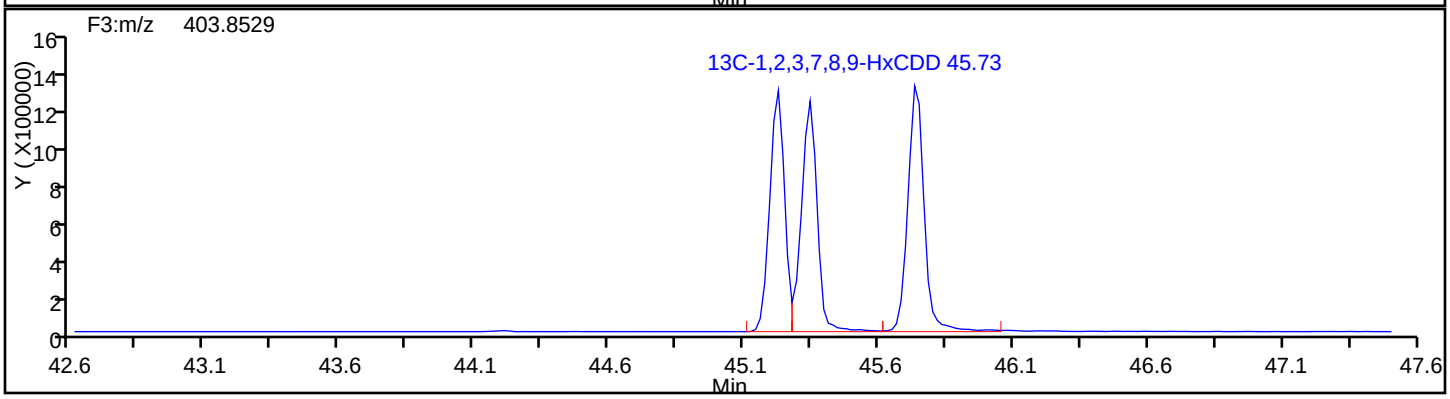
HxCDD




HxCDD Standards



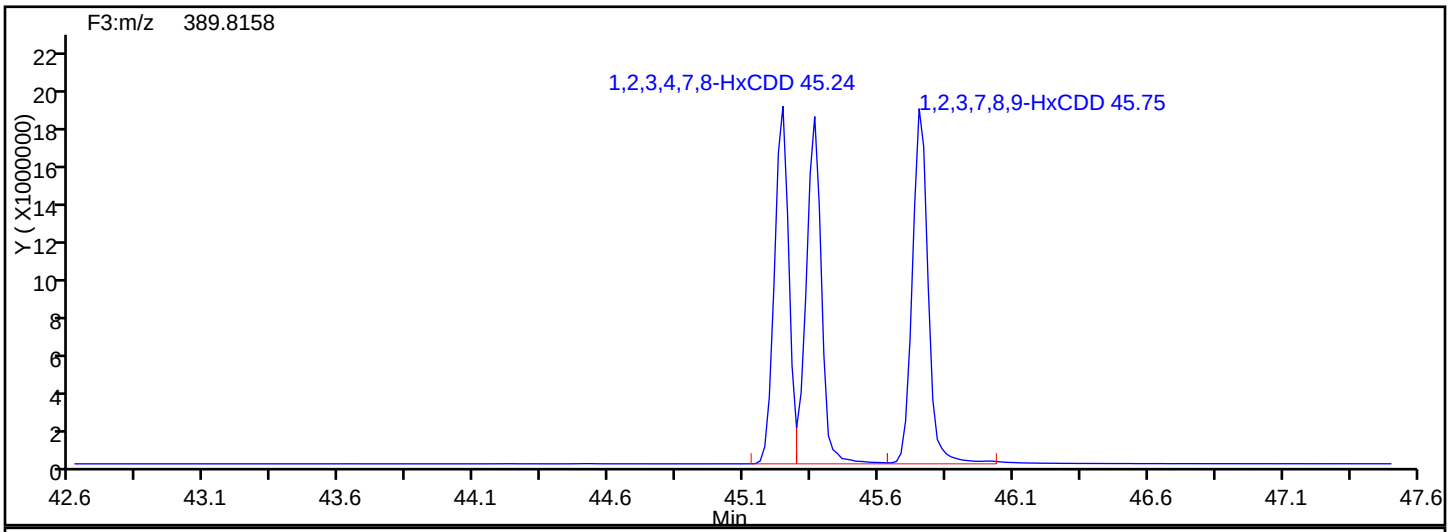
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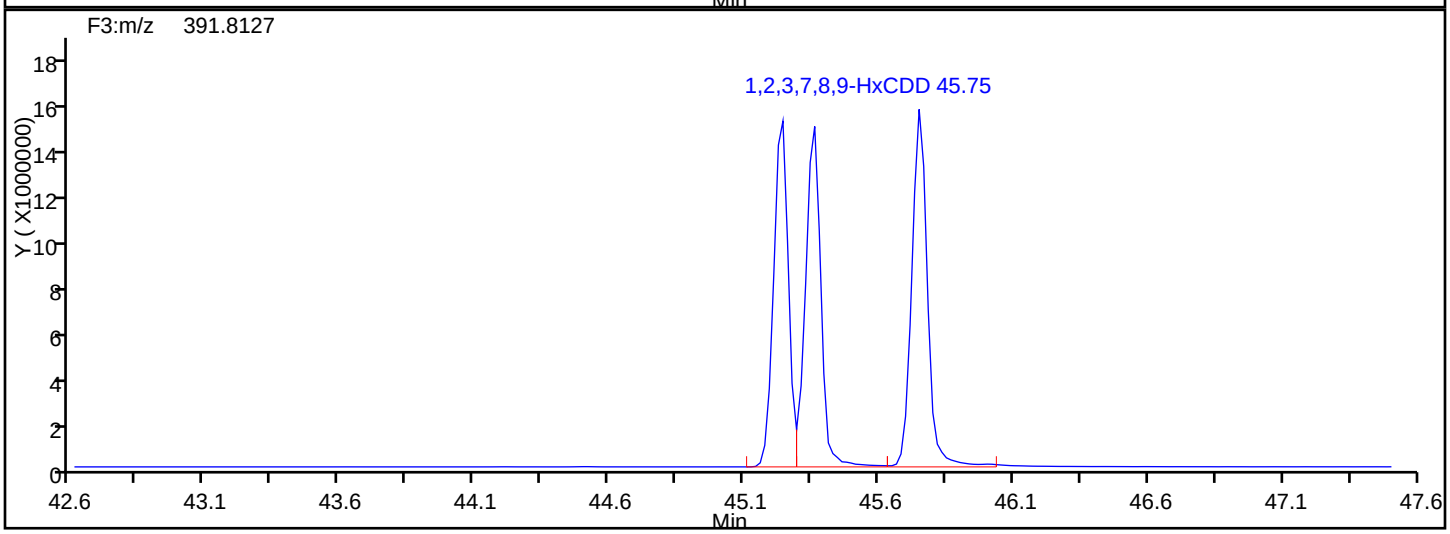
TestAmerica Knoxville

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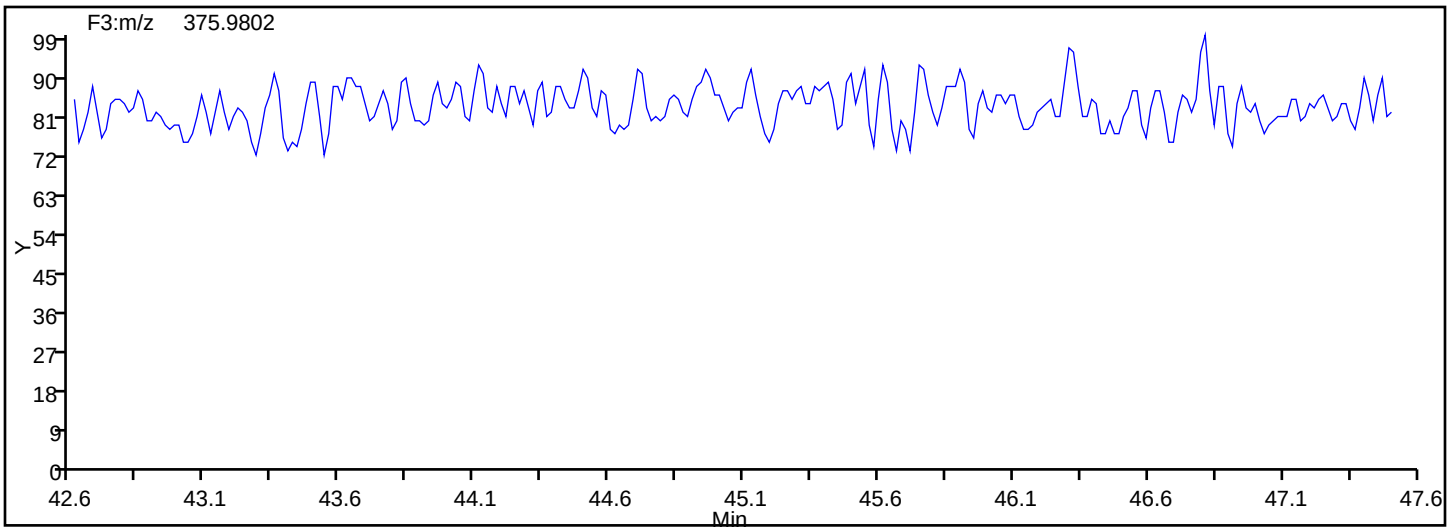
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| Column Type: | | Column Dia: | |

HxCDD




HxCDD Lock Mass



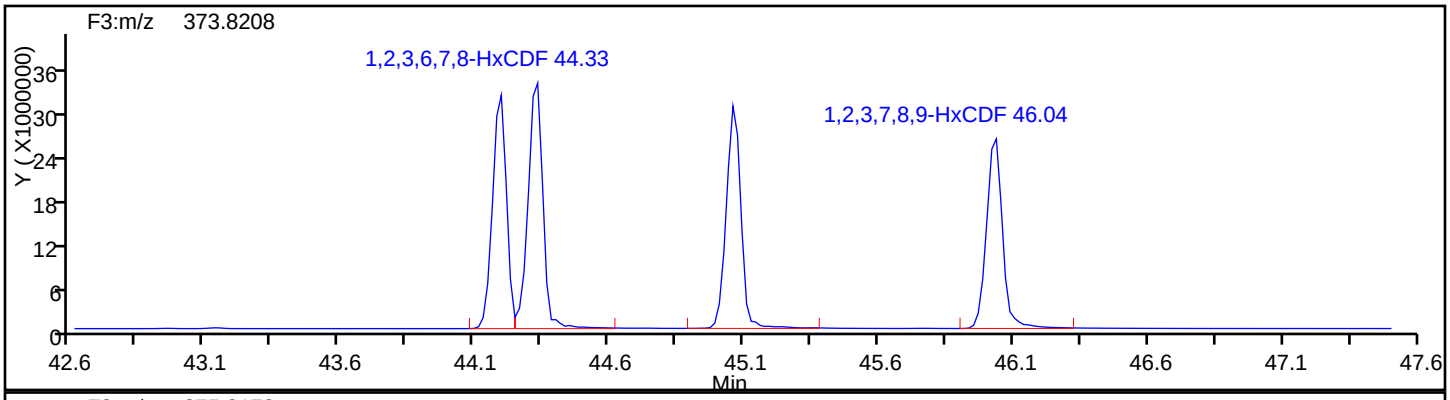
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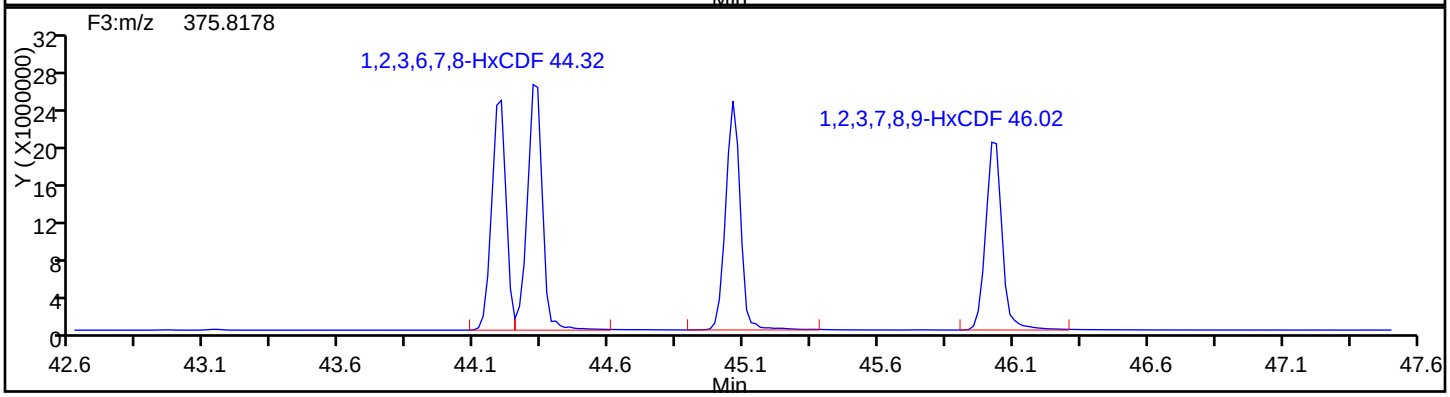
TestAmerica Knoxville

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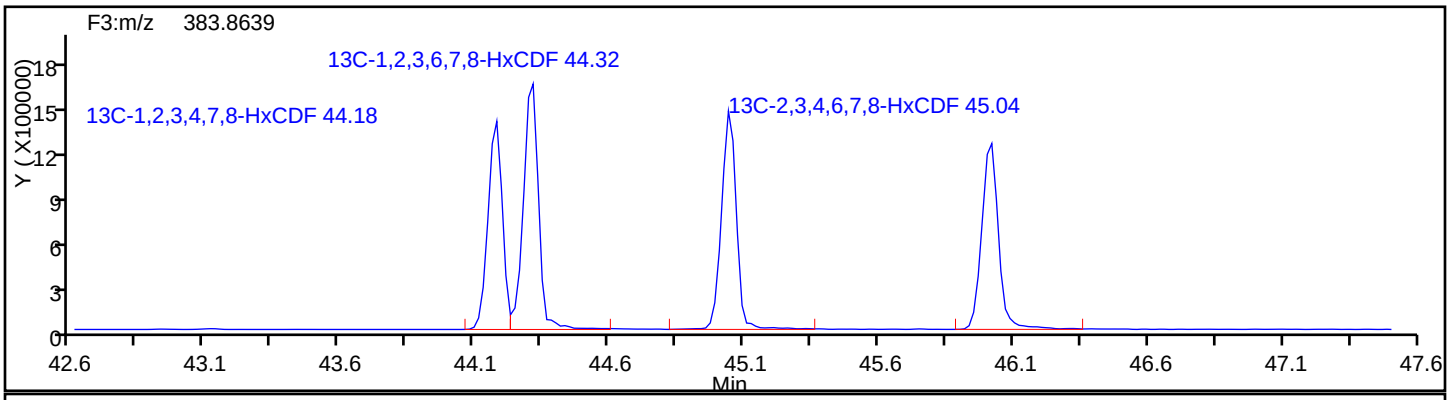
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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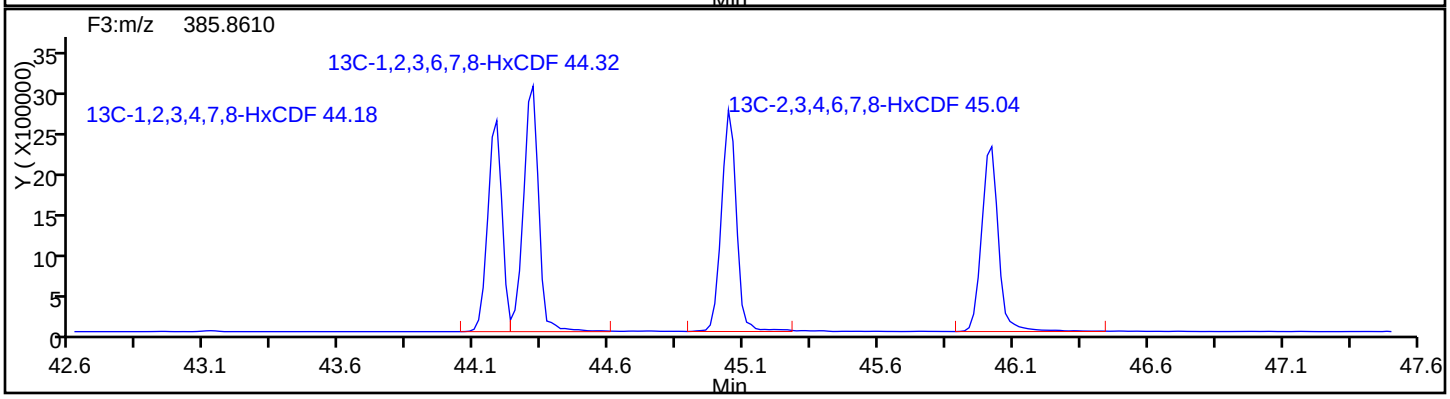
HxCDF




HxCDF Standards



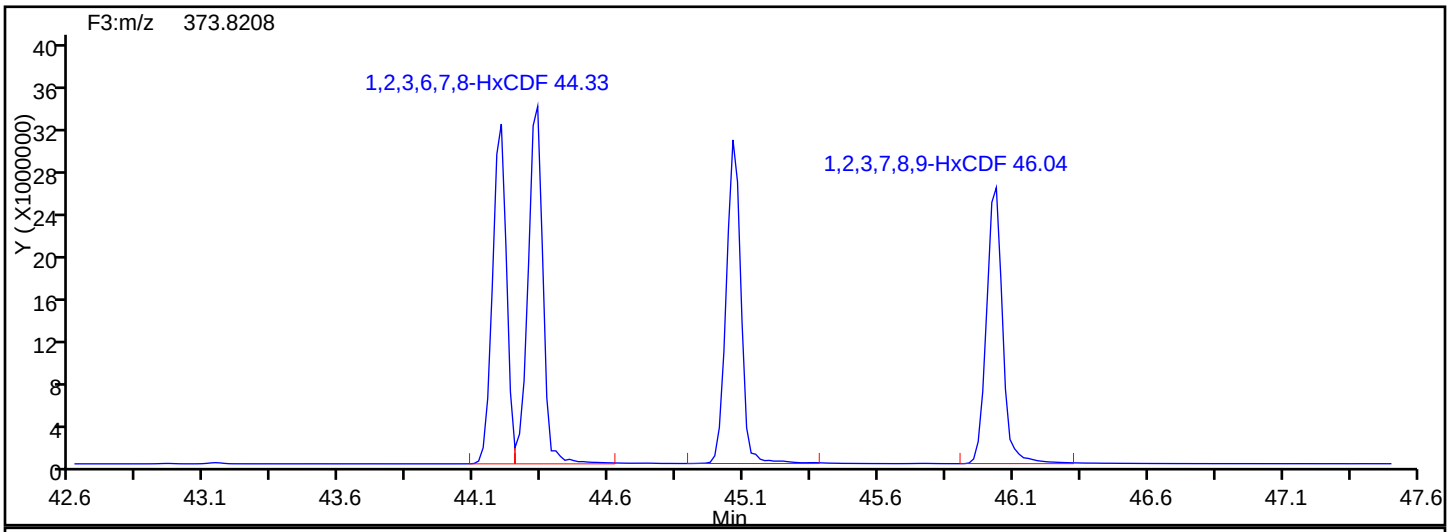
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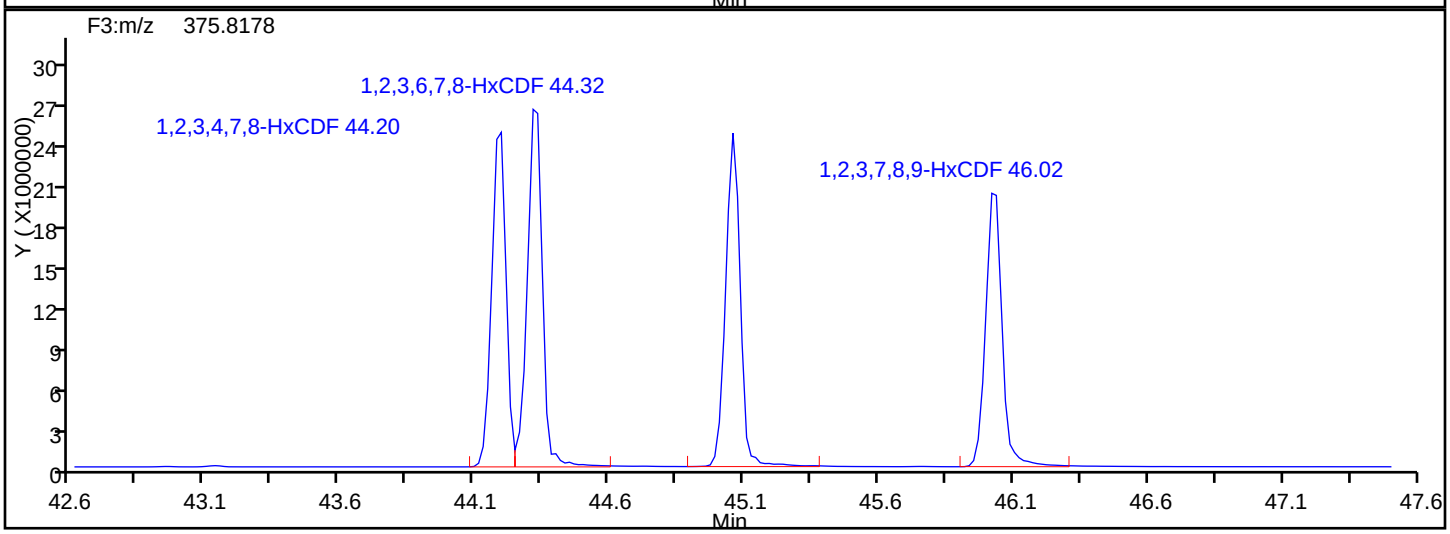
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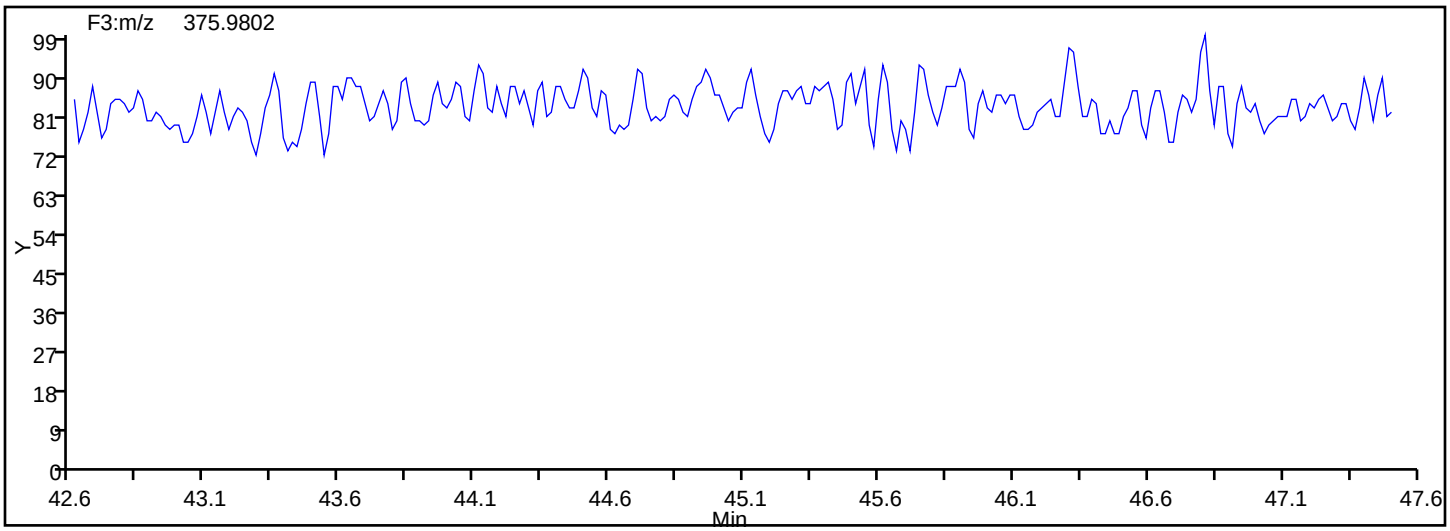
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

HxCDF




HxCDF Lock Mass



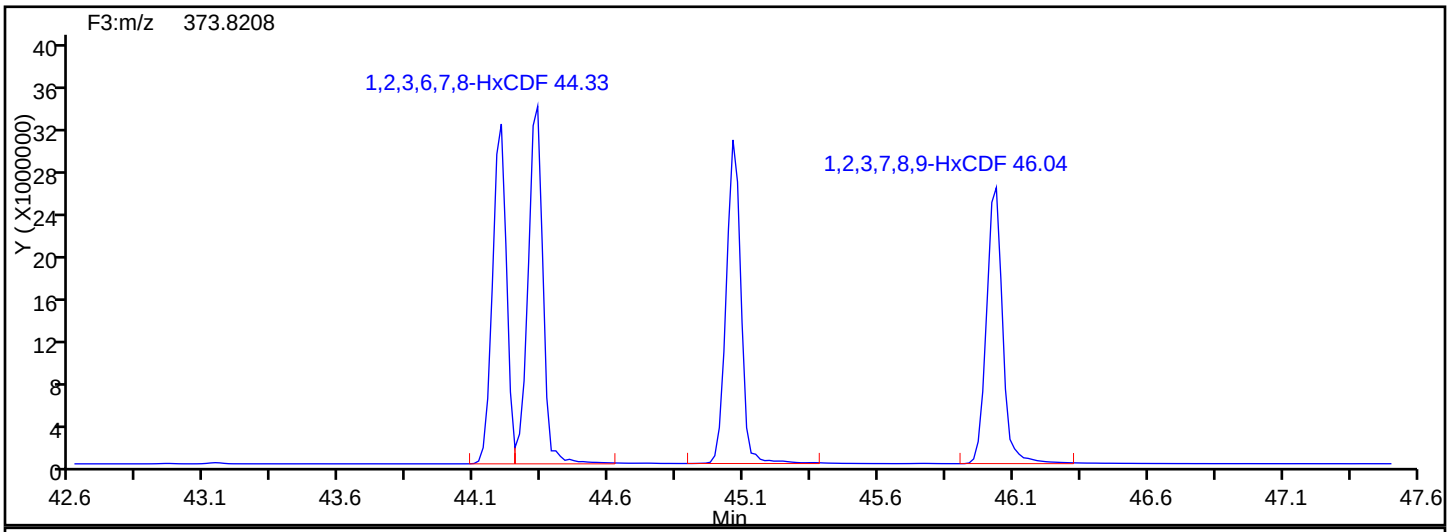
Report Date: 12-Jan-2017 08:09:44 Chrom Revision: 2.2 10-Jan-2017 11:26:10

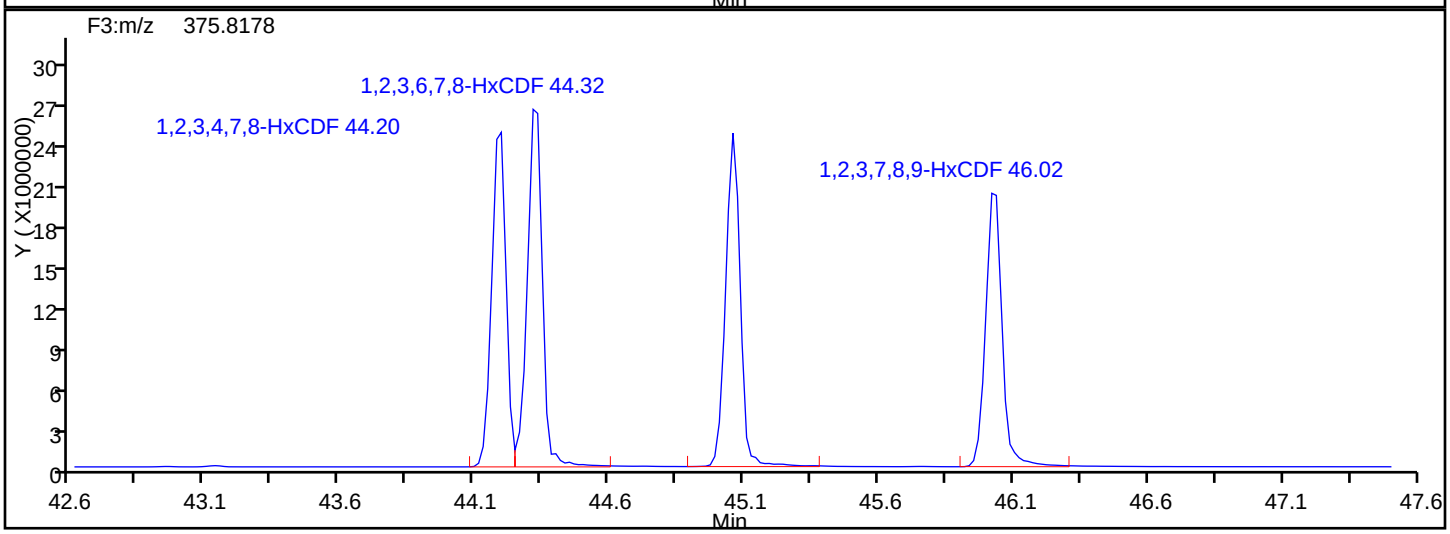
TestAmerica Knoxville

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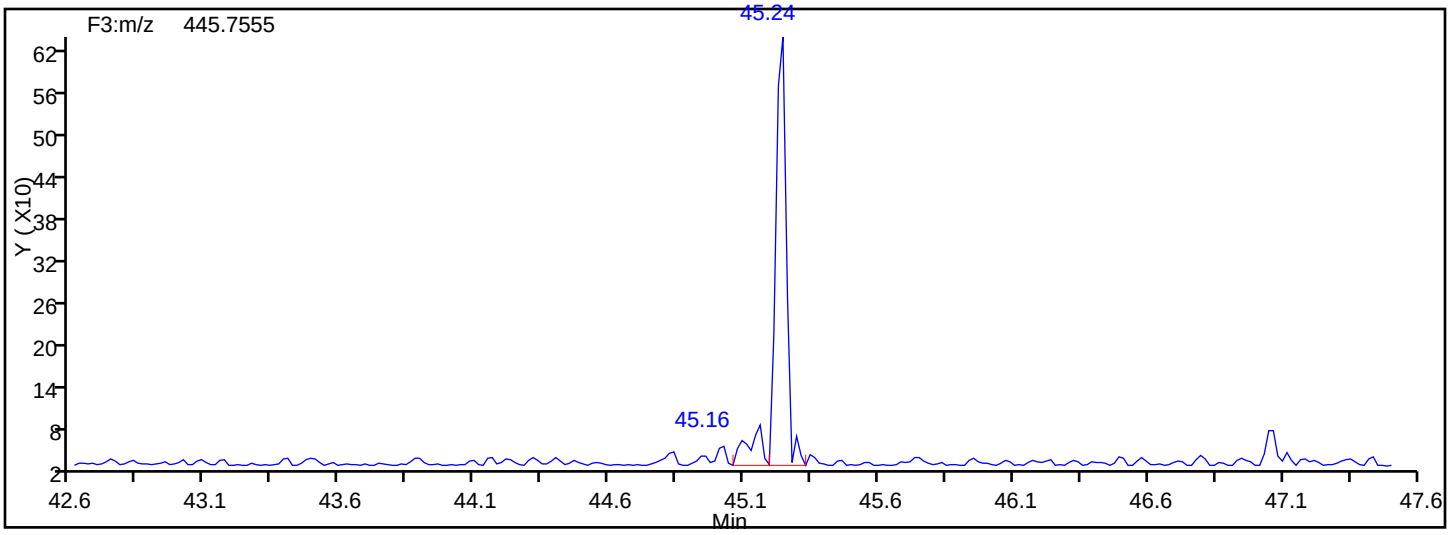
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

HxCDF




HxCDF Interference Mass



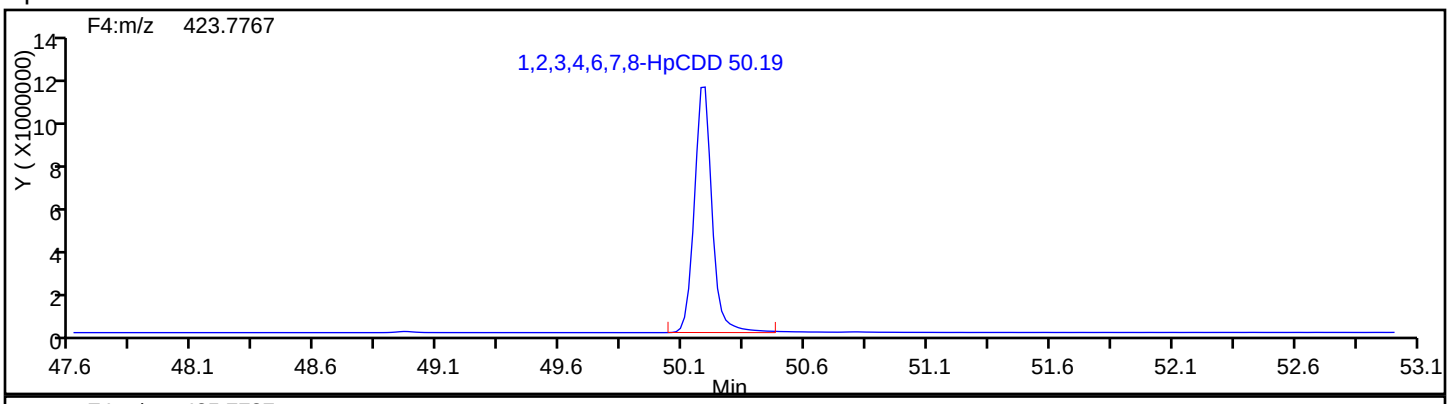
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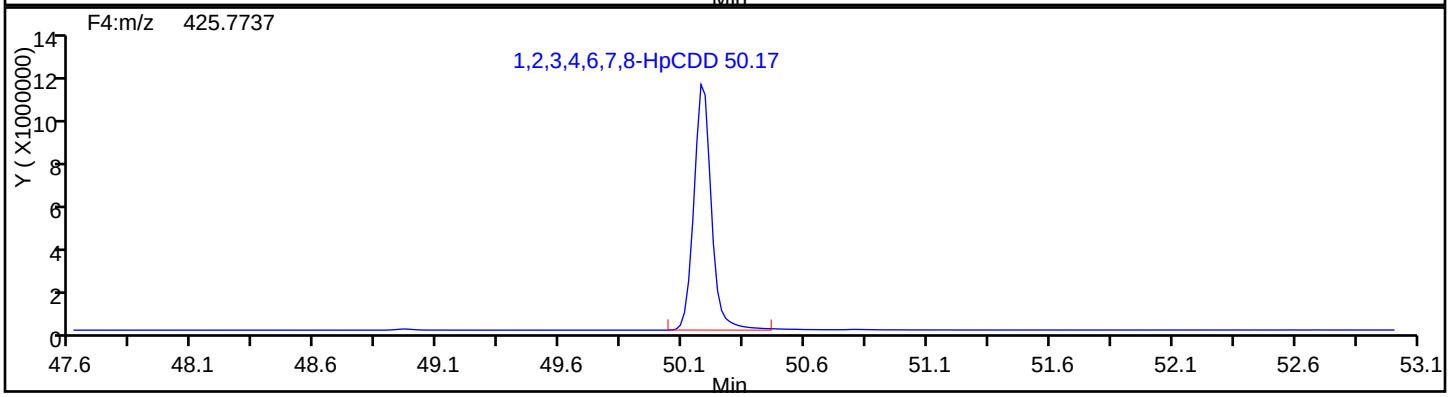
TestAmerica Knoxville

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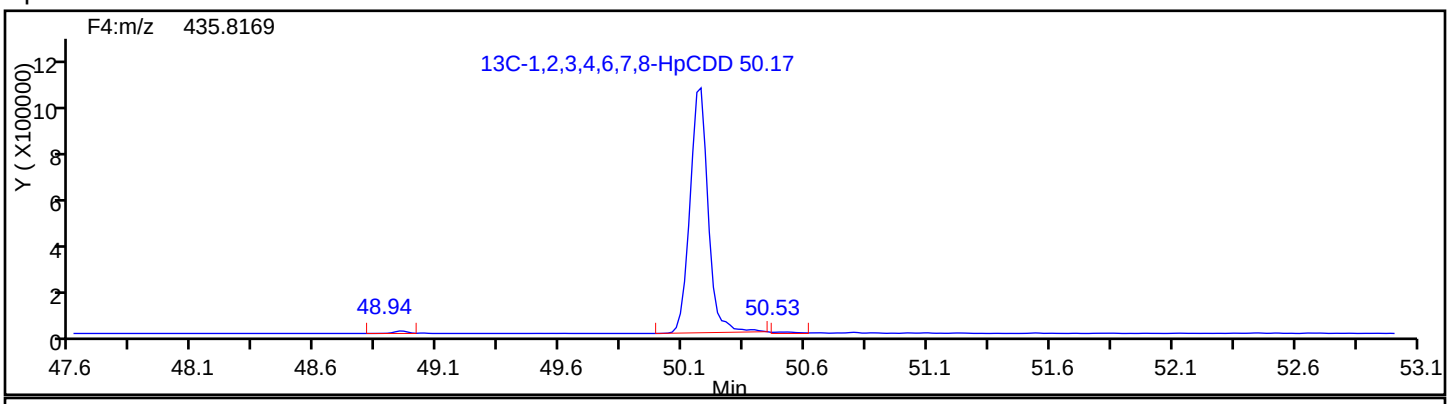
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

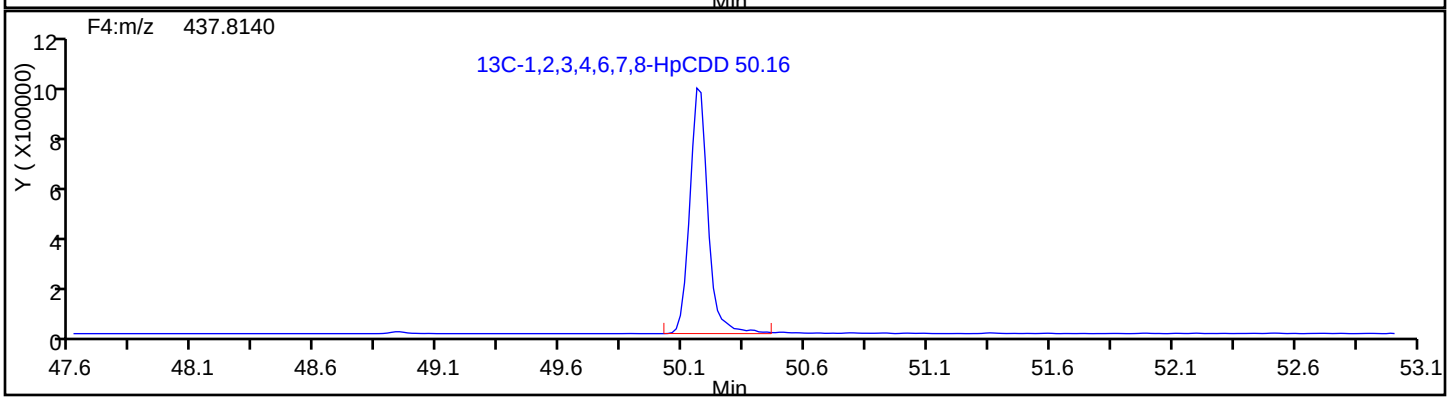
HpCDD




HpCDD Standards



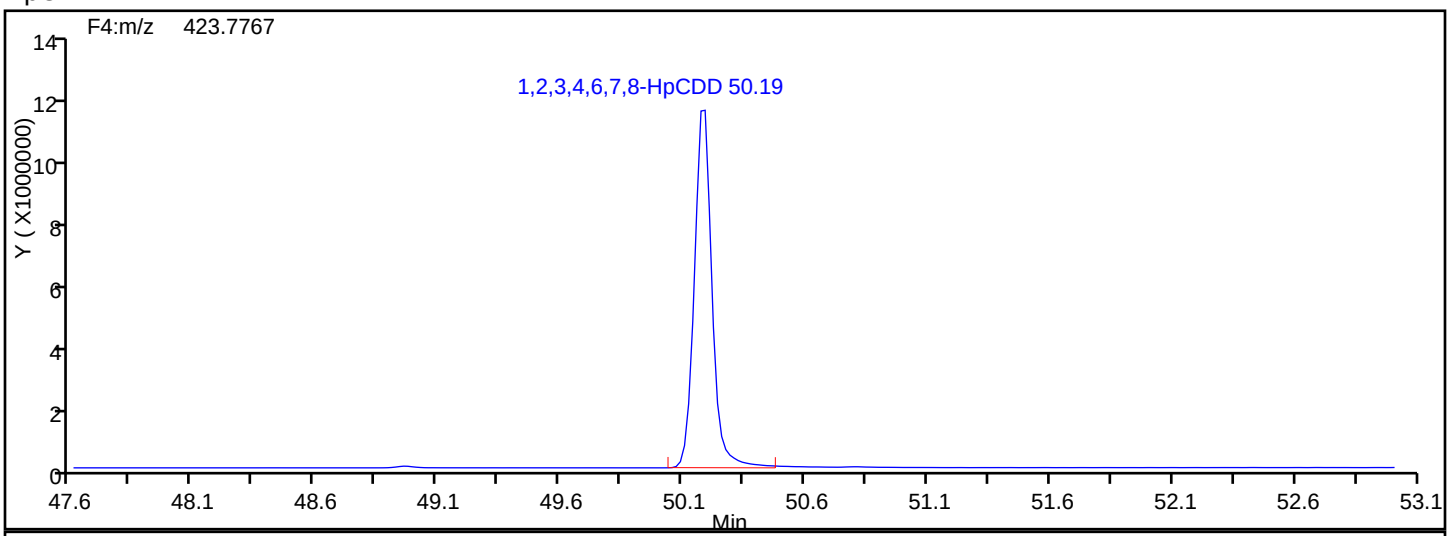
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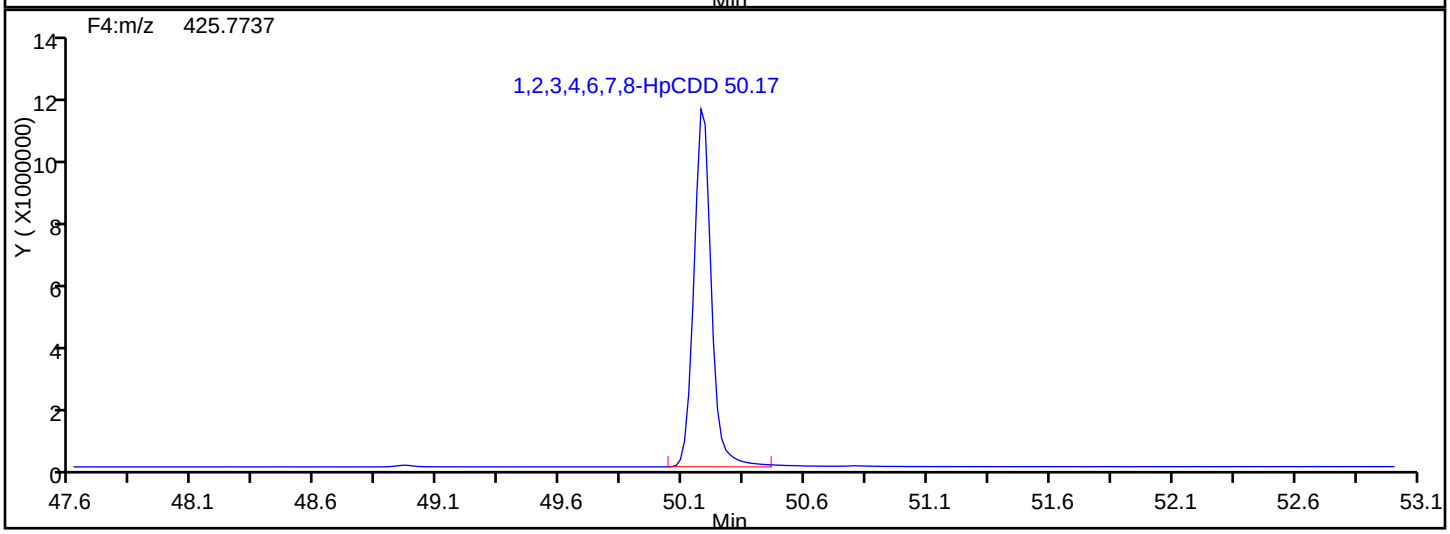
TestAmerica Knoxville

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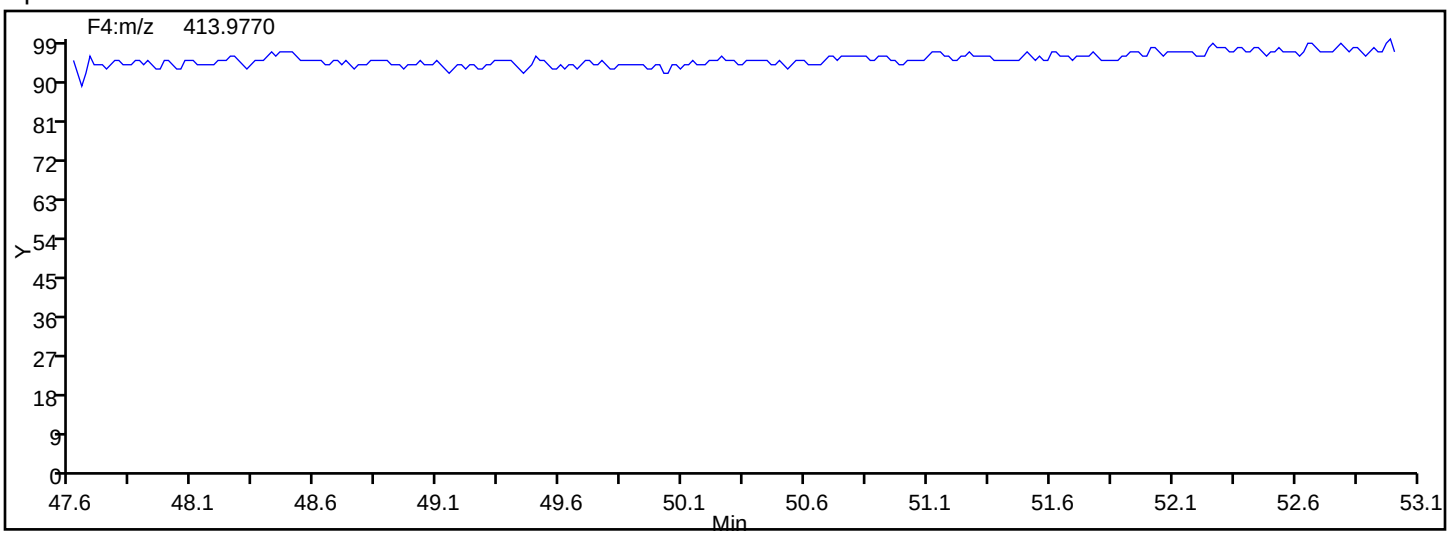
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

HpCDD




HpCDD Lock Mass



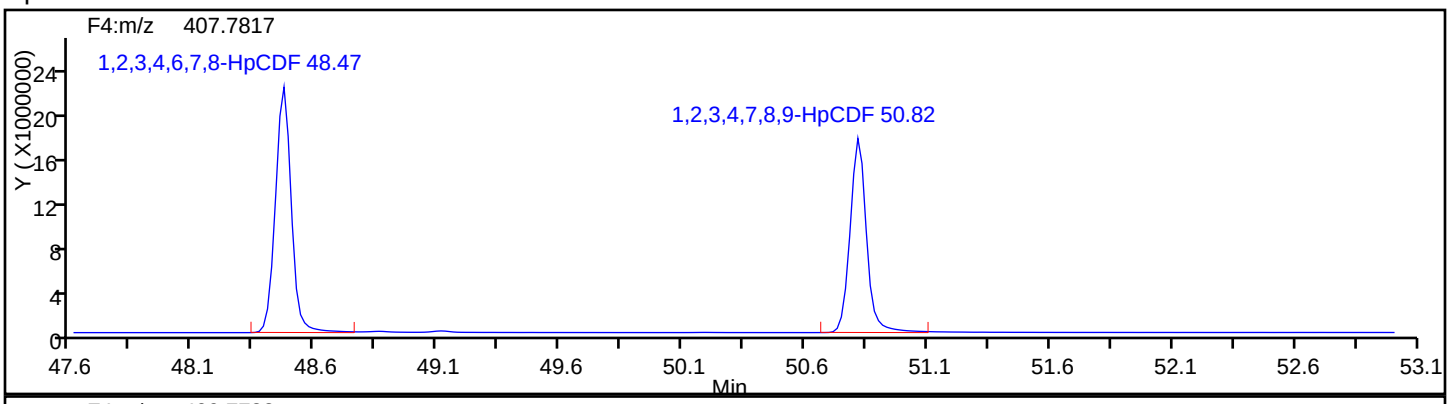
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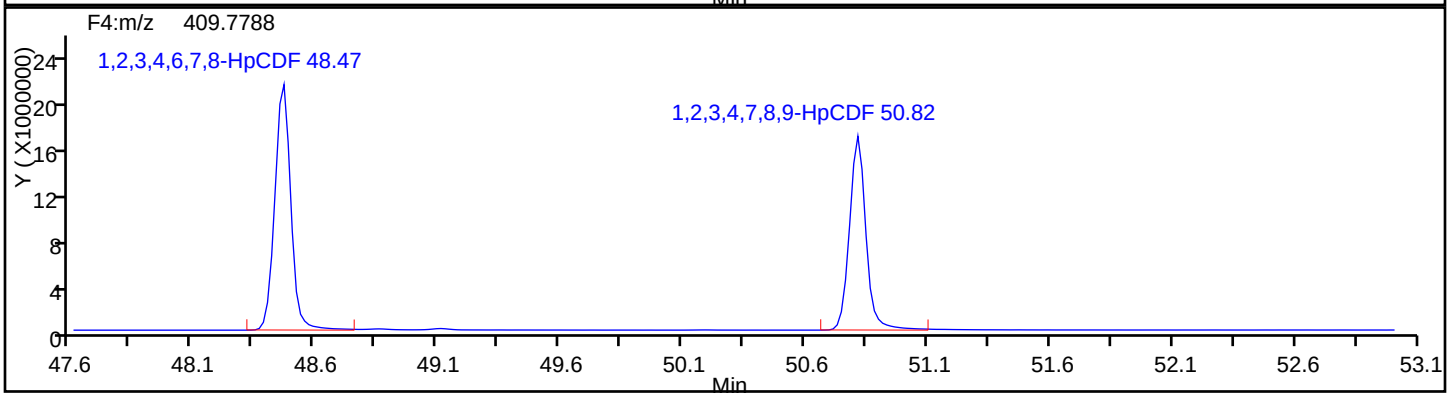
TestAmerica Knoxville

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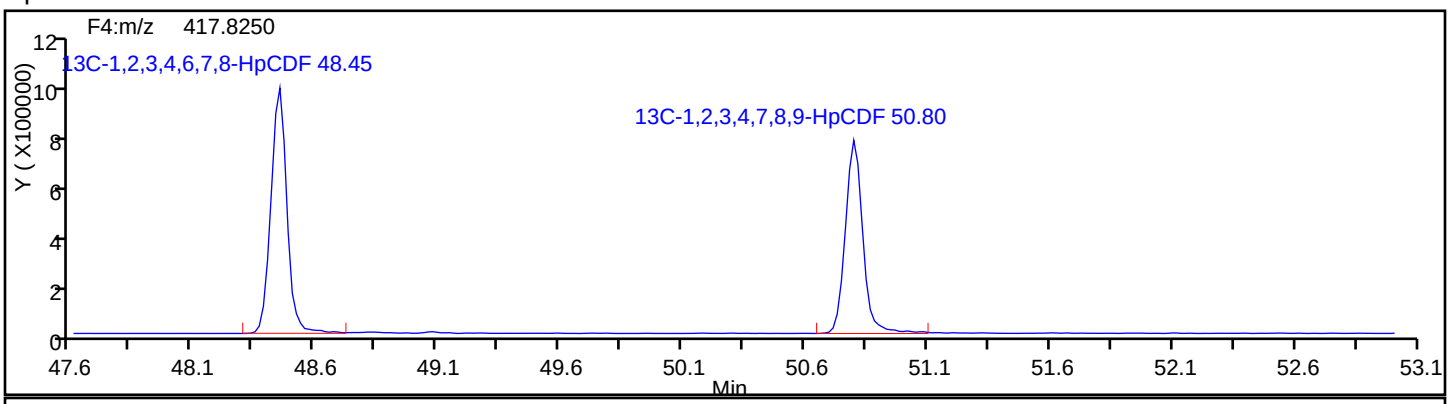
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

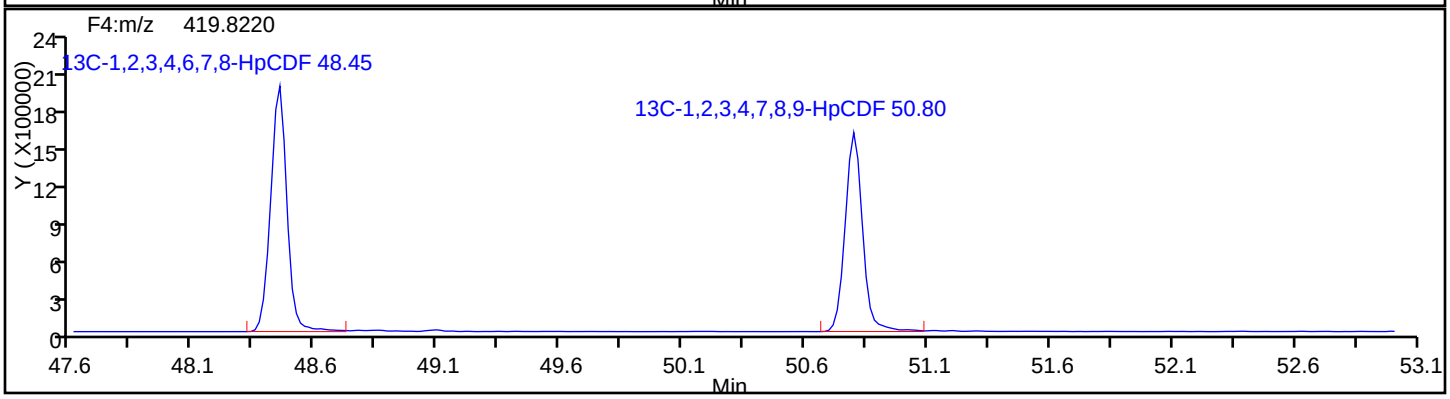
HpCDF




HpCDF Standards



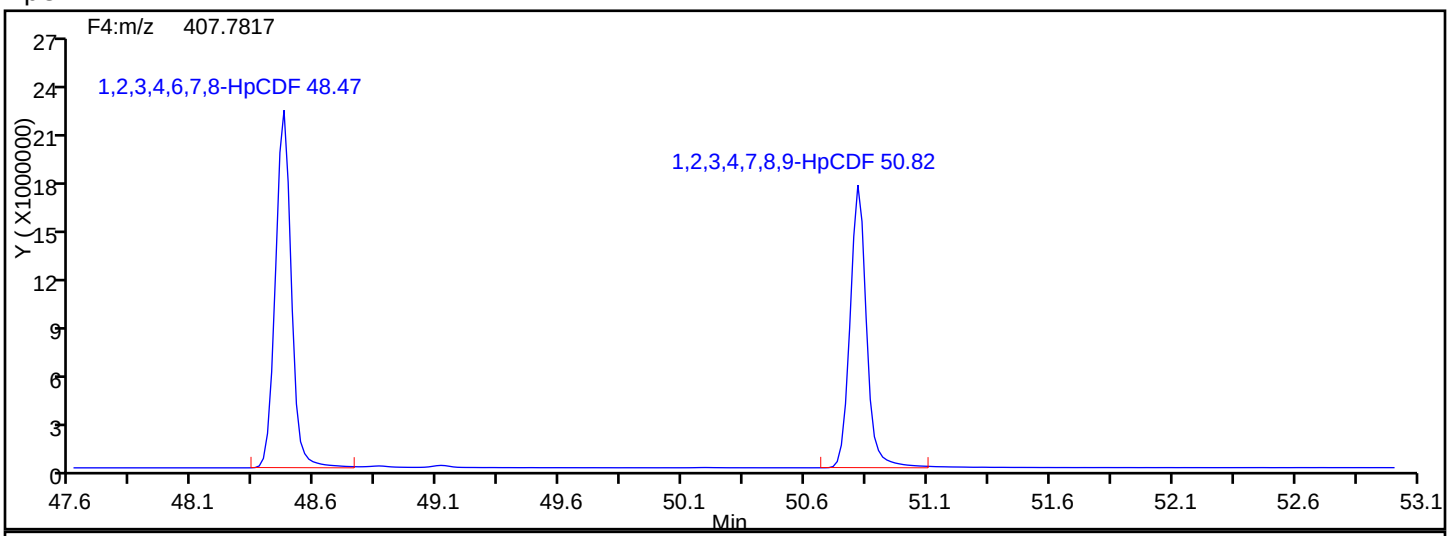
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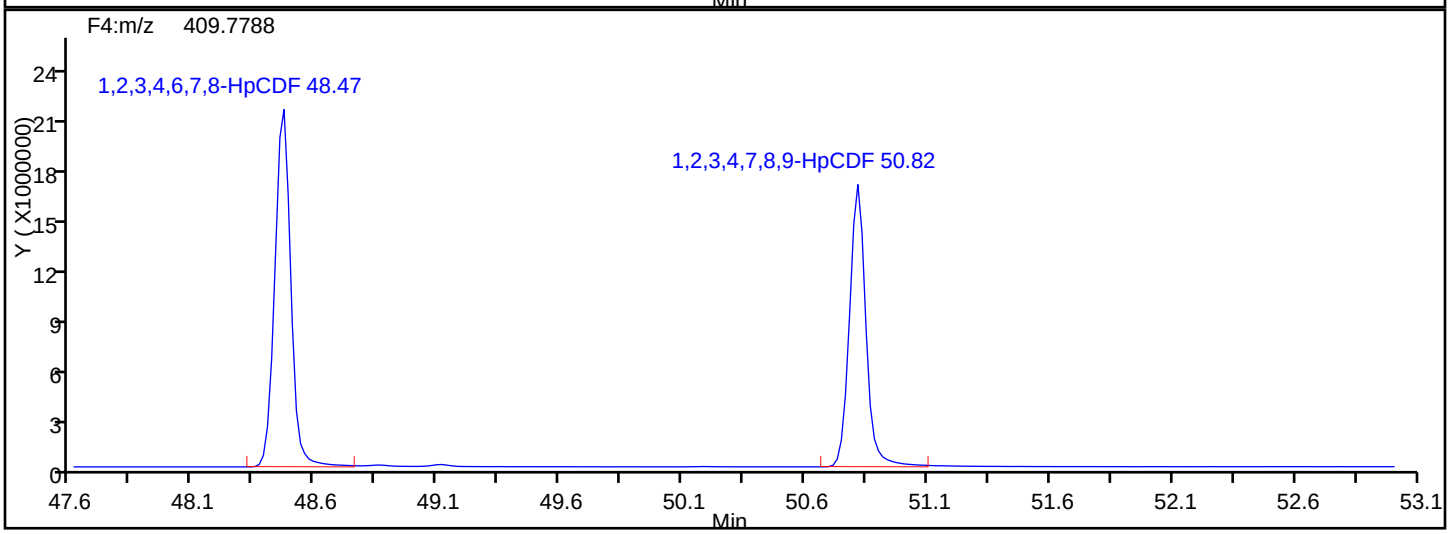
TestAmerica Knoxville

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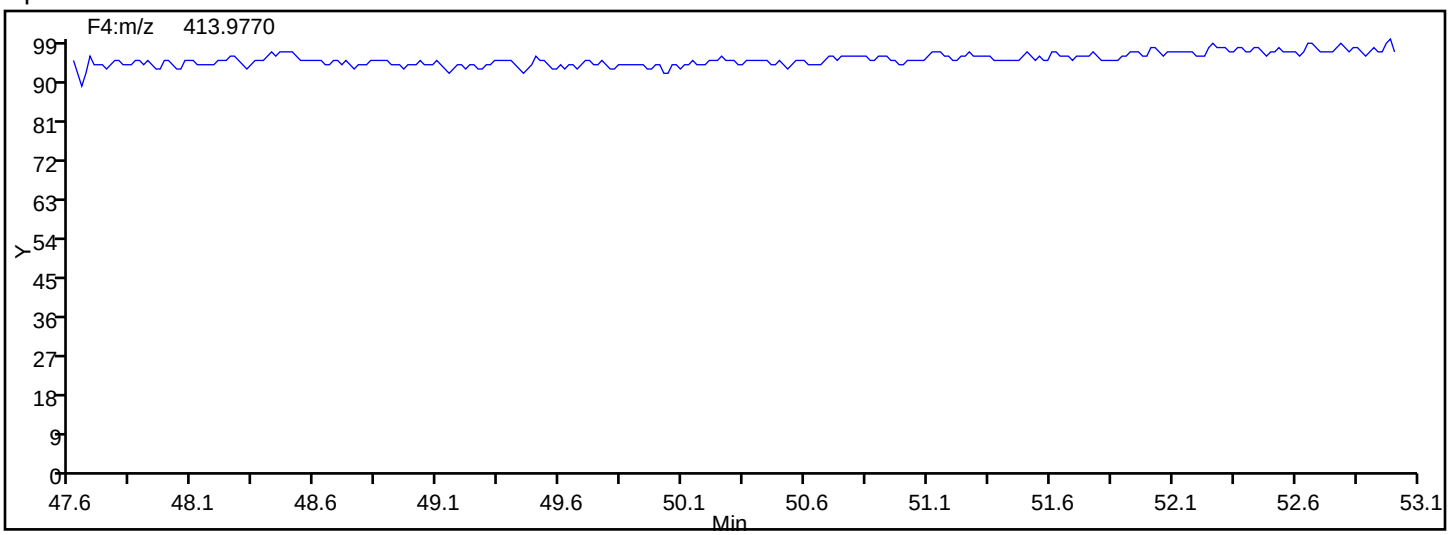
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

HpCDF




HpCDF Lock Mass



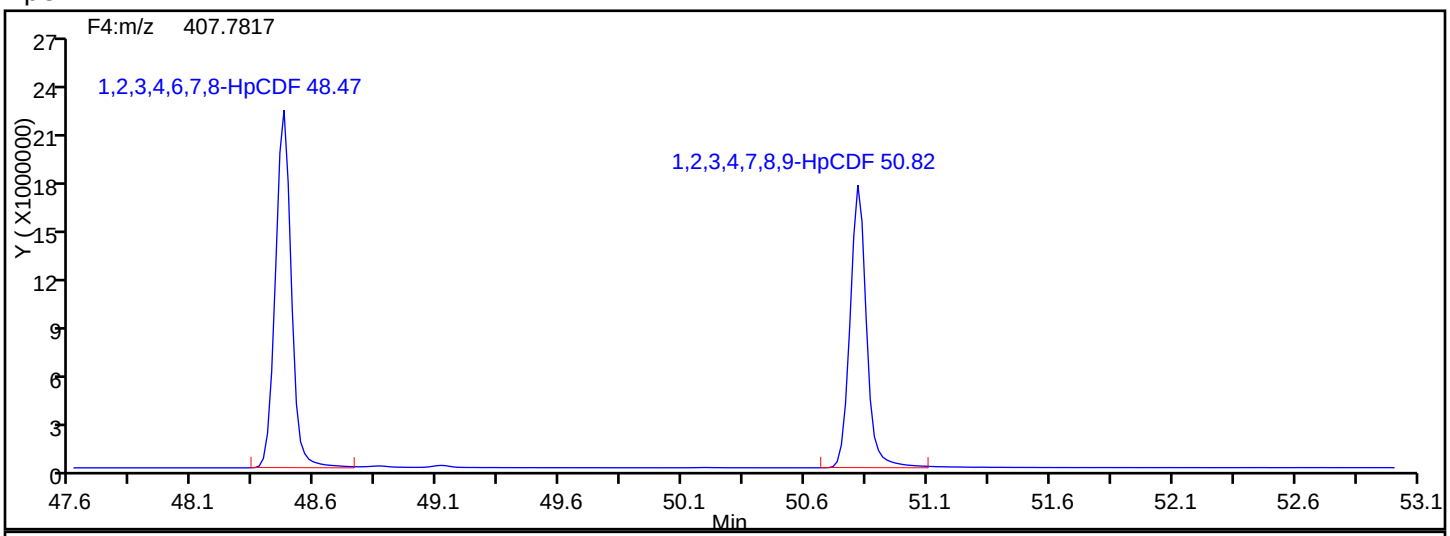
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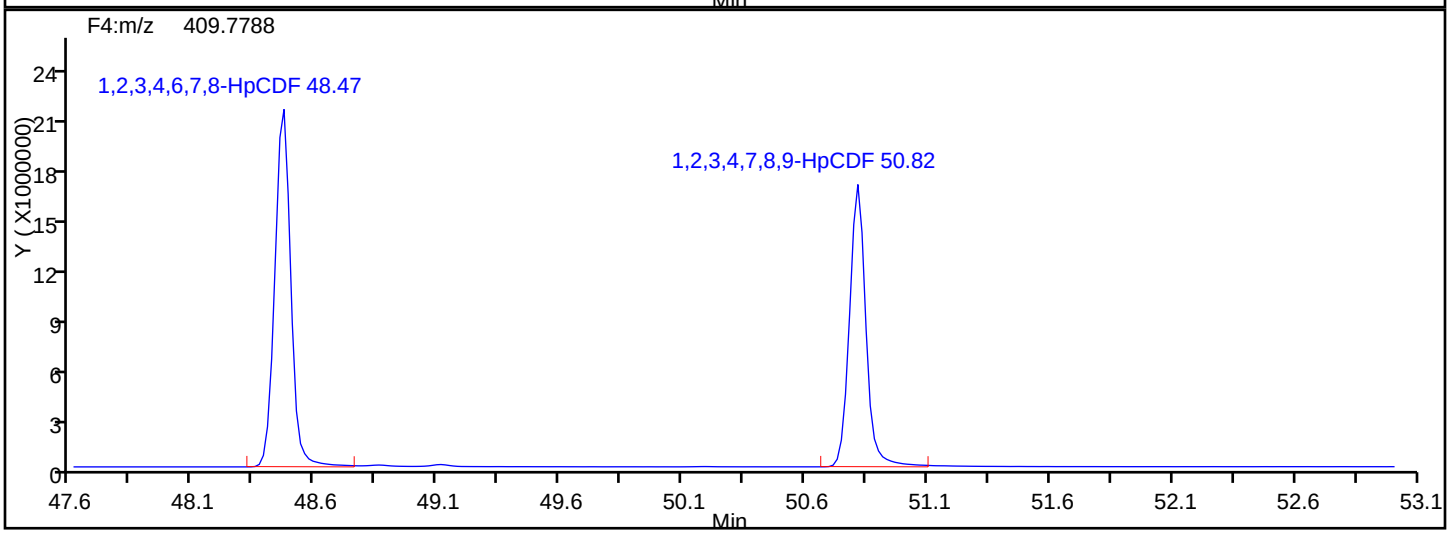
TestAmerica Knoxville

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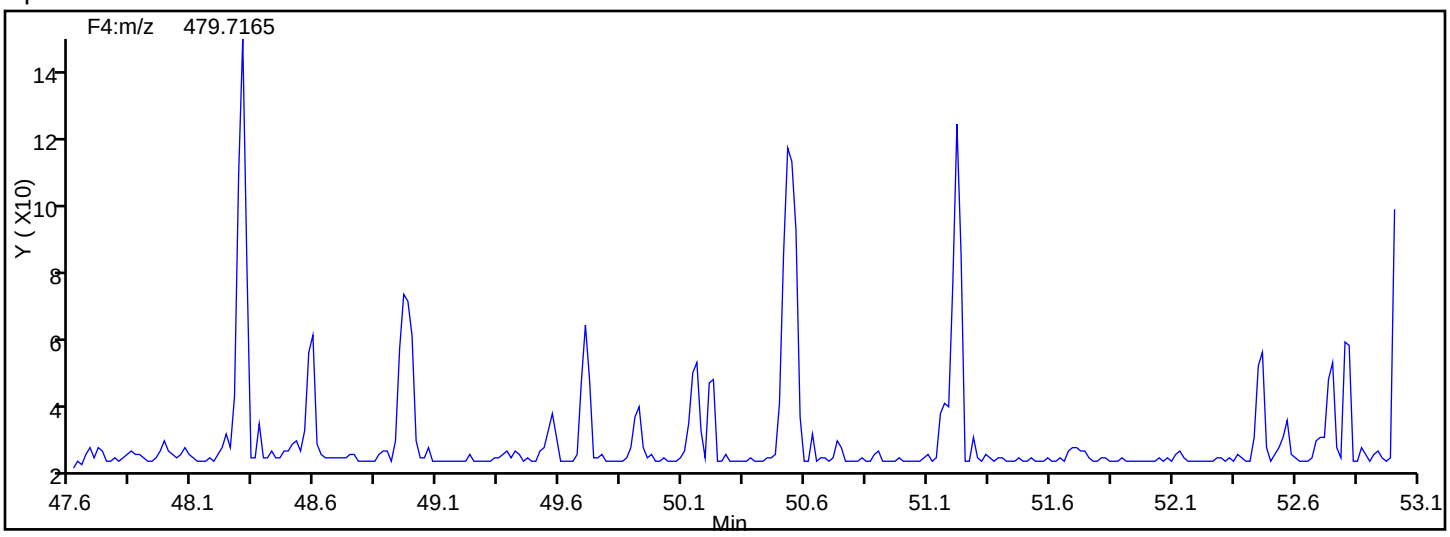
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

HpCDF




HpCDF Interference Mass



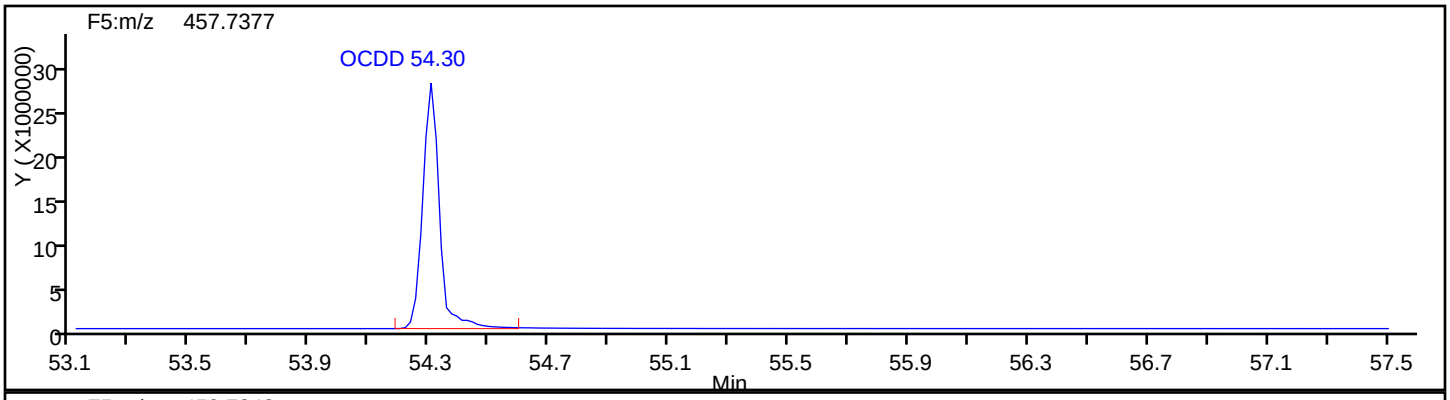
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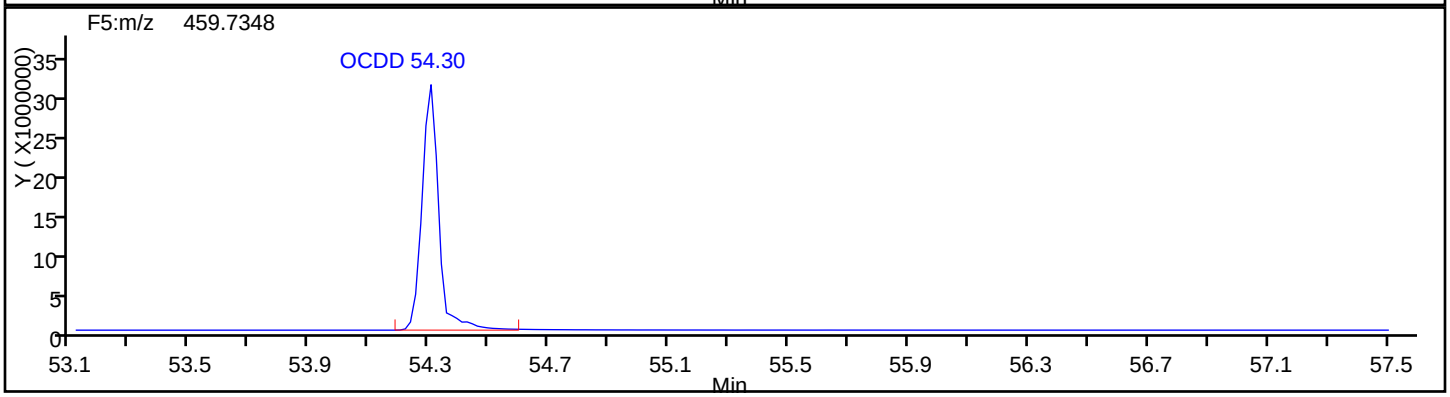
TestAmerica Knoxville

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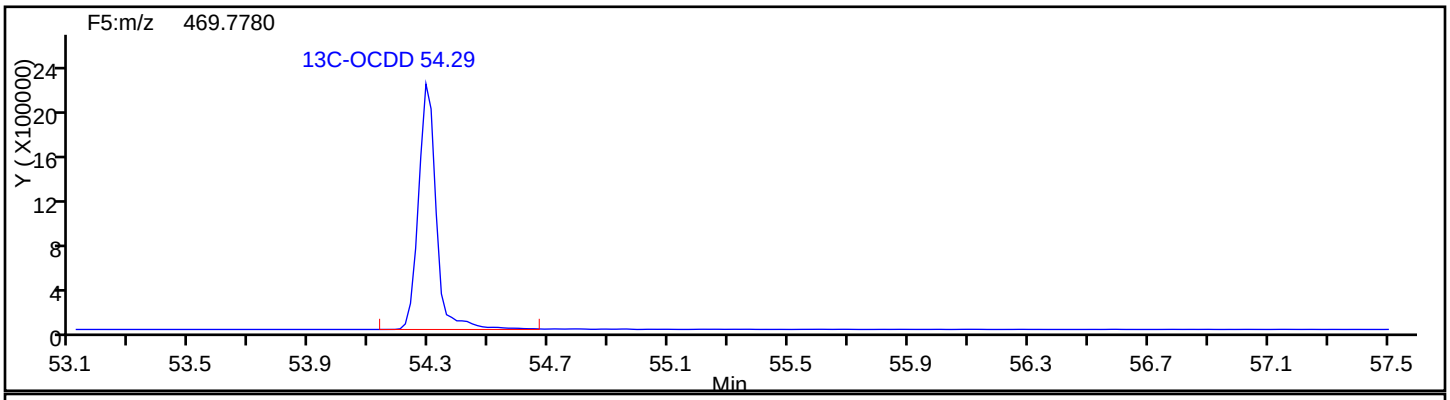
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

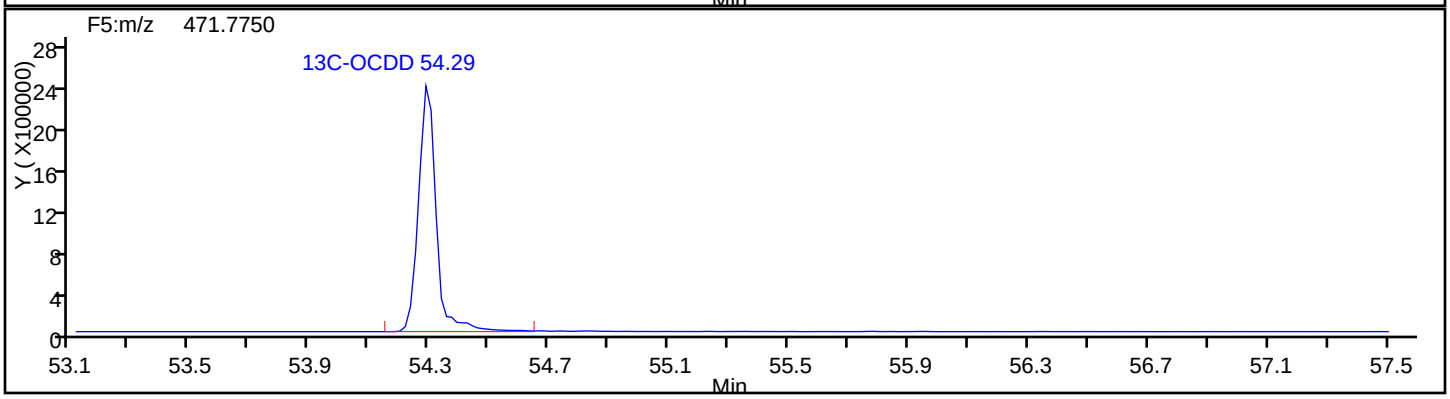
OCDD




OCDD Standards



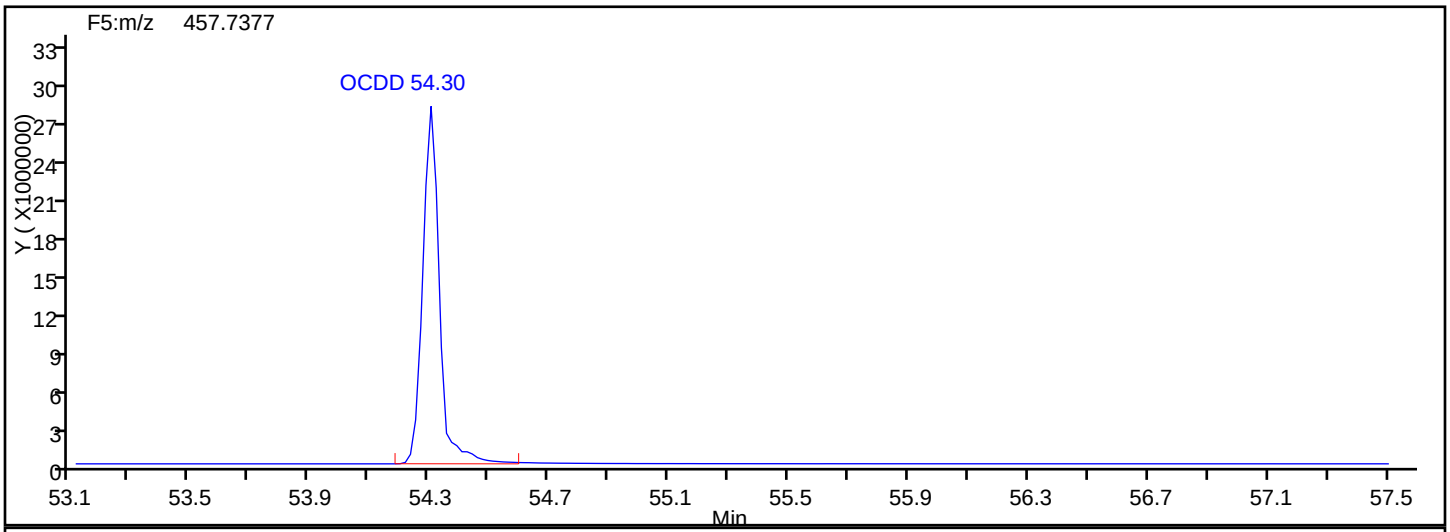
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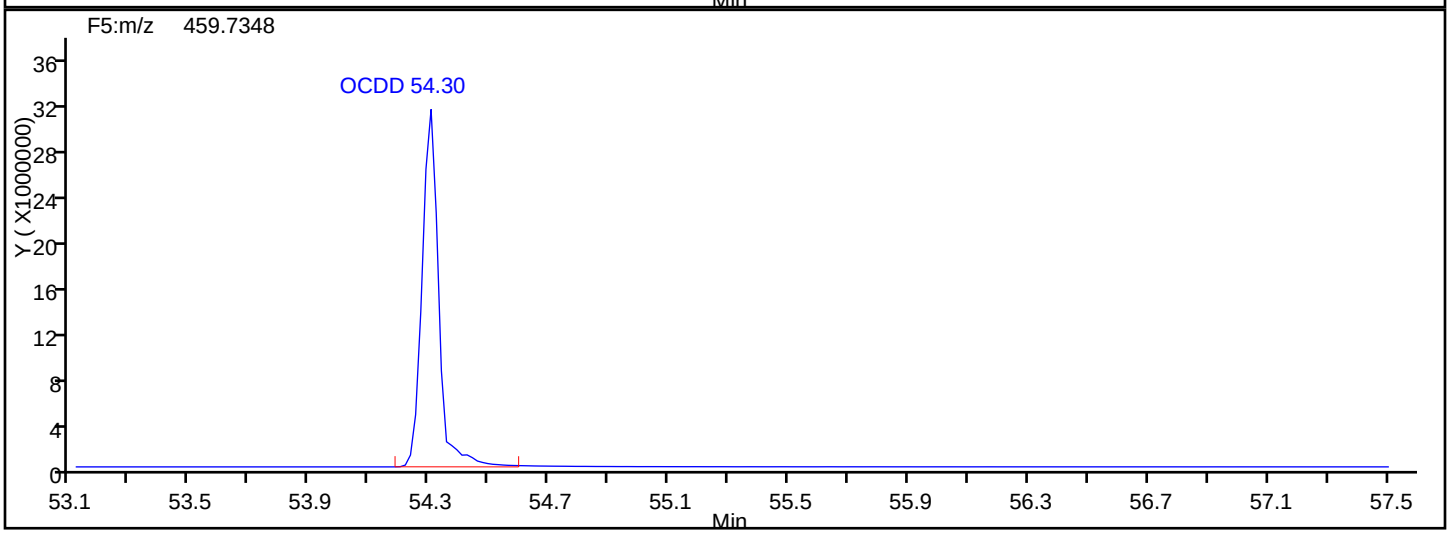
TestAmerica Knoxville

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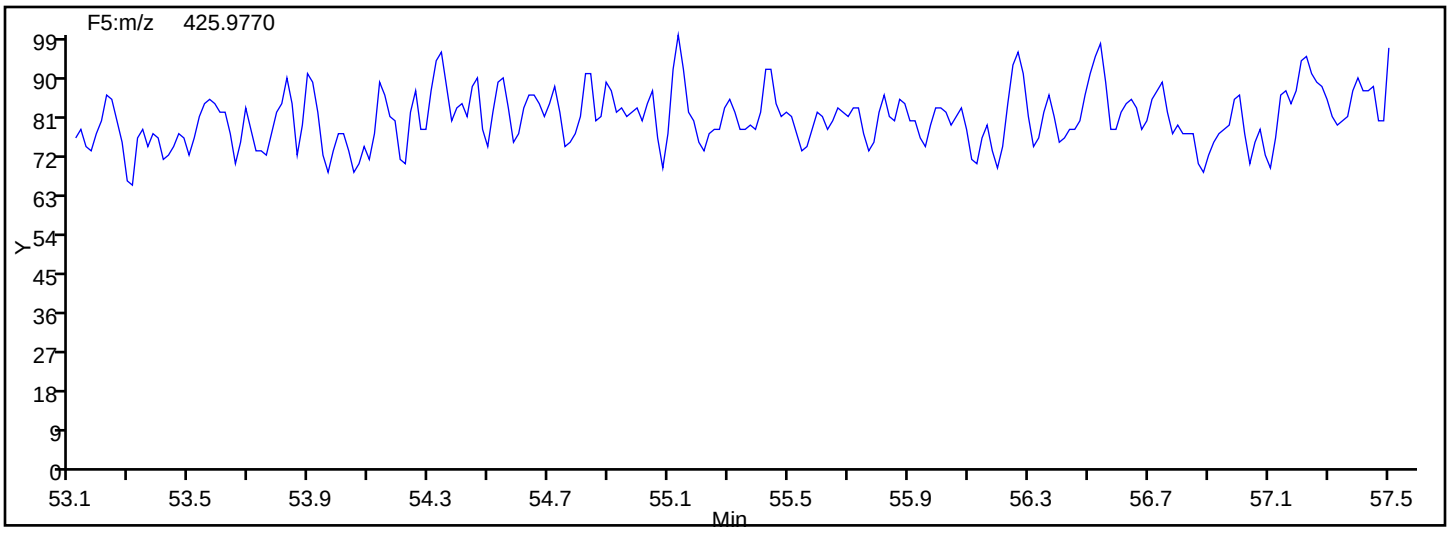
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

OCDD




OCDD Lock Mass



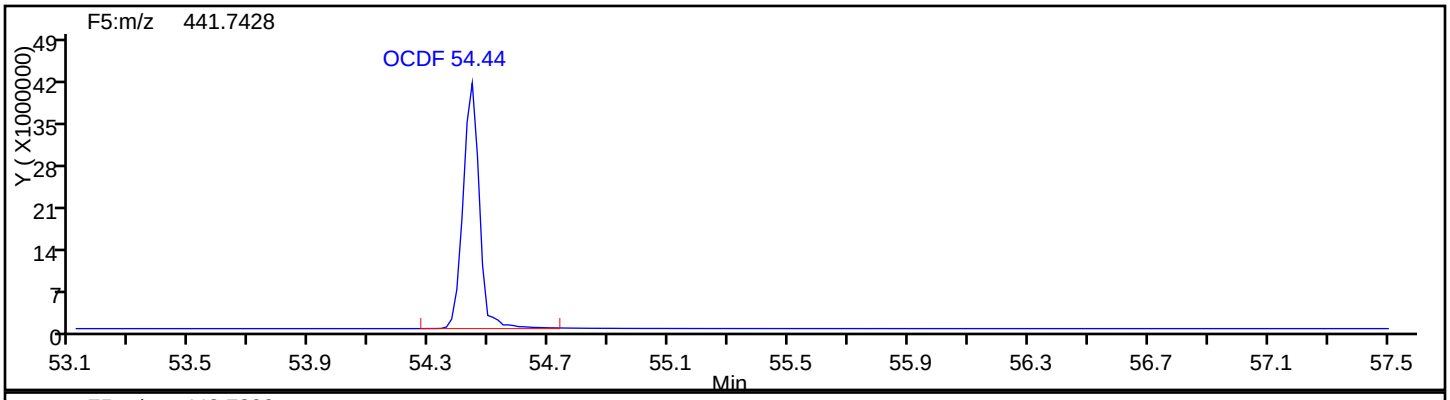
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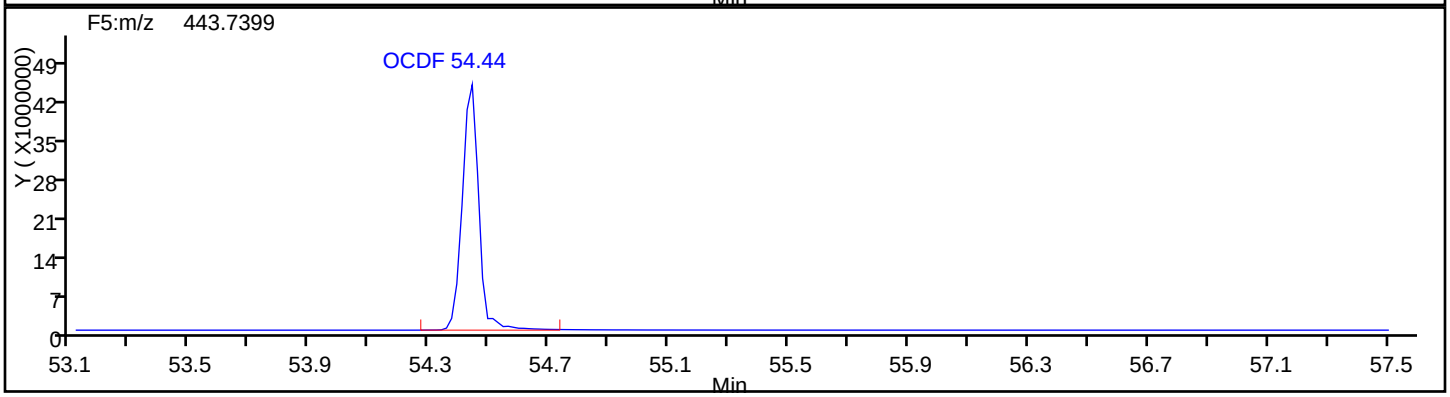
TestAmerica Knoxville

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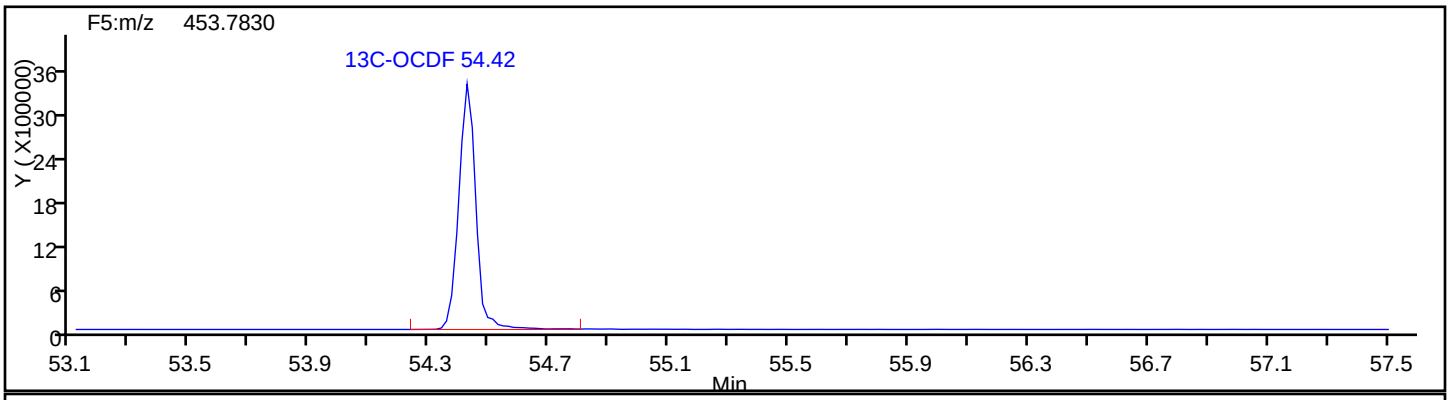
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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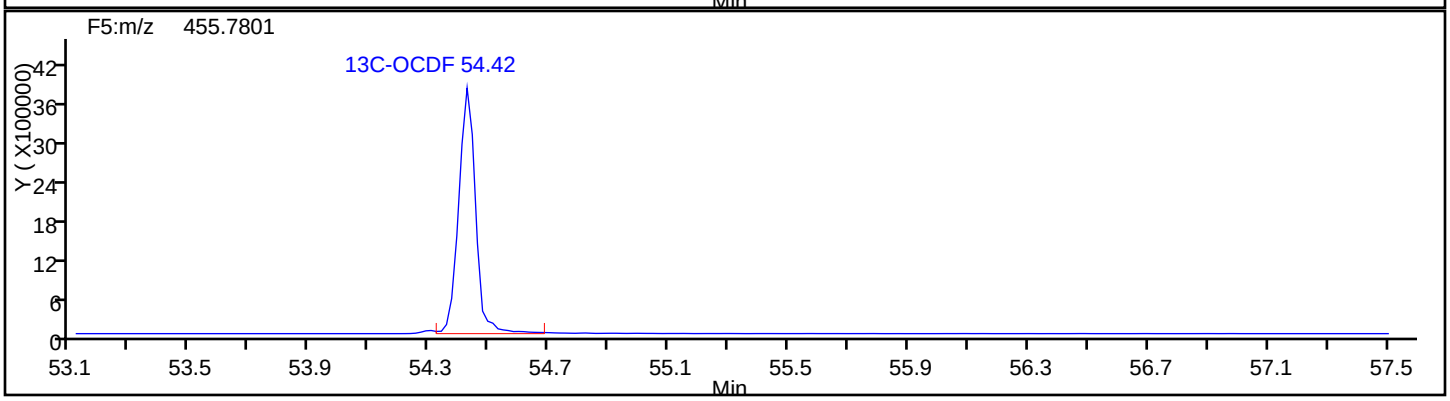
OCDF




OCDF Standards



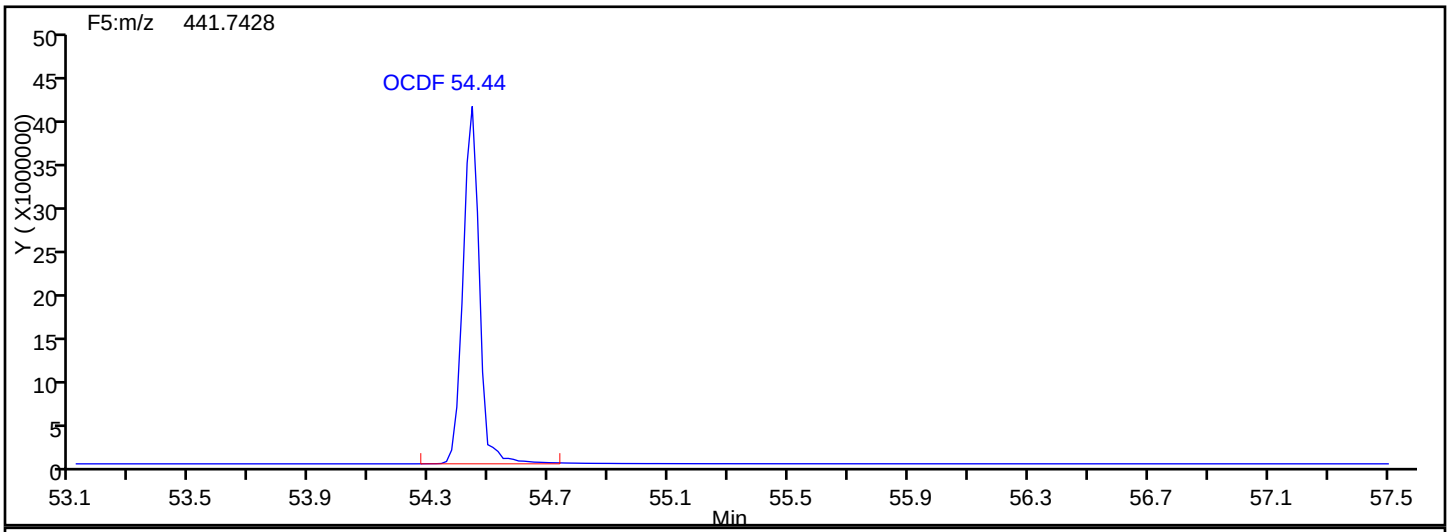
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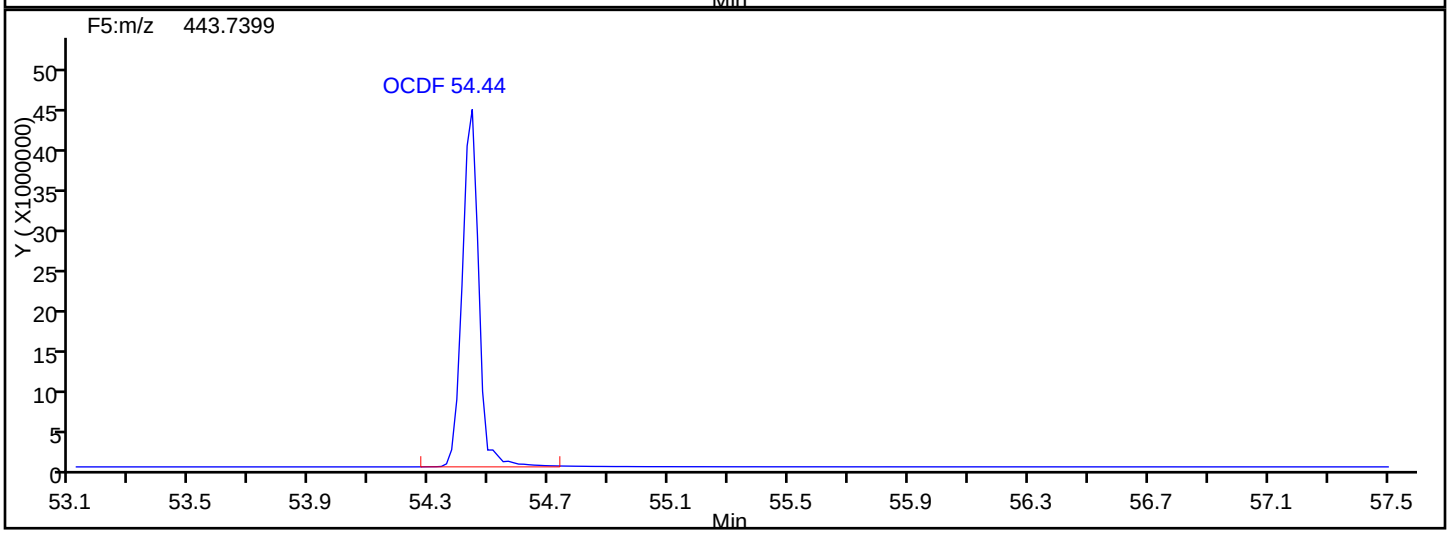
TestAmerica Knoxville

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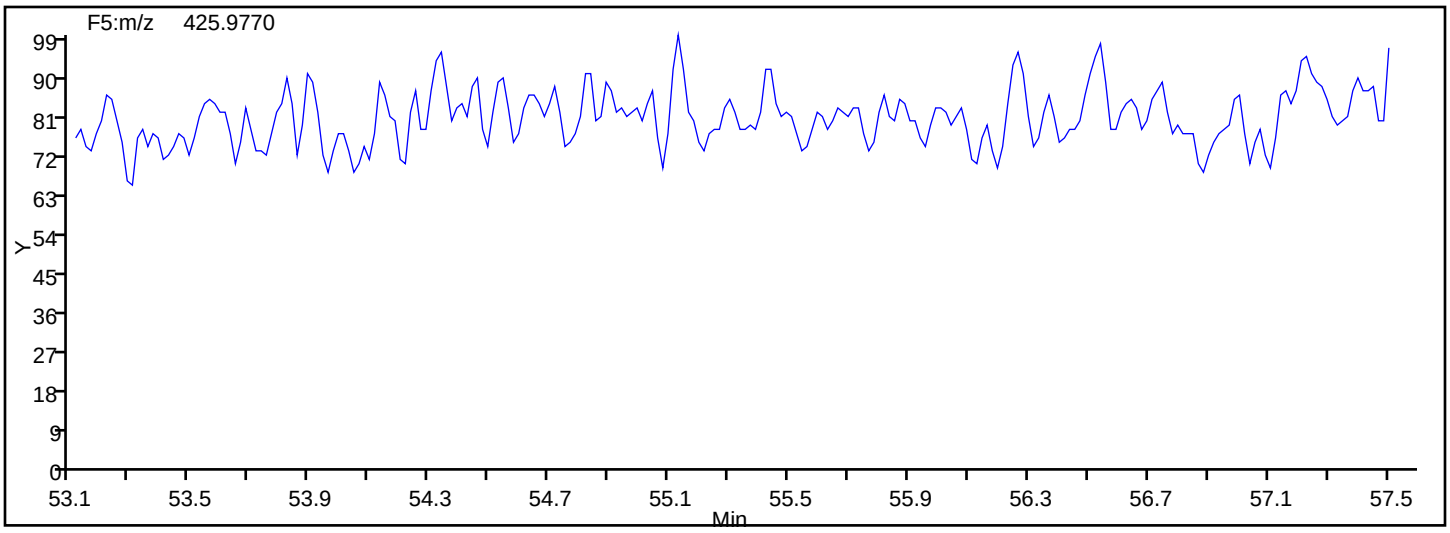
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Lock Mass



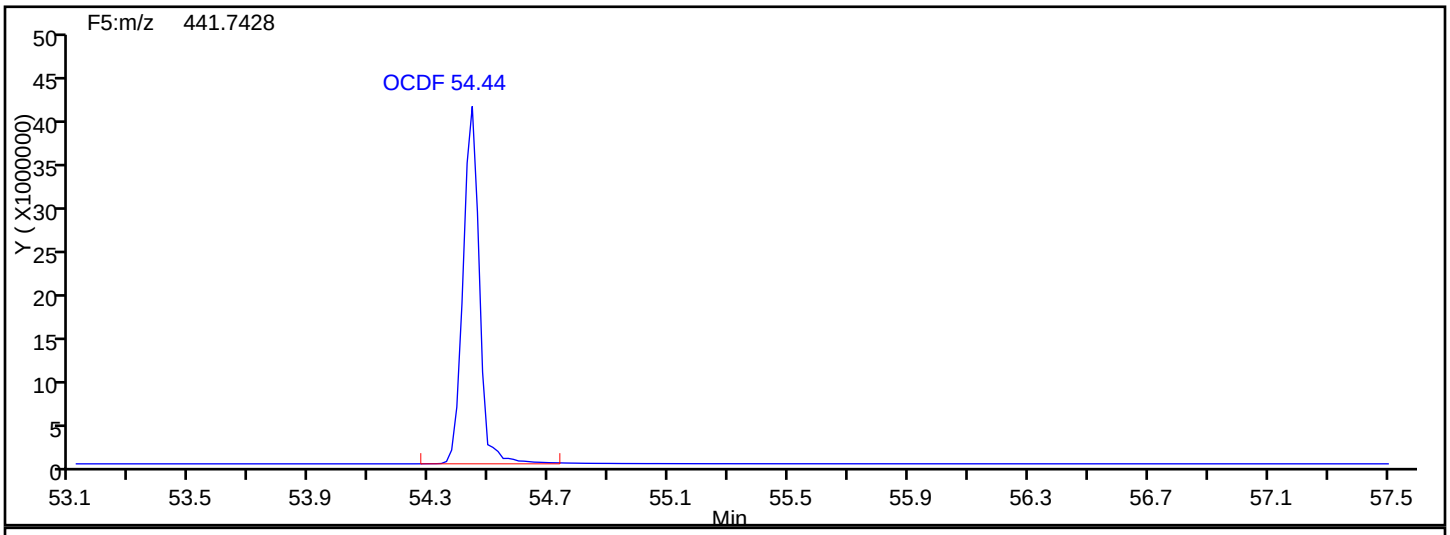
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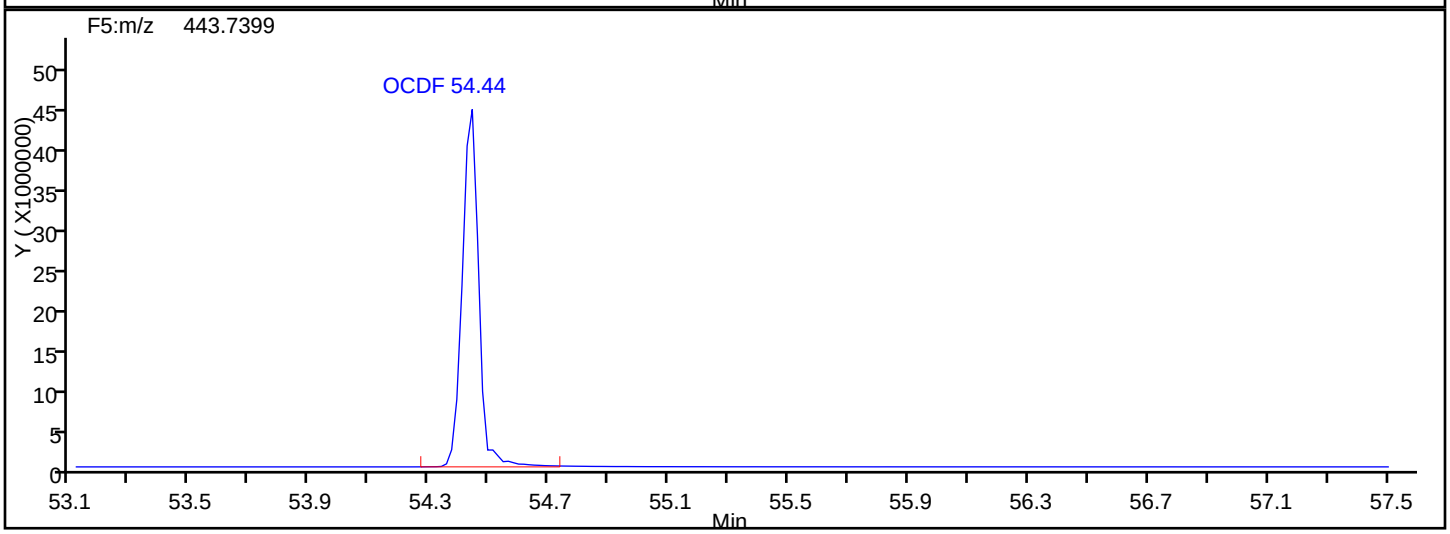
TestAmerica Knoxville

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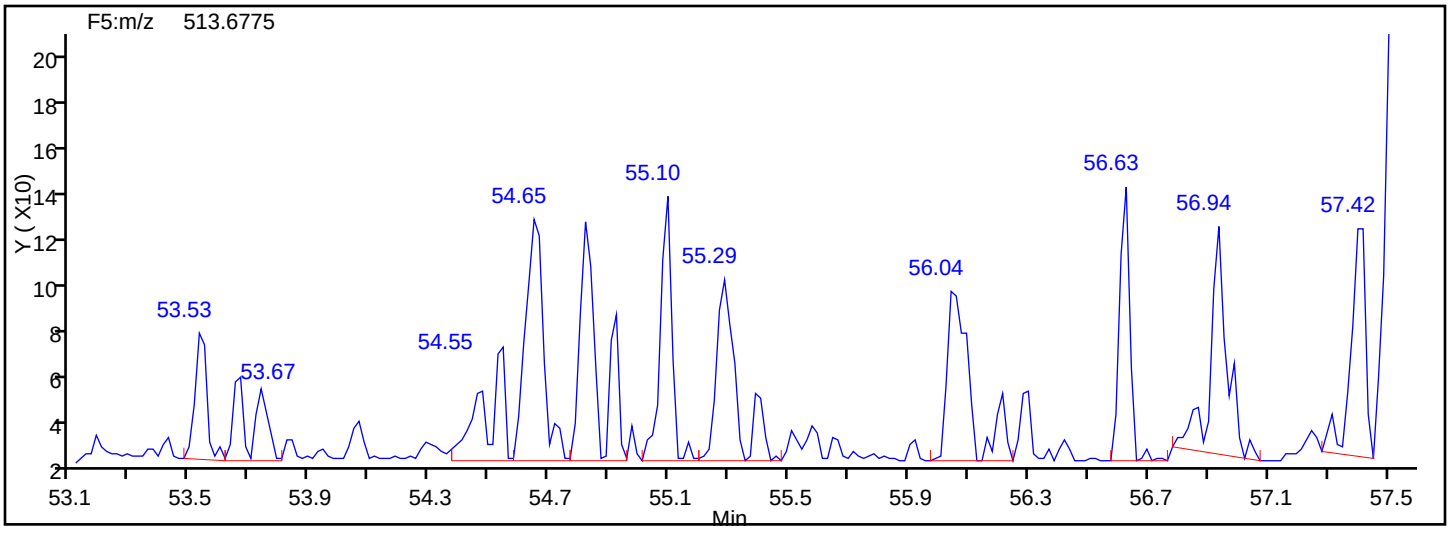
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 6 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Interference Mass



FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

Lab Sample ID (1): WDM 140-7768/1 Instrument ID (1): D2A

GC Column (1): RTX-5 ID: 0.32(mm) Date Analyzed (1): 05/16/2014 10:23

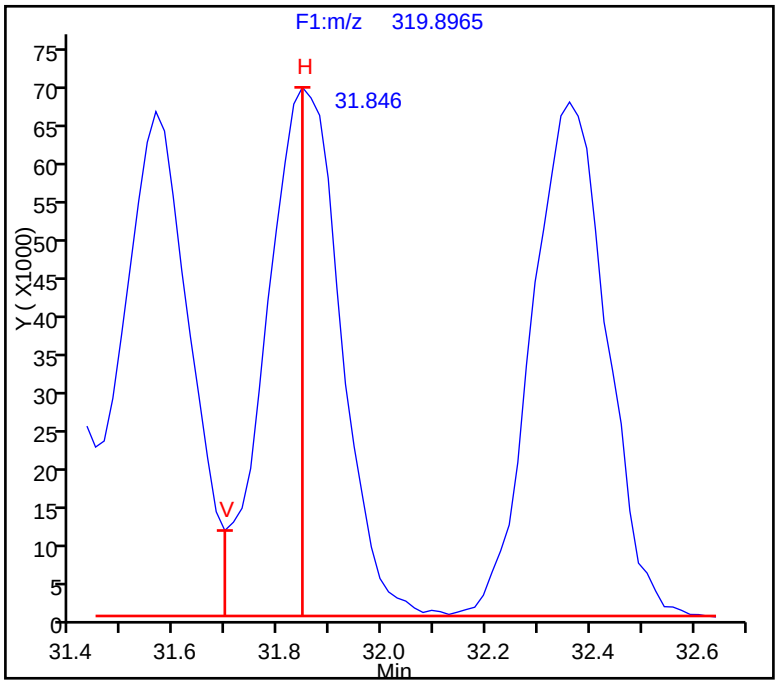
| ANALYTE | RT | RESOLUTION (%) |
|---|---|---|
| 2,3,7,8-TCDD | 31.85 | 17 |

Resolution Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516w1.d
Injection Date: 16-May-2014 10:23:00 Instrument ID: D2A
Lims ID: WDM
Client ID:
Operator ID: DavidsonM ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL

2,3,7,8-TCDD




Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 11408
H (Peak Height) = 69250

%R = 17 <= 25
Passed

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

Lab Sample ID (1): WDMCCV 140-27191/1 Instrument ID (1): D2A

GC Column (1): RTX-5 ID: 0.32(mm) Date Analyzed (1): 01/28/2019 01:01

| ANALYTE | RT | RESOLUTION (%) |
|---|---|---|
| 2,3,7,8-TCDD | 31.00 | 15 |

Report Date: 28-Jan-2019 02:09:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

Resolution Report

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d
Injection Date: 28-Jan-2019 01:01:00 Instrument ID: D2A
Lims ID: WDMCCV
Client ID:
Operator ID: Xcalibur_System ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Column:
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL

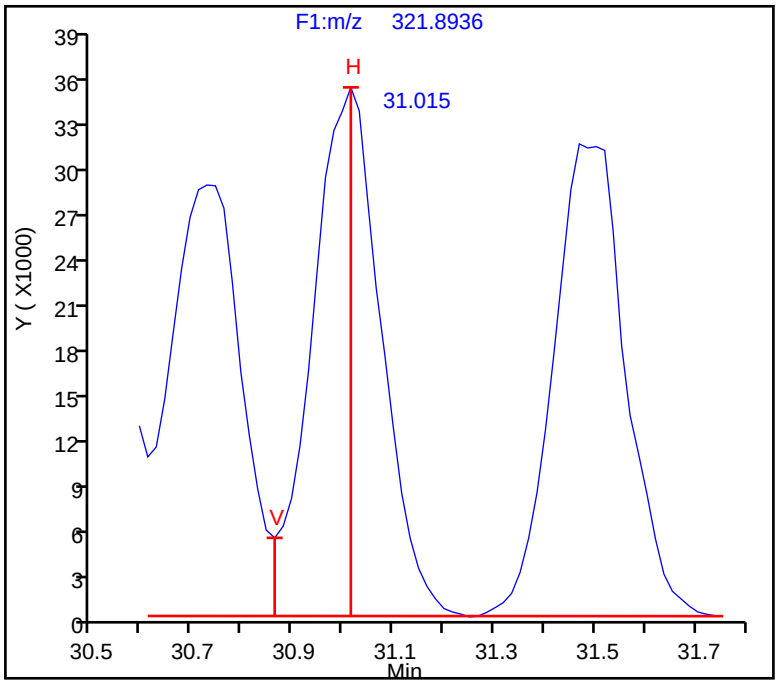
2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 5288
H (Peak Height) = 35045

%R = 15 <= 25
Passed



FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

Lab Sample ID (1): WDMCCV 140-27242/1 Instrument ID (1): D2A

GC Column (1): RTX-5 ID: 0.32(mm) Date Analyzed (1): 01/29/2019 09:51

| ANALYTE | RT | RESOLUTION (%) |
|---|---|---|
| 2,3,7,8-TCDD | 30.97 | 13 |

Resolution Report

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d
Injection Date: 29-Jan-2019 09:51:00 Instrument ID: D2A
Lims ID: WDMCCV
Client ID:
Operator ID: Xcalibur_System ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Column:
Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL

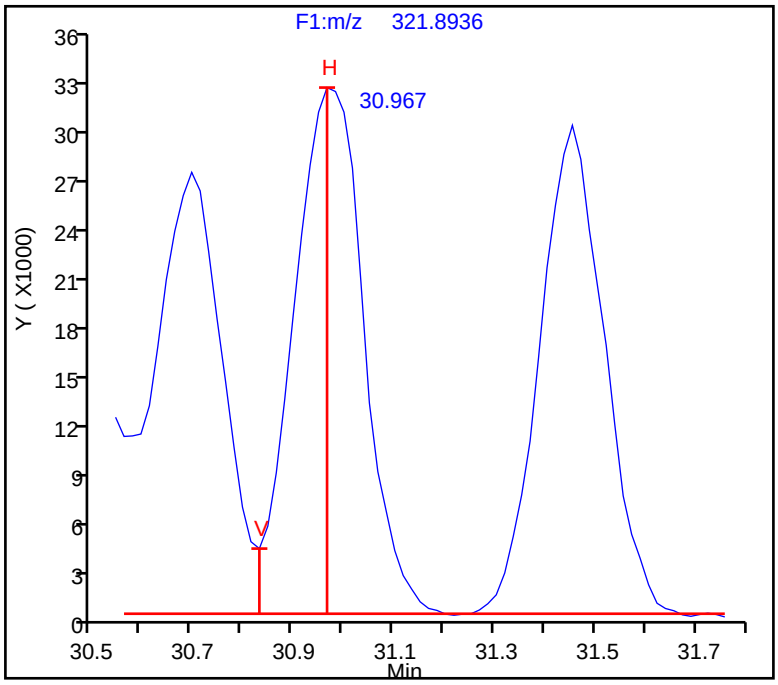
2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 4315
H (Peak Height) = 32119

%R = 13 <= 25
Passed



FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: ICV 140-7768/7  Calibration Date: 05/16/2014 20:36

Instrument ID: D2A  Calib Start Date: 05/16/2014 14:26

GC Column: RTX-5  ID: 0.32(mm)  Calib End Date: 05/16/2014 18:31

Lab File ID: d3140516ss.d  Conc. Units: pg/uL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDF | AveID | 1.088 | 1.069 | | 9.82 | 10.0 | -1.8 | 35.0 |
| 2,3,7,8-TCDD | AveID | 1.173 | 1.088 | | 9.27 | 10.0 | -7.3 | 35.0 |
| 1,2,3,7,8-PeCDF | AveID | 1.190 | 1.051 | | 44.2 | 50.0 | -11.6 | 35.0 |
| 2,3,4,7,8-PeCDF | AveID | 1.109 | 1.106 | | 49.8 | 50.0 | -0.3 | 35.0 |
| 1,2,3,7,8-PeCDD | AveID | 1.043 | 1.080 | | 51.7 | 50.0 | 3.5 | 35.0 |
| 1,2,3,4,7,8-HxCDF | AveID | 1.363 | 1.210 | | 44.4 | 50.0 | -11.2 | 35.0 |
| 1,2,3,6,7,8-HxCDF | AveID | 1.276 | 1.178 | | 46.1 | 50.0 | -7.7 | 35.0 |
| 2,3,4,6,7,8-HxCDF | AveID | 1.265 | 1.171 | | 46.3 | 50.0 | -7.5 | 35.0 |
| 1,2,3,4,7,8-HxCDD | AveID | 1.141 | 1.081 | | 47.4 | 50.0 | -5.3 | 35.0 |
| 1,2,3,6,7,8-HxCDD | AveID | 1.148 | 1.023 | | 44.5 | 50.0 | -10.9 | 35.0 |
| 1,2,3,7,8,9-HxCDD | AveID | 1.221 | 1.075 | | 44.0 | 50.0 | -12.0 | 35.0 |
| 1,2,3,7,8,9-HxCDF | AveID | 1.257 | 1.146 | | 45.6 | 50.0 | -8.9 | 35.0 |
| 1,2,3,4,6,7,8-HpCDF | AveID | 1.498 | 1.371 | | 45.7 | 50.0 | -8.5 | 35.0 |
| 1,2,3,4,6,7,8-HpCDD | AveID | 1.120 | 1.091 | | 48.7 | 50.0 | -2.6 | 35.0 |
| 1,2,3,4,7,8,9-HpCDF | AveID | 1.381 | 1.356 | | 49.1 | 50.0 | -1.8 | 35.0 |
| OCDD | AveID | 1.207 | 1.096 | | 90.7 | 100 | -9.3 | 35.0 |
| OCDF | AveID | 1.116 | 1.302 | | 117 | 100 | 16.7 | 35.0 |
| 13C-2,3,7,8-TCDF | Ave | 1.755 | 1.954 | | 111 | 100 | 11.4 | |
| 13C-2,3,7,8-TCDD | Ave | 1.071 | 1.163 | | 109 | 100 | 8.6 | |
| 13C-1,2,3,7,8-PeCDF | Ave | 1.370 | 1.489 | | 109 | 100 | 8.6 | |
| 13C-2,3,4,7,8-PeCDF | Ave | 1.384 | 1.444 | | 104 | 100 | 4.3 | |
| 13C-1,2,3,7,8-PeCDD | Ave | 0.8743 | 0.8389 | | 96.0 | 100 | -4.0 | |
| 13C-1,2,3,4,7,8-HxCDF | Ave | 1.189 | 1.260 | | 106 | 100 | 6.0 | |
| 13C-1,2,3,6,7,8-HxCDF | Ave | 1.462 | 1.518 | | 104 | 100 | 3.8 | |
| 13C-2,3,4,6,7,8-HxCDF | Ave | 1.320 | 1.402 | | 106 | 100 | 6.2 | |
| 13C-1,2,3,4,7,8-HxCDD | Ave | 0.8772 | 0.9166 | | 104 | 100 | 4.5 | |
| 13C-1,2,3,6,7,8-HxCDD | Ave | 0.9171 | 1.021 | | 111 | 100 | 11.4 | |
| 13C-1,2,3,7,8,9-HxCDF | Ave | 1.200 | 1.243 | | 104 | 100 | 3.6 | |
| 13C-1,2,3,4,6,7,8-HpCDF | Ave | 1.050 | 1.135 | | 108 | 100 | 8.1 | |
| 13C-1,2,3,4,6,7,8-HpCDD | Ave | 0.8155 | 0.8003 | | 98.1 | 100 | -1.9 | |
| 13C-1,2,3,4,7,8,9-HpCDF | Ave | 0.8947 | 0.8904 | | 99.5 | 100 | -0.5 | |
| 13C-OCDD | Ave | 0.7044 | 0.7274 | | 207 | 200 | 3.3 | |
| 13C-OCDF | Ave | 1.061 | 0.8403 | | 158 | 200 | -20.8 | |
| 37Cl4-2,3,7,8-TCDD | Ave | 1.227 | 1.270 | | 10.4 | 10.0 | 3.6 | |

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516ss.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 16-May-2014 20:36:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:76 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist:

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Feb-2017 12:30:10 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK012

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:32:47

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 31:53 | 1417873 | 0.79 | 1.1733 | 9.273 | 9.273 | 0.0556 | 0.0556 | 92.73 | |
| A Non-2,3,7,8-sub-TCDD | 30:20 | 27238 | 0.77 | 0.0000 | | | | | | RQ |
| S Total TCDD | | | | | 9.273 | 9.273 | 0.0556 | 0.0556 | | RQ |
| 2,3,7,8-TCDF | 29:49 | 2340173 | 0.79 | 1.0881 | 9.823 | 9.823 | 0.0298 | 0.0298 | 98.23 | |
| A Non-2,3,7,8-sub-TCDF | 28:61 | 61132 | 0.77 | 0.0000 | | | | | | RQ |
| S Total TCDF | | | | | 9.823 | 9.823 | 0.0298 | 0.0298 | | RQ |
| 1,2,3,7,8-PeCDD | 41:03 | 5075088 | 1.55 | 1.0434 | 51.7 | 51.7 | 0.0781 | 0.0781 | 103 | |
| A Non-2,3,7,8-sub-PeCDD | 39:56 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDD | | | | | 51.7 | 51.7 | 0.0781 | 0.0781 | | |
| 1,2,3,7,8-PeCDF | 39:20 | 8772190 | 1.60 | 1.1898 | 44.2 | 44.2 | 0.3292 | 0.3292 | 88.37 | |
| 2,3,4,7,8-PeCDF | 40:31 | 8947470 | 1.58 | 1.1095 | 49.8 | 49.8 | 0.3182 | 0.3182 | 99.70 | |
| A Non-2,3,7,8-sub-PeCDF | 38:38 | 194618 | 1.55 | 0.0000 | | | | | | RQ |
| S Total PeCDF | | | | | 94.0 | 94.0 | 0.3237 | 0.3237 | | RQ |
| 1,2,3,4,7,8-HxCDD | 45:16 | 6434621 | 1.25 | 1.1409 | 47.4 | 47.4 | 0.1781 | 0.1781 | 94.72 | |
| 1,2,3,6,7,8-HxCDD | 45:23 | 6785615 | 1.25 | 1.1481 | 44.5 | 44.5 | 0.1729 | 0.1729 | 89.06 | |
| 1,2,3,7,8,9-HxCDD | 45:46 | 6765473 | 1.25 | 1.2212 | 44.0 | 44.0 | 0.1645 | 0.1645 | 88.00 | |
| A Non-2,3,7,8-sub-HxCDD | 44:42 | 6077453 | 1.07 | 0.0000 | | | | | | |
| S Total HxCDD | | | | | 135.9 | 135.9 | 0.1718 | 0.1718 | | |
| 1,2,3,4,7,8-HxCDF | 44:13 | 9905457 | 1.24 | 1.3629 | 44.4 | 44.4 | 0.1276 | 0.1276 | 88.77 | |
| 1,2,3,6,7,8-HxCDF | 44:21 | 11612537 | 1.25 | 1.2762 | 46.1 | 46.1 | 0.1262 | 0.1262 | 92.27 | |
| 2,3,4,6,7,8-HxCDF | 45:05 | 10663021 | 1.25 | 1.2654 | 46.3 | 46.3 | 0.1363 | 0.1363 | 92.51 | |
| 1,2,3,7,8,9-HxCDF | 46:04 | 9252844 | 1.24 | 1.2573 | 45.6 | 45.6 | 0.1802 | 0.1802 | 91.12 | |
| A Non-2,3,7,8-sub-HxCDF | 44:34 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDF | | | | | 182.3 | 182.3 | 0.1426 | 0.1426 | | |
| 1,2,3,4,6,7,8-HpCDD | 50:12 | 5673345 | 1.05 | 1.1204 | 48.7 | 48.7 | 0.2370 | 0.2370 | 97.39 | |
| A Non-2,3,7,8-sub-HpCDD | 49:35 | 43311 | 1.01 | 0.0000 | | | | | | |
| S Total HpCDD | | | | | 48.7 | 48.7 | 0.2370 | 0.2370 | | |
| 1,2,3,4,6,7,8-HpCDF | 48:30 | 10105566 | 1.06 | 1.4984 | 45.7 | 45.7 | 0.1492 | 0.1492 | 91.47 | |
| 1,2,3,4,7,8,9-HpCDF | 50:50 | 7845196 | 1.05 | 1.3807 | 49.1 | 49.1 | 0.2145 | 0.2145 | 98.23 | |

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HpCDF | 49:39 | | | | | | 0.0 | 0.0 | | |
| S Total HpCDF | | | | | 94.9 | 94.9 | 0.1818 | 0.1818 | | |
| OCDD | 54:20 | 10353088 | 0.91 | 1.2073 | 90.7 | 90.7 | 0.1168 | 0.1168 | 90.74 | |
| OCDF | 54:27 | 14219371 | 0.91 | 1.1162 | 116.7 | 116.7 | 0.1569 | 0.1569 | 117 | |
| D 13C-2,3,7,8-TCDD | 31:49 | 13031572 | 0.81 | 1.0709 | 108.6 | 108.6 | 0.2879 | 0.2879 | 109 | |
| D 13C-2,3,7,8-TCDF | 29:46 | 21894242 | 0.80 | 1.7545 | 111.4 | 111.4 | 0.3328 | 0.3328 | 111 | |
| D 13C-1,2,3,7,8-PeCDD | 40:61 | 9401272 | 1.59 | 0.8743 | 96.0 | 96.0 | 0.3372 | 0.3372 | 95.95 | |
| D 13C-1,2,3,7,8-PeCDF | 39:17 | 16685645 | 1.58 | 1.3704 | 108.6 | 108.6 | 0.5610 | 0.5610 | 109 | |
| D 13C-2,3,4,7,8-PeCDF | 40:30 | 16178636 | 1.60 | 1.3837 | 104.3 | 104.3 | 0.5556 | 0.5556 | 104 | |
| D 13C-1,2,3,4,7,8-HxCDD | 45:15 | 11909770 | 1.26 | 0.8772 | 104.5 | 104.5 | 0.1864 | 0.1864 | 104 | |
| D 13C-1,2,3,6,7,8-HxCDD | 45:22 | 13272005 | 1.28 | 0.9171 | 111.4 | 111.4 | 0.1783 | 0.1783 | 111 | |
| D 13C-1,2,3,4,7,8-HxCDF | 44:12 | 16374250 | 0.52 | 1.1892 | 106.0 | 106.0 | 0.1201 | 0.1201 | 106 | |
| D 13C-1,2,3,6,7,8-HxCDF | 44:20 | 19722109 | 0.52 | 1.4625 | 103.8 | 103.8 | 0.0977 | 0.0977 | 104 | |
| D 13C-2,3,4,6,7,8-HxCDF | 45:04 | 18217439 | 0.53 | 1.3197 | 106.2 | 106.2 | 0.1082 | 0.1082 | 106 | |
| D 13C-1,2,3,7,8,9-HxCDF | 46:03 | 16152585 | 0.52 | 1.2001 | 103.6 | 103.6 | 0.1190 | 0.1190 | 104 | |
| D 13C-1,2,3,4,6,7,8-HpCDD | 50:11 | 10398852 | 1.09 | 0.8155 | 98.1 | 98.1 | 0.0233 | 0.0233 | 98.14 | |
| D 13C-1,2,3,4,6,7,8-HpCDF | 48:28 | 14746195 | 0.45 | 1.0496 | 108.1 | 108.1 | 0.1265 | 0.1265 | 108 | |
| D 13C-1,2,3,4,7,8,9-HpCDF | 50:49 | 11568712 | 0.47 | 0.8947 | 99.5 | 99.5 | 0.1484 | 0.1484 | 99.51 | |
| D 13C-OCDD | 54:18 | 18901029 | 0.92 | 0.7044 | 206.5 | 206.5 | 0.1411 | 0.1411 | 103 | |
| D 13C-OCDF | 54:27 | 21836911 | 0.89 | 1.0615 | 158.3 | 158.3 | 0.0854 | 0.0854 | 79.17 | |
| $ 37Cl4-2,3,7,8-TCDD | 31:53 | 1423356 | | 1.2266 | 10.4 | 10.4 | 0.0168 | 0.0168 | 104 | |
| * 13C-1,2,3,4-TCDD | 31:18 | 11206563 | 0.82 | 9.1E+04 | 100.0 | 100.0 | | | | |
| * 13C-1,2,3,7,8,9-HxCDD | 45:45 | 12993023 | 1.26 | 1E+05 | 100.0 | 100.0 | | | | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

## Reagents:

61CV1613OS_00005 Amount Added: 20.00 Units: uL

Report Date: 01-Feb-2017 12:30:13 Chrom Revision: 2.2 30-Jan-2017 14:50:44

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516ss.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 16-May-2014 20:36:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:76 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A
Sublist:

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Feb-2017 12:30:10 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK012

First Level Reviewer: davidsonm Date: 11-Jan-2017 16:32:47

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | |
| 319.8965 | 31:53 | 31:53 | 0 | 1.002 | 625068 | 60444 | 179 | 447 | 338 | | |
| 321.8936 | 31:53 | 31:53 | 0 | 1.002 | 792805 | 81677 | 166 | 415 | 492 | 0.79(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | RQ |
| 319.8965 | 31:36 | 30:20 | 77 | | 14371 | 1924 | 179 | 447 | 11 | | |
| 321.8936 | 31:38 | 30:20 | 79 | | 15389 | 2519 | 166 | 415 | 15 | 0.93(0.65-0.89) | |
| 2,3,7,8-TCDF | | | | | | | | | | | |
| 303.9016 | 29:49 | 29:49 | 0 | 1.002 | 1031334 | 108919 | 158 | 395 | 689 | | |
| 305.8987 | 29:49 | 29:49 | 0 | 1.002 | 1308839 | 141742 | 155 | 387 | 914 | 0.79(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | RQ |
| 303.9016 | 27:53 | 28:61 | -68 | | 9888 | 1534 | 158 | 395 | 10 | | |
| 305.8987 | 27:55 | 28:61 | -66 | | 12672 | 2036 | 155 | 387 | 13 | 0.78(0.65-0.89) | |
| 303.9016 | 34:42 | 28:61 | 340 | | 16780 | 2164 | 158 | 395 | 14 | | |
| 305.8987 | 34:43 | 28:61 | 341 | | 115682 | 4841 | 155 | 387 | 31 | 0.15(0.65-0.89) | |
| 1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 355.8546 | 41:03 | 41:03 | 0 | 1.001 | 3087321 | 702702 | 295 | 737 | 2382 | | |
| 357.8516 | 41:02 | 41:03 | -1 | 1.000 | 1987767 | 465184 | 422 | 1055 | 1102 | 1.55(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | |
| 355.8546 | 39:56 | | | | | | 295 | 737 | | | |
| 357.8516 | 39:56 | | | | | | 422 | 1055 | | | |
| 1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 39:20 | 39:20 | 0 | 1.001 | 5404007 | 1115966 | 2501 | 6252 | 446 | | |
| 341.8567 | 39:20 | 39:20 | 0 | 1.001 | 3368183 | 689033 | 2774 | 6935 | 248 | 1.60(1.32-1.78) | |
| 2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 40:31 | 40:31 | 0 | 1.000 | 5473120 | 1239165 | 2501 | 6252 | 495 | | |
| 341.8567 | 40:31 | 40:31 | 0 | 1.000 | 3474350 | 799162 | 2774 | 6935 | 288 | 1.58(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | RQ |
| 339.8597 | 39:50 | 38:38 | 71 | | 138716 | 26751 | 2501 | 6252 | 11 | | |
| 341.8567 | 39:50 | 38:38 | 71 | | 76321 | 15381 | 2774 | 6935 | 6 | 1.82(1.32-1.78) | |
| 1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:16 | 45:16 | 0 | 1.000 | 3579248 | 927964 | 1313 | 3282 | 707 | | |
| 391.8127 | 45:16 | 45:16 | 0 | 1.000 | 2855373 | 725887 | 1200 | 3000 | 605 | 1.25(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:23 | 45:23 | 0 | 1.000 | 3774978 | 909011 | 1313 | 3282 | 692 | | |
| 391.8127 | 45:23 | 45:23 | 0 | 1.000 | 3010637 | 734850 | 1200 | 3000 | 612 | 1.25(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:46 | 45:46 | 0 | 1.012 | 3754712 | 862716 | 1313 | 3282 | 657 | | |
| 391.8127 | 45:46 | 45:46 | 0 | 1.012 | 3010761 | 693378 | 1200 | 3000 | 578 | 1.25(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | |
| 389.8158 | 44:38 | 44:42 | -5 | | 3139465 | 355478 | 1313 | 3282 | 271 | | |
| 391.8127 | 44:38 | 44:42 | -5 | | 2937988 | 346912 | 1200 | 3000 | 289 | 1.07(1.05-1.43) | |
| 1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:13 | 44:13 | 0 | 1.000 | 5487400 | 1497391 | 1821 | 4552 | 822 | | |
| 375.8178 | 44:13 | 44:13 | 0 | 1.000 | 4418057 | 1193324 | 1292 | 3230 | 924 | 1.24(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:21 | 44:21 | 0 | 1.000 | 6453112 | 1603982 | 1821 | 4552 | 881 | | |
| 375.8178 | 44:21 | 44:21 | 0 | 1.000 | 5159425 | 1253054 | 1292 | 3230 | 970 | 1.25(1.05-1.43) | |
| 2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 45:05 | 45:05 | 0 | 1.000 | 5919412 | 1461157 | 1821 | 4552 | 802 | | |
| 375.8178 | 45:05 | 45:05 | 0 | 1.000 | 4743609 | 1190672 | 1292 | 3230 | 922 | 1.25(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 46:04 | 46:04 | 0 | 1.000 | 5114596 | 1110954 | 1821 | 4552 | 610 | | |
| 375.8178 | 46:03 | 46:04 | -1 | 1.000 | 4138248 | 899907 | 1292 | 3230 | 697 | 1.24(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:34 | | | | | | 1821 | 4552 | | | |
| 375.8178 | 44:34 | | | | | | 1292 | 3230 | | | |
| 1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 423.7767 | 50:12 | 50:12 | 0 | 1.000 | 2908005 | 549724 | 901 | 2252 | 610 | | |
| 425.7737 | 50:12 | 50:12 | 0 | 1.000 | 2765340 | 524474 | 1173 | 2932 | 447 | 1.05(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | |
| 423.7767 | 48:59 | 49:35 | -36 | | 21729 | 5130 | 901 | 2252 | 6 | | |
| 425.7737 | 48:60 | 49:35 | -35 | | 21582 | 5123 | 1173 | 2932 | 4 | 1.01(0.88-1.20) | |
| 1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 407.7817 | 48:30 | 48:30 | 0 | 1.001 | 5205525 | 1048507 | 1360 | 3400 | 771 | | |
| 409.7788 | 48:29 | 48:30 | -1 | 1.000 | 4900041 | 996621 | 1290 | 3225 | 773 | 1.06(0.88-1.20) | |
| 1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 407.7817 | 50:50 | 50:50 | 0 | 1.000 | 4012075 | 797853 | 1360 | 3400 | 587 | | |
| 409.7788 | 50:50 | 50:50 | 0 | 1.000 | 3833121 | 754937 | 1290 | 3225 | 585 | 1.05(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | |
| 407.7817 | 49:39 | | | | | | 1360 | 3400 | | | |
| 409.7788 | 49:39 | | | | | | 1290 | 3225 | | | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCDD | | | | | | | | | | | |
| 457.7377 | 54:20 | 54:20 | 0 | 1.000 | 4936199 | 1099344 | 554 | 1385 | 1984 | | |
| 459.7348 | 54:18 | 54:20 | -1 | 1.000 | 5416889 | 1240830 | 651 | 1627 | 1906 | 0.91(0.76-1.02) | |
| OCDF | | | | | | | | | | | |
| 441.7428 | 54:27 | 54:27 | 0 | 1.000 | 6768152 | 1570191 | 718 | 1795 | 2187 | | |
| 443.7399 | 54:27 | 54:27 | 0 | 1.000 | 7451219 | 1761771 | 1059 | 2647 | 1664 | 0.91(0.76-1.02) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 31:49 | 31:50 | 0 | 1.016 | 5815191 | 584676 | 597 | 1492 | 979 | | |
| 333.9338 | 31:50 | 31:50 | 0 | 1.017 | 7216381 | 737228 | 843 | 2107 | 875 | 0.81(0.65-0.89) | |
| 13C-2,3,7,8-TCDF | | | | | | | | | | | |
| 315.9419 | 29:46 | 29:45 | 0 | 0.951 | 9740010 | 1056104 | 1458 | 3645 | 724 | | |
| 317.9389 | 29:46 | 29:45 | 0 | 0.951 | 12154232 | 1352506 | 1269 | 3172 | 1066 | 0.80(0.65-0.89) | |
| 13C-1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 367.8949 | 40:61 | 40:60 | 0 | 1.310 | 5770571 | 1350495 | 883 | 2207 | 1529 | | |
| 369.8919 | 40:61 | 40:60 | 0 | 1.310 | 3630701 | 849050 | 494 | 1235 | 1719 | 1.59(1.32-1.78) | |
| 13C-1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 39:17 | 39:17 | 0 | 1.255 | 10209440 | 2060178 | 1791 | 4477 | 1150 | | |
| 353.8970 | 39:17 | 39:17 | 0 | 1.255 | 6476205 | 1306438 | 1800 | 4500 | 726 | 1.58(1.32-1.78) | |
| 13C-2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 40:30 | 40:29 | 0 | 1.294 | 9958166 | 2298930 | 1791 | 4477 | 1284 | | |
| 353.8970 | 40:30 | 40:29 | 0 | 1.294 | 6220470 | 1436425 | 1800 | 4500 | 798 | 1.60(1.32-1.78) | |
| 13C-1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:15 | 45:14 | 1 | 0.989 | 6640939 | 1716989 | 1276 | 3190 | 1346 | | |
| 403.8529 | 45:15 | 45:14 | 1 | 0.989 | 5268831 | 1375213 | 660 | 1650 | 2084 | 1.26(1.05-1.43) | |
| 13C-1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:22 | 45:21 | 1 | 0.992 | 7448022 | 1763686 | 1276 | 3190 | 1382 | | |
| 403.8529 | 45:22 | 45:21 | 1 | 0.992 | 5823983 | 1400199 | 660 | 1650 | 2122 | 1.28(1.05-1.43) | |
| 13C-1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44:12 | 44:11 | 1 | 0.966 | 5572913 | 1526862 | 563 | 1407 | 2712 | | |
| 385.8610 | 44:12 | 44:11 | 1 | 0.966 | 10801337 | 2947711 | 1128 | 2820 | 2613 | 0.52(0.43-0.59) | |
| 13C-1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44:20 | 44:19 | 1 | 0.969 | 6720563 | 1680247 | 563 | 1407 | 2984 | | |
| 385.8610 | 44:20 | 44:19 | 1 | 0.969 | 13001546 | 3153048 | 1128 | 2820 | 2795 | 0.52(0.43-0.59) | |
| 13C-2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 45:04 | 45:03 | 0 | 0.985 | 6334059 | 1563970 | 563 | 1407 | 2778 | | |
| 385.8610 | 45:04 | 45:03 | 0 | 0.985 | 11883380 | 2946859 | 1128 | 2820 | 2612 | 0.53(0.43-0.59) | |
| 13C-1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 383.8639 | 46:03 | 46:01 | 1 | 1.006 | 5526618 | 1177745 | 563 | 1407 | 2092 | | |
| 385.8610 | 46:01 | 46:01 | 0 | 1.006 | 10625967 | 2256210 | 1128 | 2820 | 2000 | 0.52(0.43-0.59) | |
| 13C-1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 435.8169 | 50:11 | 50:09 | 1 | 1.097 | 5427250 | 1008813 | 153 | 382 | 6594 | | |
| 437.8140 | 50:11 | 50:09 | 1 | 1.097 | 4971602 | 943619 | 72 | 180 | 13106 | 1.09(0.88-1.20) | |
| 13C-1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 417.8250 | 48:28 | 48:27 | 0 | 1.059 | 4588031 | 915667 | 791 | 1977 | 1158 | | |
| 419.8220 | 48:28 | 48:27 | 0 | 1.059 | 10158164 | 2048687 | 781 | 1952 | 2623 | 0.45(0.51-0.37) | |

Report Date: 01-Feb-2017 12:30:13 Chrom Revision: 2.2 30-Jan-2017 14:50:44
Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516ss.d

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 417.8250 | 50:49 | 50:48 | 1 | 1.111 | 3700112 | 716176 | 791 | 1977 | 905 | | |
| 419.8220 | 50:49 | 50:48 | 1 | 1.111 | 7868600 | 1520419 | 781 | 1952 | 1947 | 0.47(0.37-0.51) | |
| 13C-OCDD | | | | | | | | | | | |
| 469.7780 | 54:18 | 54:17 | 1 | 1.187 | 9058974 | 2055731 | 645 | 1612 | 3187 | | |
| 471.7750 | 54:18 | 54:17 | 1 | 1.187 | 9842055 | 2215791 | 532 | 1330 | 4165 | 0.92(0.76-1.02) | |
| 13C-OCDF | | | | | | | | | | | |
| 453.7830 | 54:27 | 54:26 | 1 | 1.190 | 10295647 | 2421522 | 579 | 1447 | 4182 | | |
| 455.7801 | 54:27 | 54:26 | 1 | 1.190 | 11541264 | 2651395 | 494 | 1235 | 5367 | 0.89(0.76-1.02) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31:53 | 31:53 | 0 | 1.019 | 1423356 | 147302 | 96 | 240 | 1534 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 31:18 | 31:18 | 0 | | 5037847 | 530028 | 597 | 1492 | 888 | | |
| 333.9338 | 31:18 | 31:18 | 0 | | 6168716 | 637618 | 843 | 2107 | 756 | 0.82(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:45 | 45:45 | 0 | | 7238094 | 1648269 | 1276 | 3190 | 1292 | | |
| 403.8529 | 45:45 | 45:45 | 0 | | 5754929 | 1311453 | 660 | 1650 | 1987 | 1.26(1.05-1.43) | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

## Reagents:

61CV1613OS_00005 Amount Added: 20.00 Units: uL

Report Date: 01-Feb-2017 12:30:13 Chrom Revision: 2.2 30-Jan-2017 14:50:44

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516ss.d
Lims ID: ICV
Client ID:
Inject. Date: 16-May-2014 20:36:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 7
Sublist:

Non-2,3,7,8-sub-TCDD, RT: 30.308

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 319.8965 Area | 319.8965 Height | 321.8936 Area | 321.8936 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 31:36 | 14371 | 1924 | 15389 | 2519 | | 0.93 | R |
| Signal Totals: | | | | | | | |
| | 14371 | 1924 | 15389 | 2519 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 29760 | 4443 | | | | 0.93 | RQ |
| | 27238 | 4458 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (29760 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (27238 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516ss.d
Lims ID: ICV
Client ID:
Inject. Date: 16-May-2014 20:36:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 7
Sublist:

Non-2,3,7,8-sub-TCDF, RT: 28.995

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 303.9016 Area | 303.9016 Height | 305.8987 Area | 305.8987 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 27:53 | 9888 | 1534 | 12672 | 2036 | | 0.78 | n |
| 34:42 | 16780 | 2164 | 115682 | 4841 | | 0.15 | R |
| Signal Totals: | | | | | | | |
| | 26668 | 3698 | 128354 | 6877 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 155022 | 10575 | | | | 0.21 | RQ |
| | 61132 | 8544 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (155022 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (61132 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516ss.d
Lims ID: ICV
Client ID:
Inject. Date: 16-May-2014 20:36:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 7
Sublist:

Non-2,3,7,8-sub-PeCDF, RT: 38.623

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 339.8597 Area | 339.8597 Height | 341.8567 Area | 341.8567 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 39:50 | 138716 | 26751 | 76321 | 15381 | | 1.82 | Rn |
| Signal Totals: | | | | | | | |
| | 138716 | 26751 | 76321 | 15381 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 215037 | 42132 | | | | 1.82 | RQ |
| | 194618 | 39221 | | | | | Empc Correction |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (215037 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (194618 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516ss.d
Lims ID: ICV
Client ID:
Inject. Date: 16-May-2014 20:36:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 7
Sublist:

Non-2,3,7,8-sub-HxCDD, RT: 44.687

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 389.8158 Area | 389.8158 Height | 391.8127 Area | 391.8127 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 44:38 | 3139465 | 355478 | 2937988 | 346912 | | 1.07 | |
| Signal Totals: | | | | | | | |
| | 3139465 | 355478 | 2937988 | 346912 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 6077453 | 702390 | | | | 1.07 | |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (6077453 * 0.0) / (0 * 0.000)

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516ss.d
Lims ID: ICV
Client ID:
Inject. Date: 16-May-2014 20:36:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 7
Sublist:

Non-2,3,7,8-sub-HpCDD, RT: 49.566

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 423.7767 Area | 423.7767 Height | 425.7737 Area | 425.7737 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 48:59 | 21729 | 5130 | 21582 | 5123 | | 1.01 | n |
| Signal Totals: | | | | | | | |
| | 21729 | 5130 | 21582 | 5123 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 43311 | 10253 | | | | 1.01 | |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43311 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
n - Failed Sig-To-Noise Test

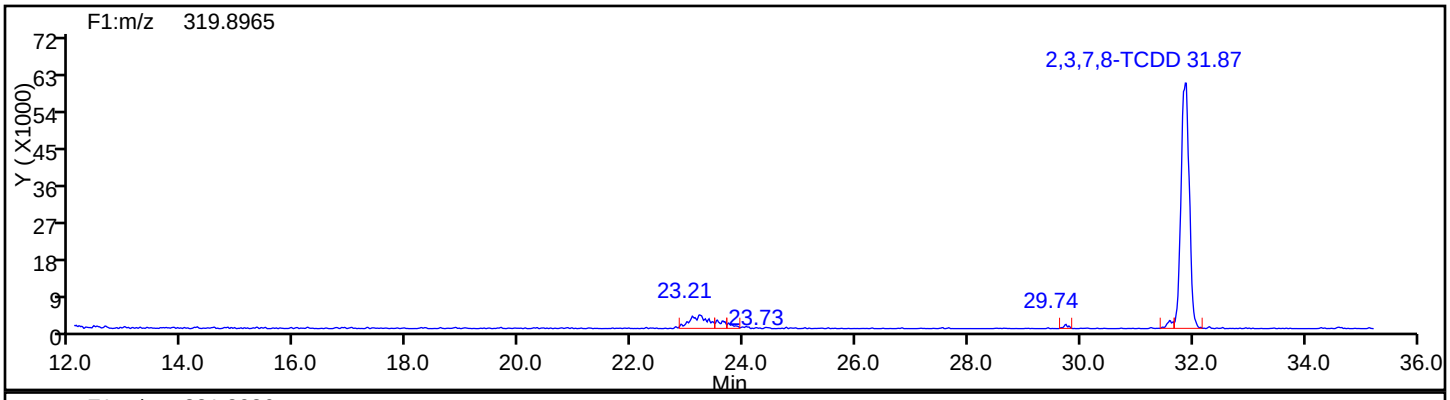
Report Date: 01-Feb-2017 12:30:13 Chrom Revision: 2.2 30-Jan-2017 14:50:44

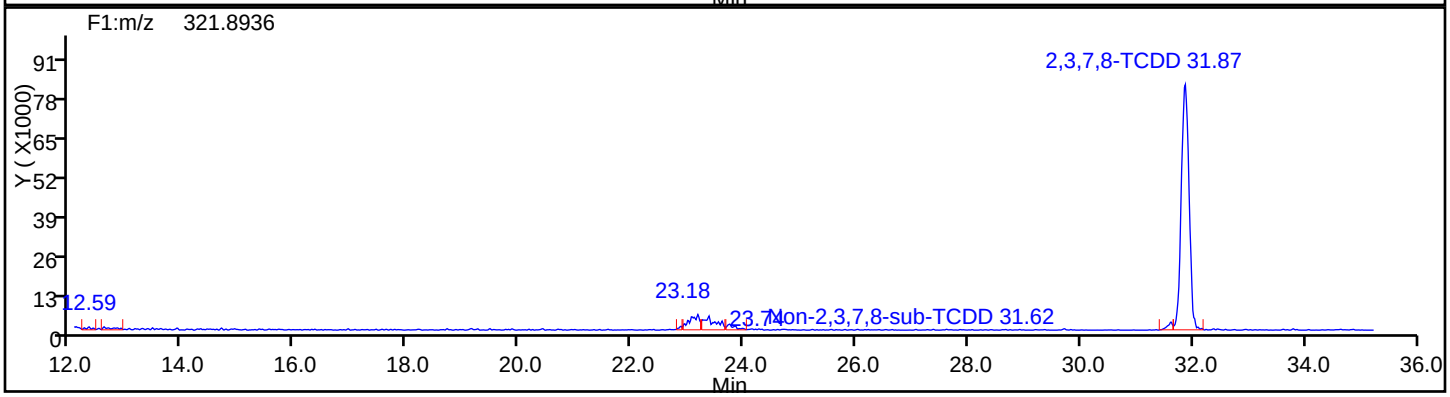
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516ss.d

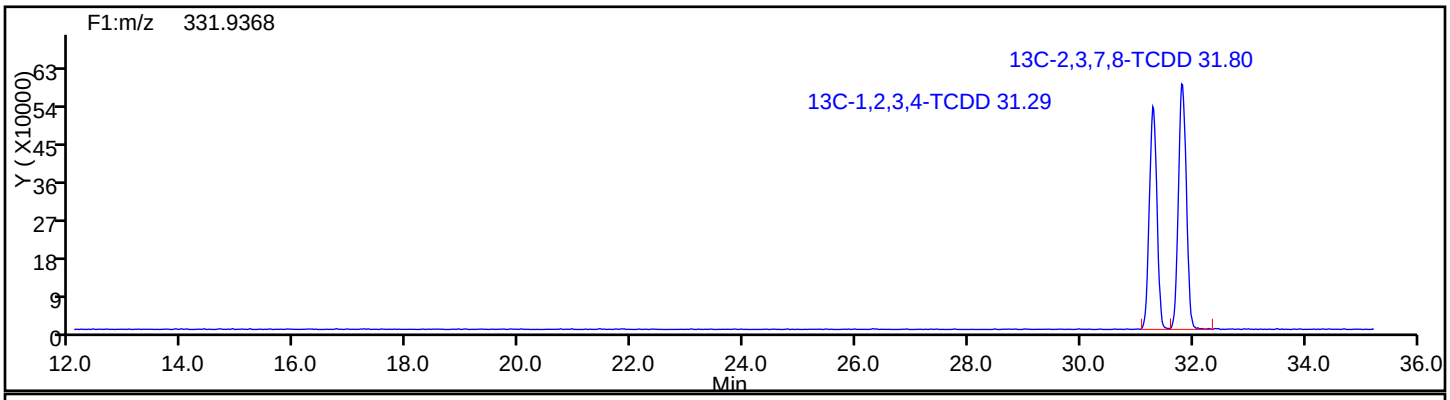
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 20:36:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 7 |
| Column Type: | | Column Dia: | |

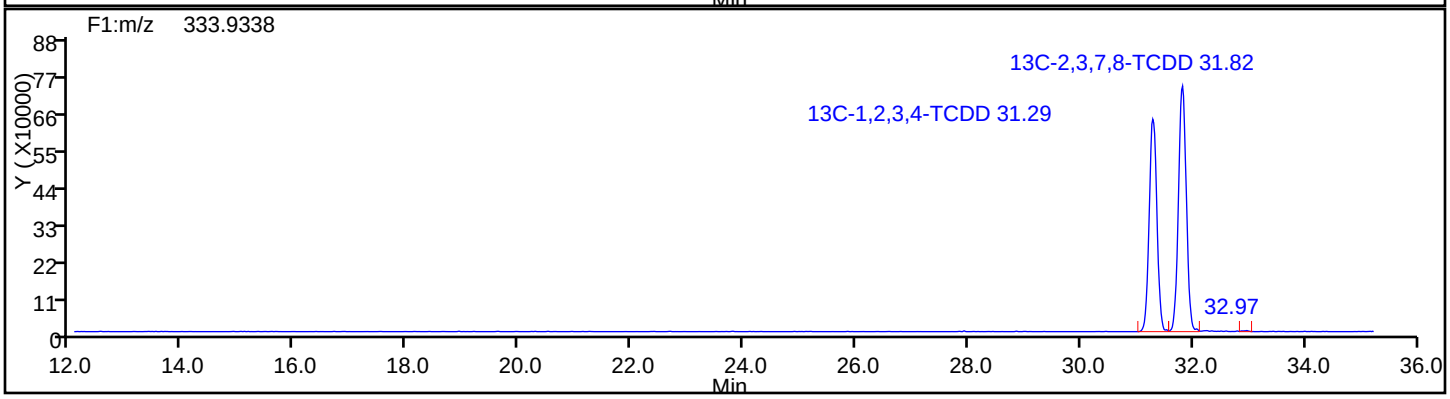
TCDD




TCDD Standards



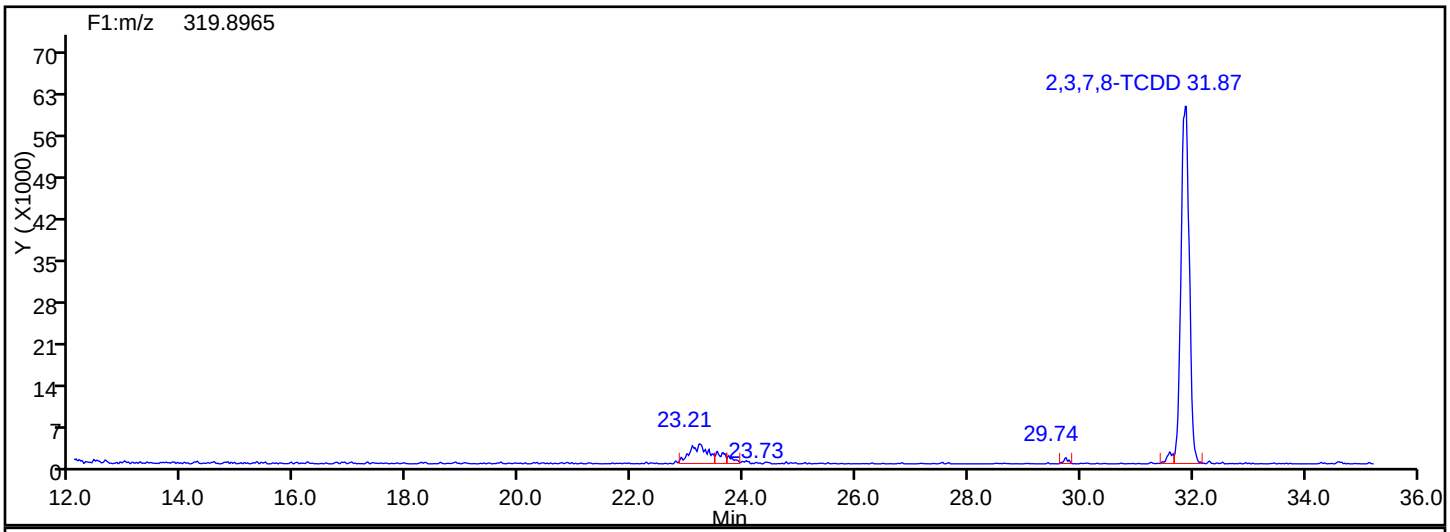
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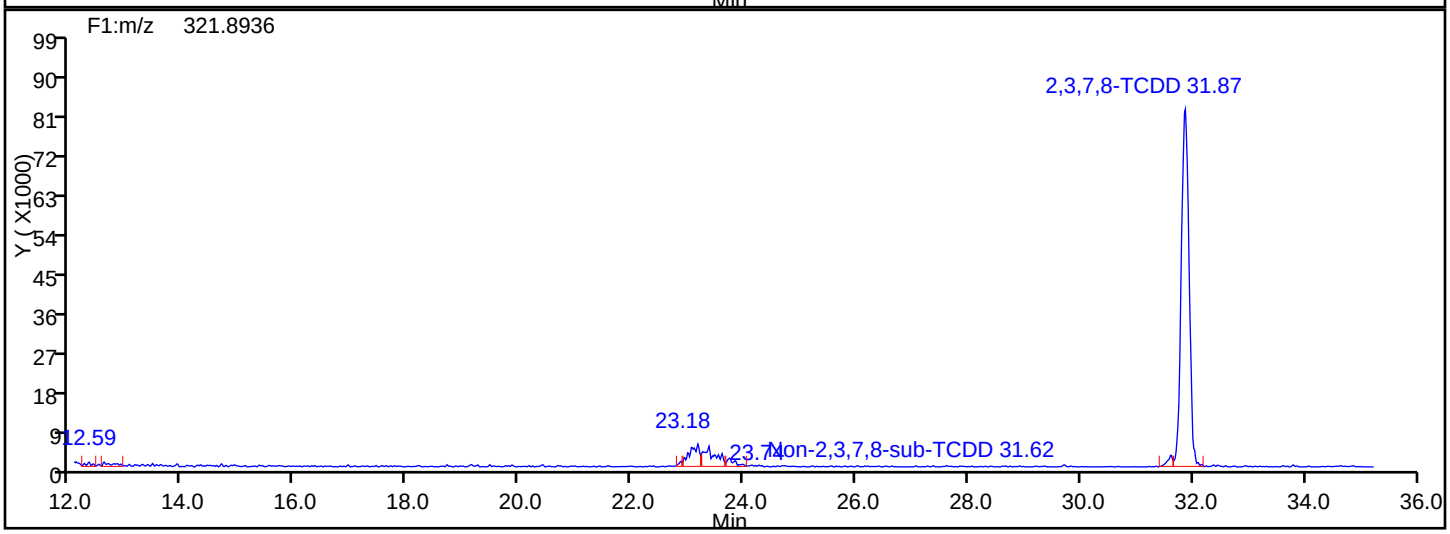
TestAmerica Knoxville

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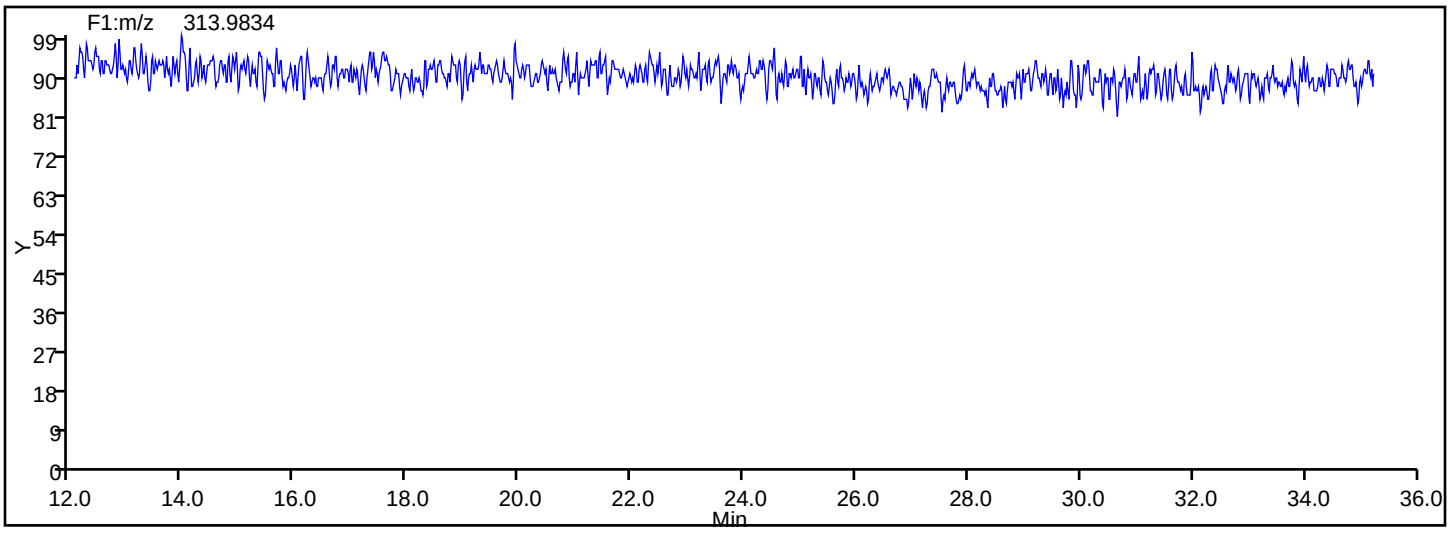
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|---|---|---|---|
| Injection Date: | 16-May-2014 20:36:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 7 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



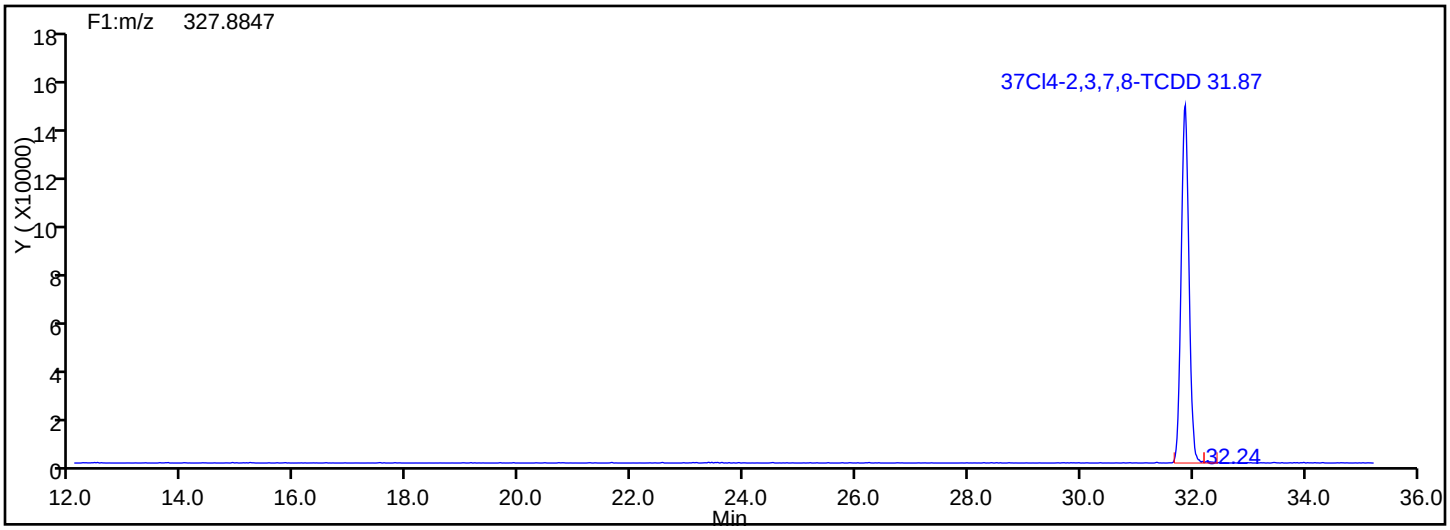
Report Date: 01-Feb-2017 12:30:14 Chrom Revision: 2.2 30-Jan-2017 14:50:44

TestAmerica Knoxville

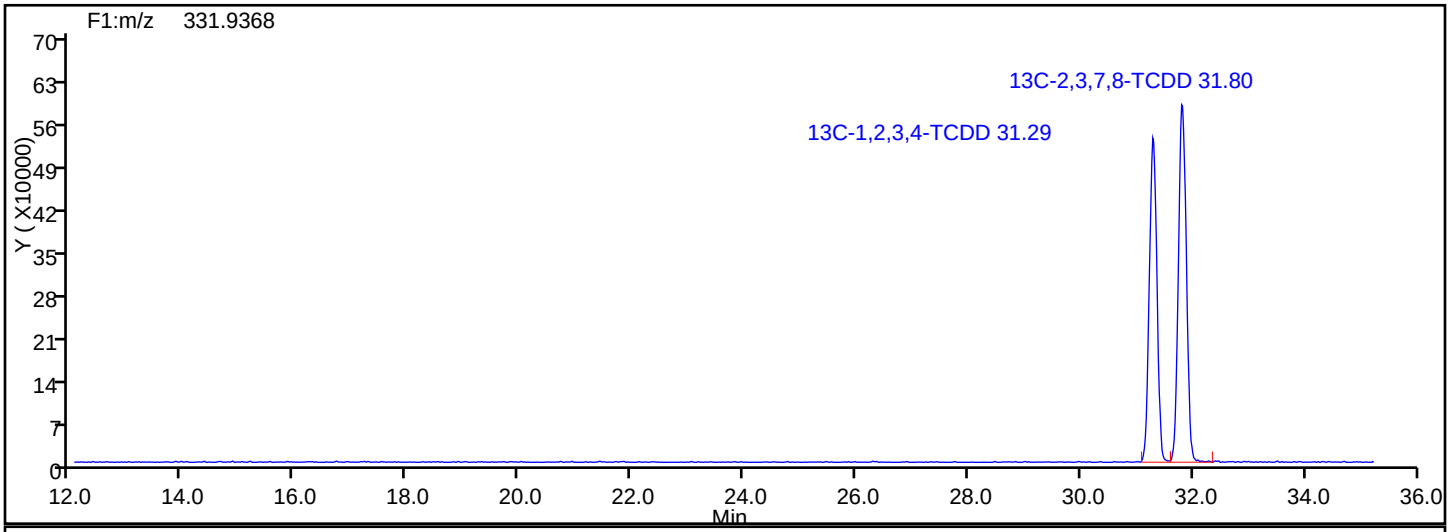
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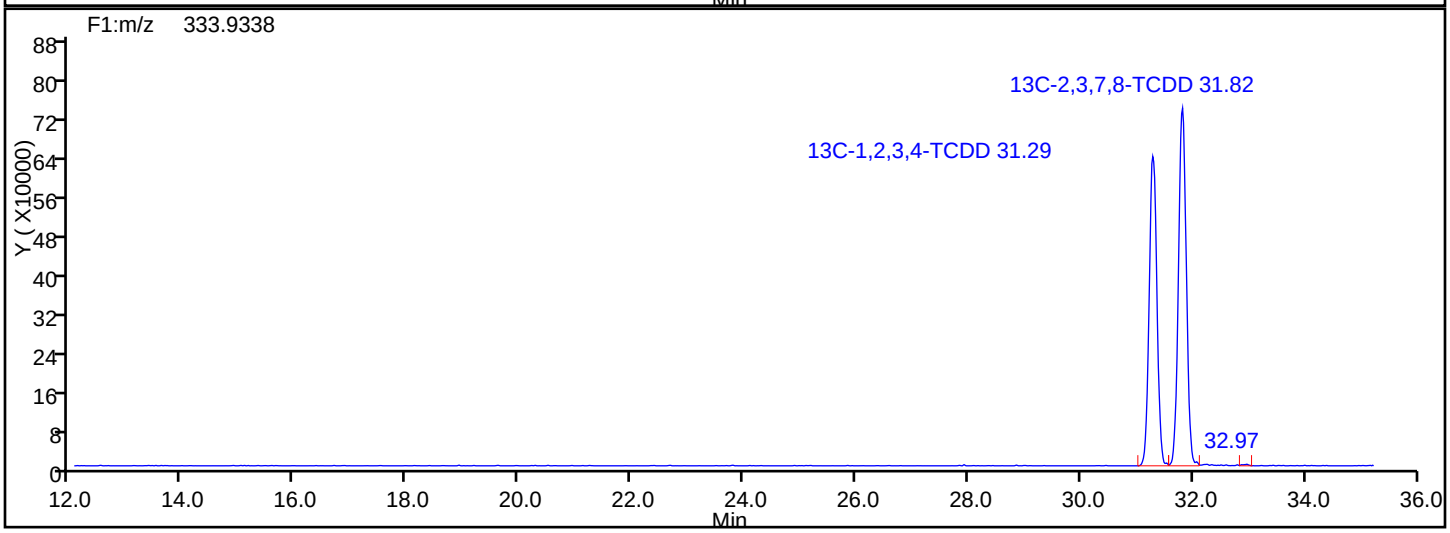
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 7 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



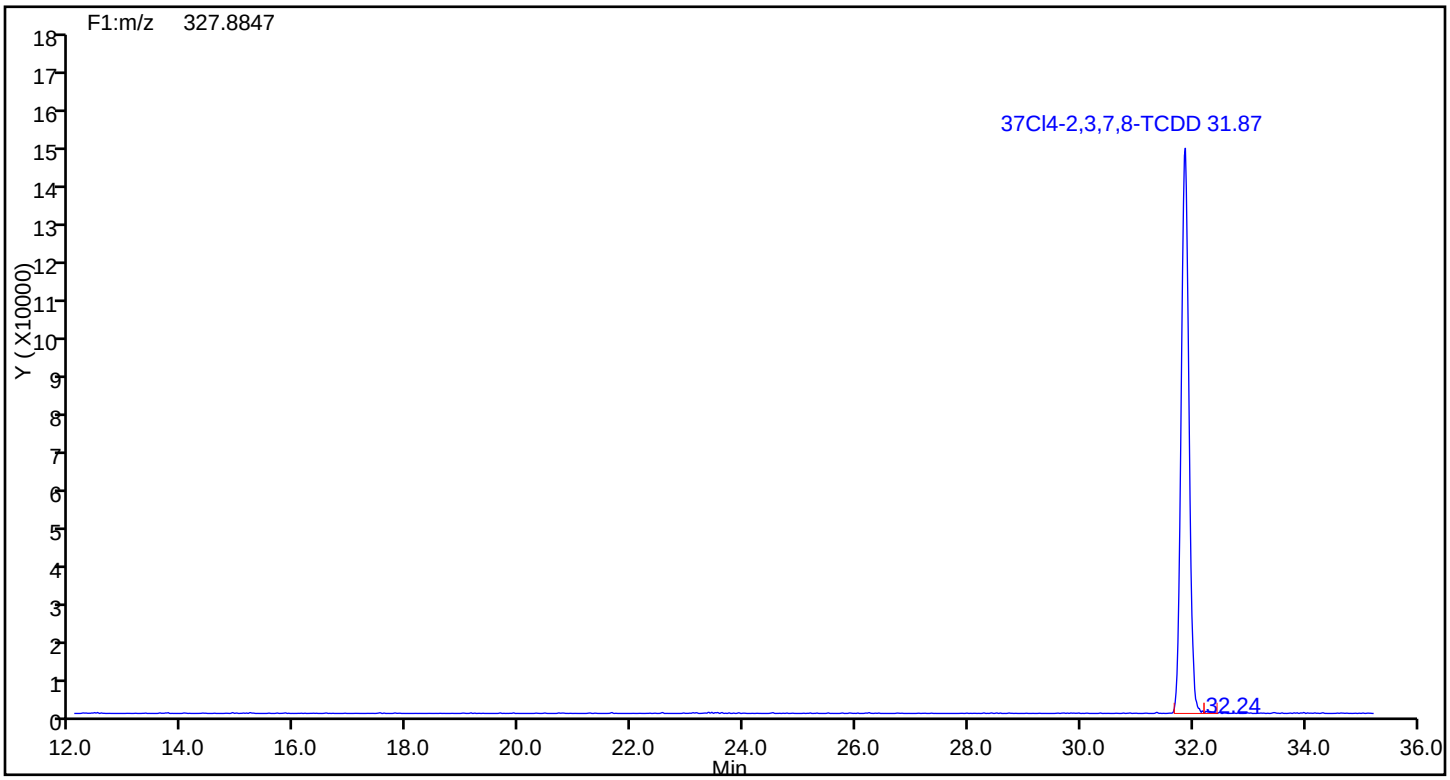



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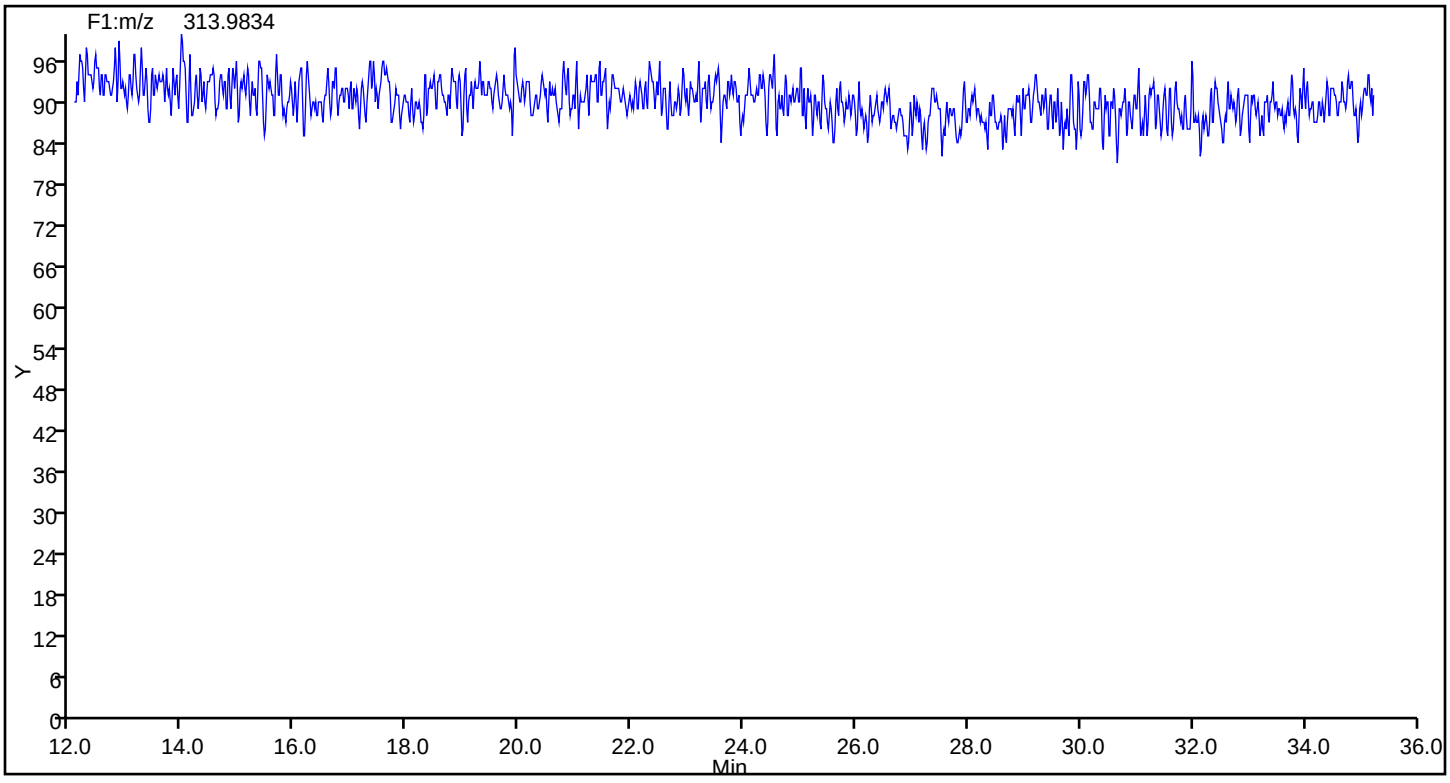
TestAmerica Knoxville

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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Lock Mass



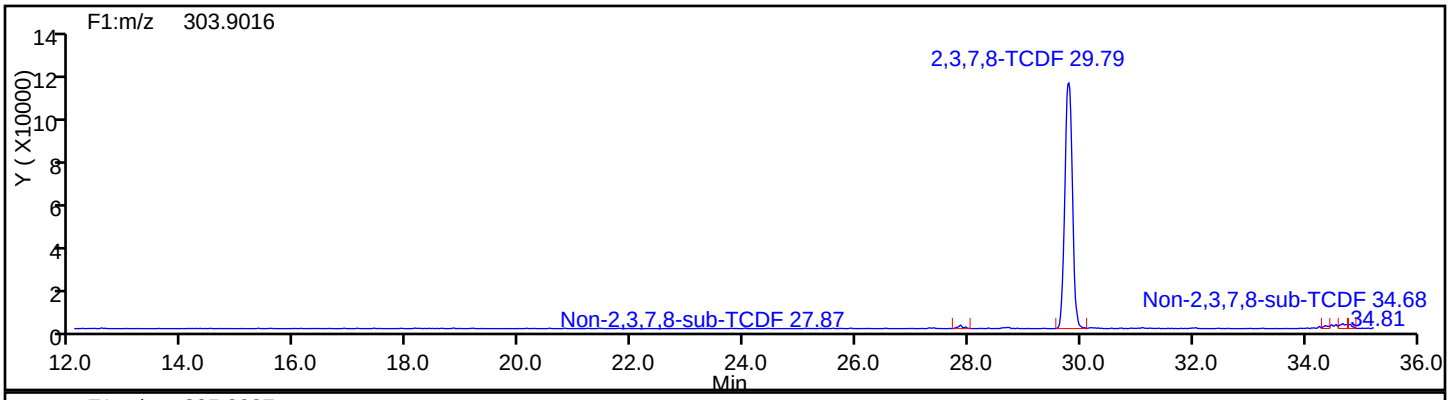
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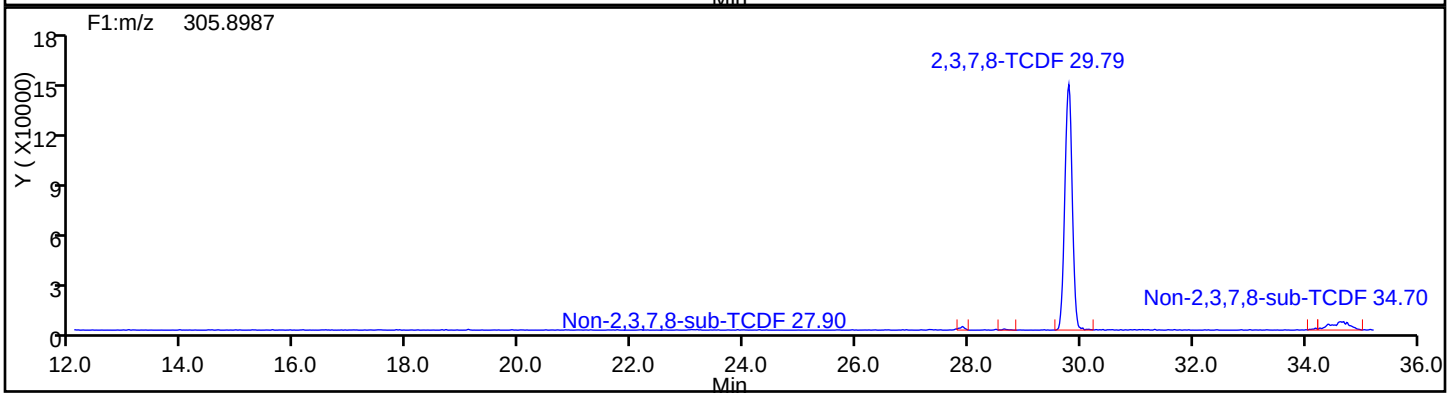
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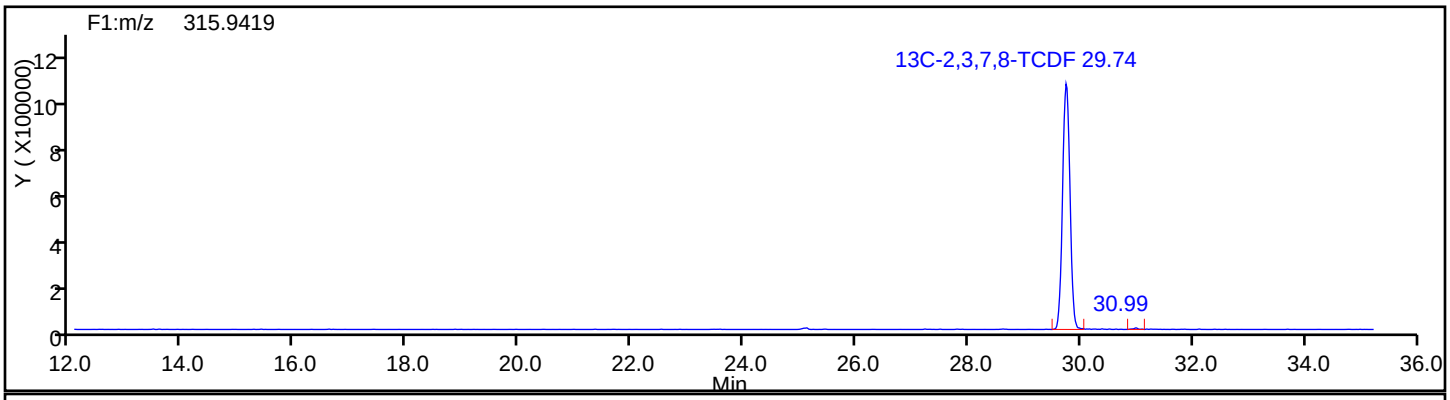
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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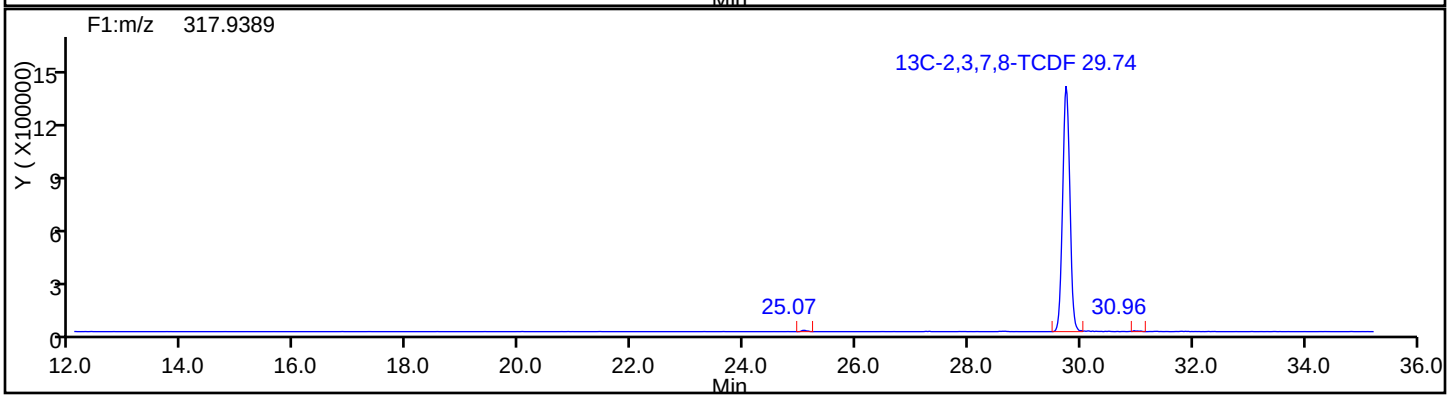
TCDF




TCDF Standards



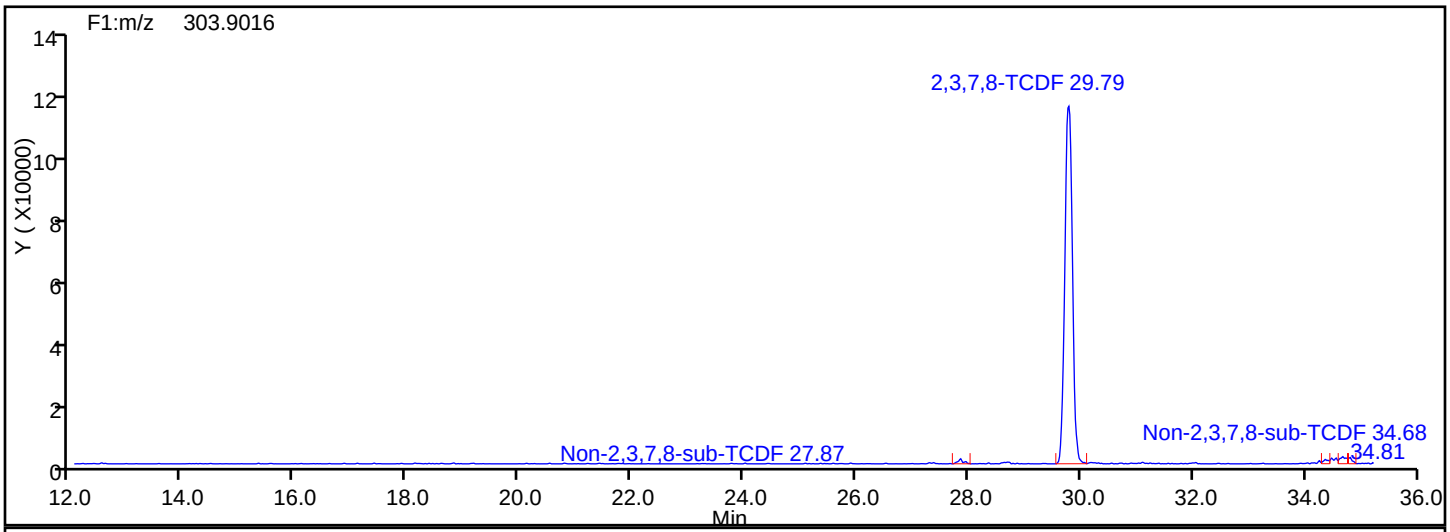
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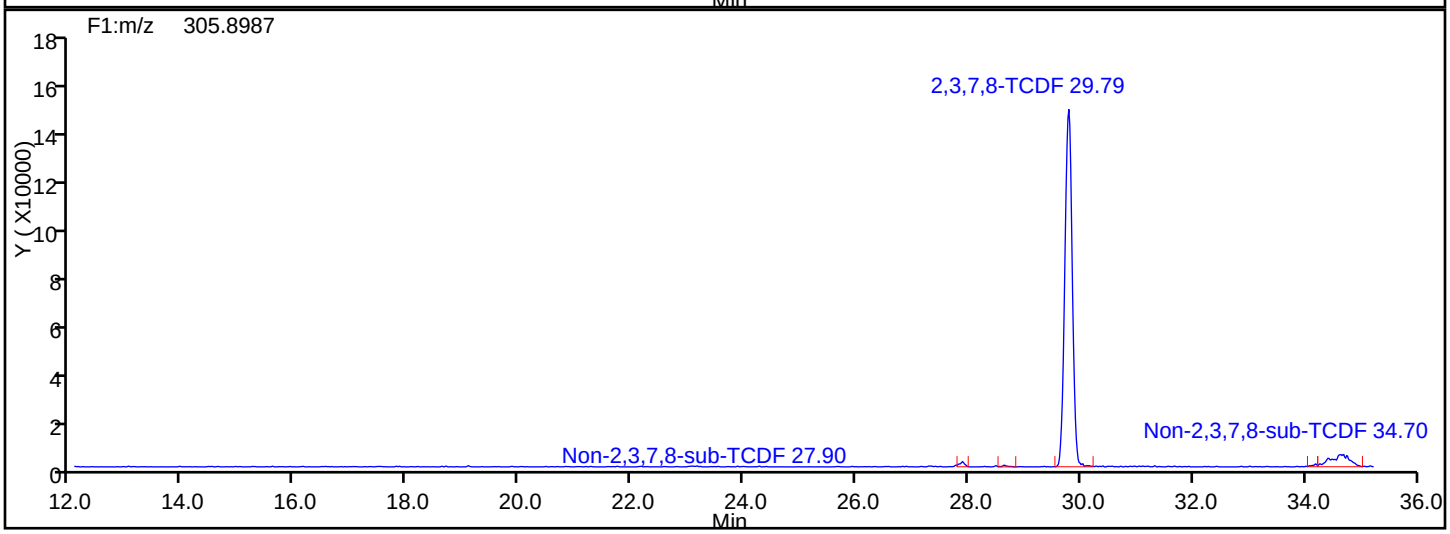
TestAmerica Knoxville

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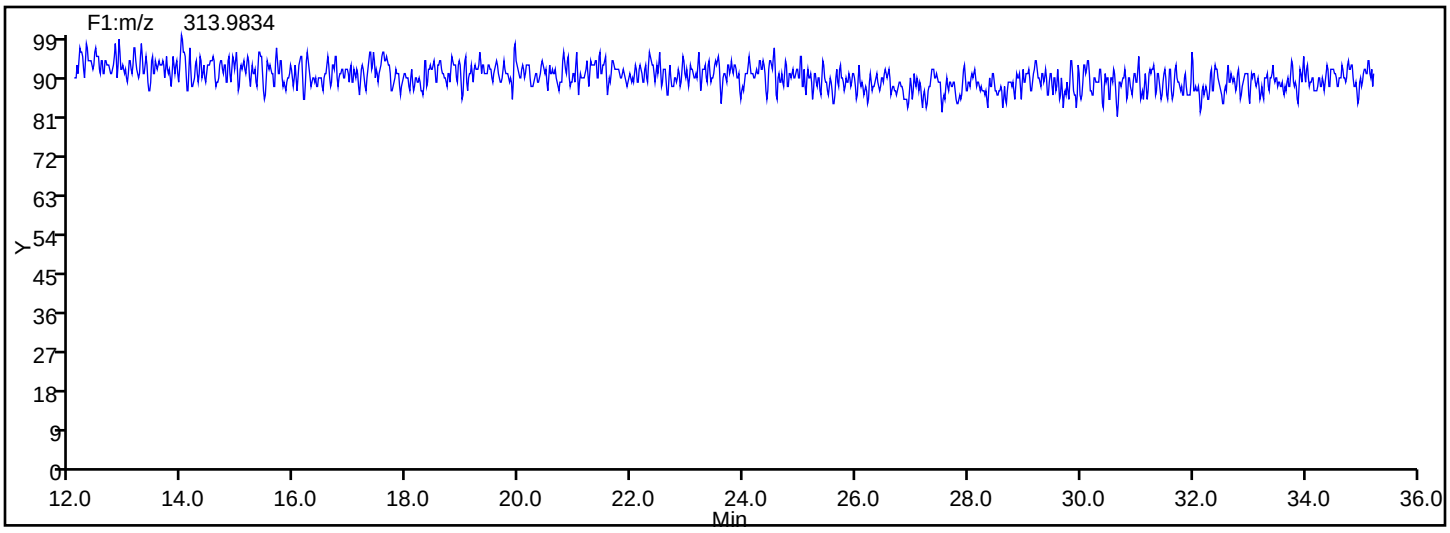
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TCDF




TCDF Lock Mass

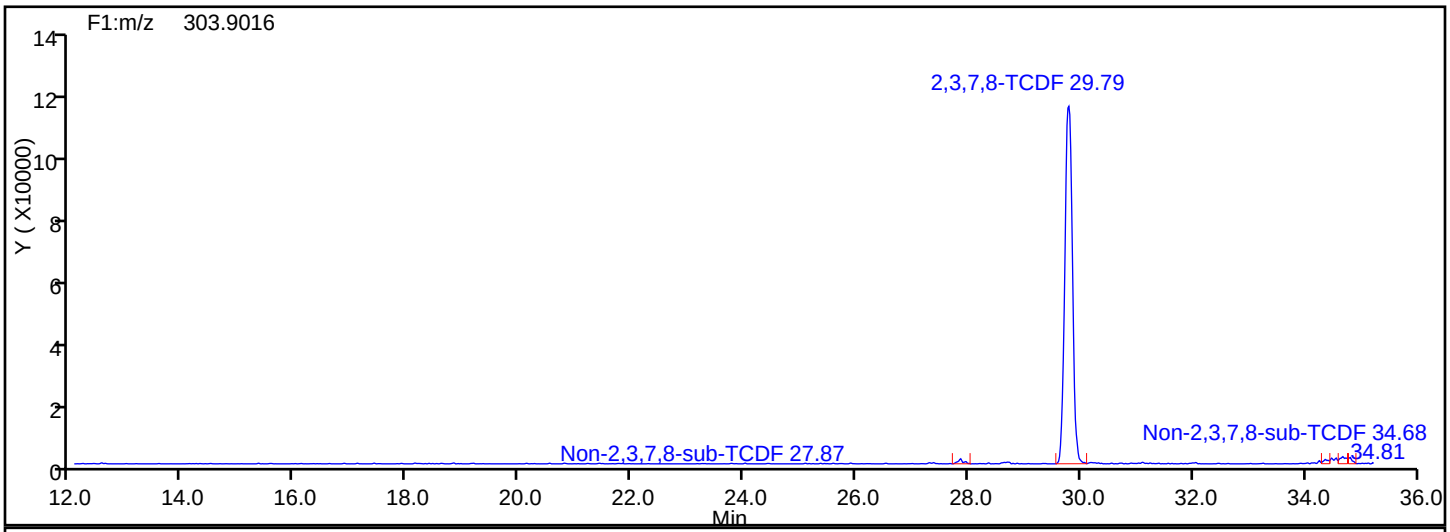


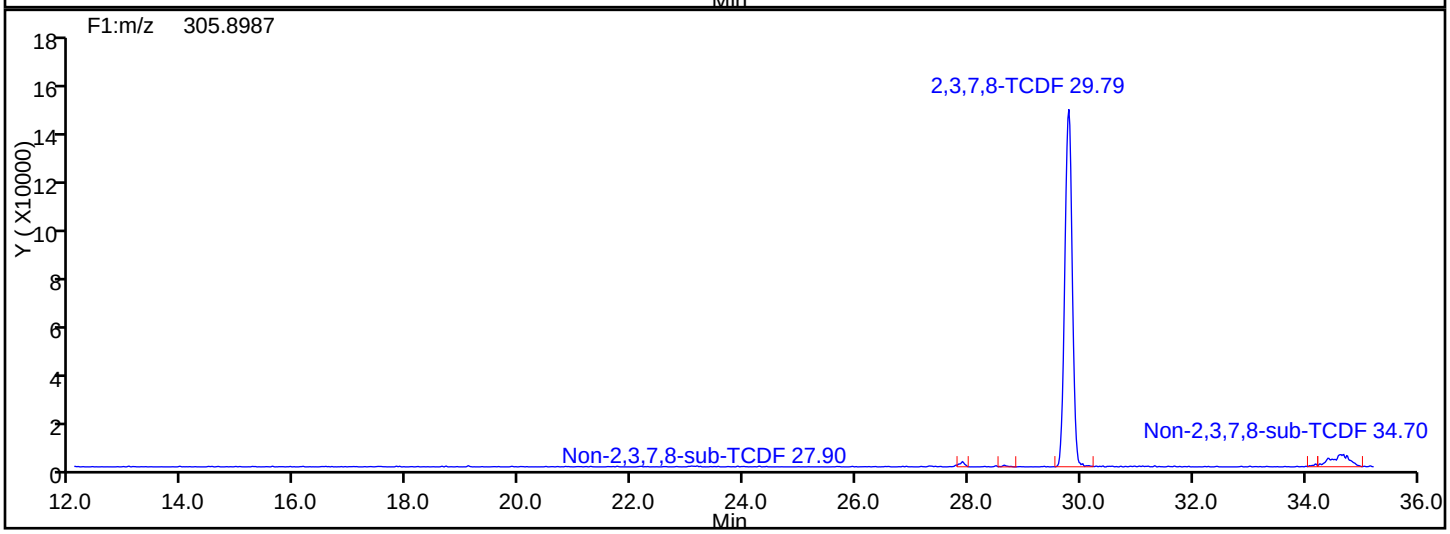
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TestAmerica Knoxville

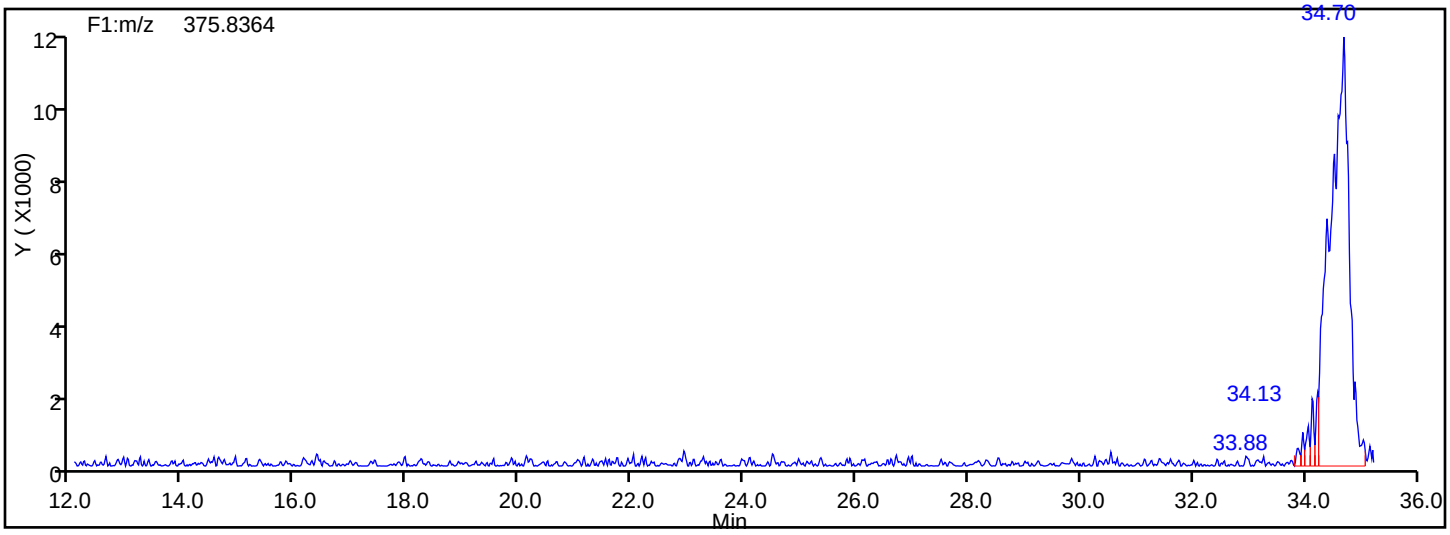
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

TCDF




TCDF Interference Mass



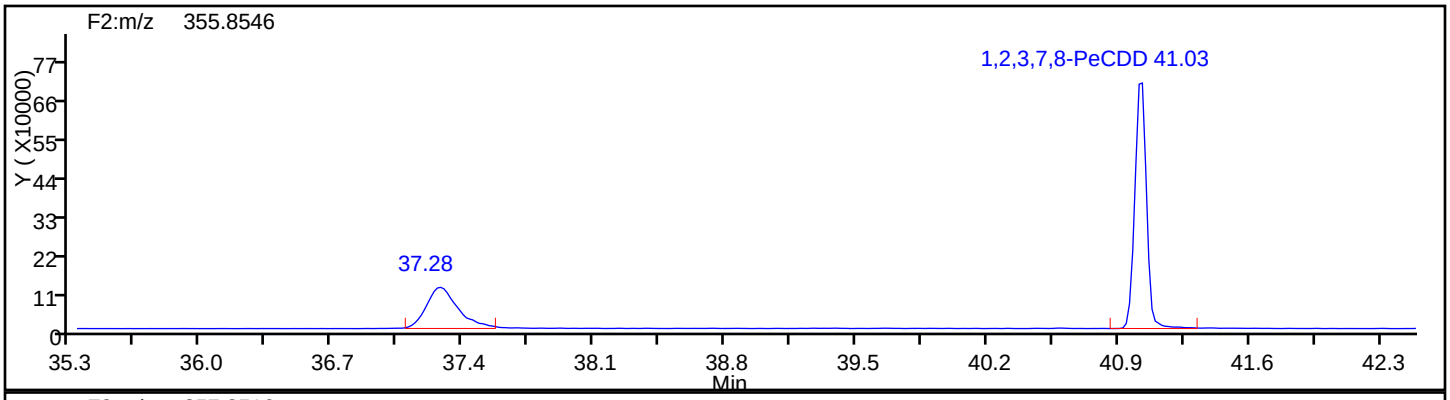
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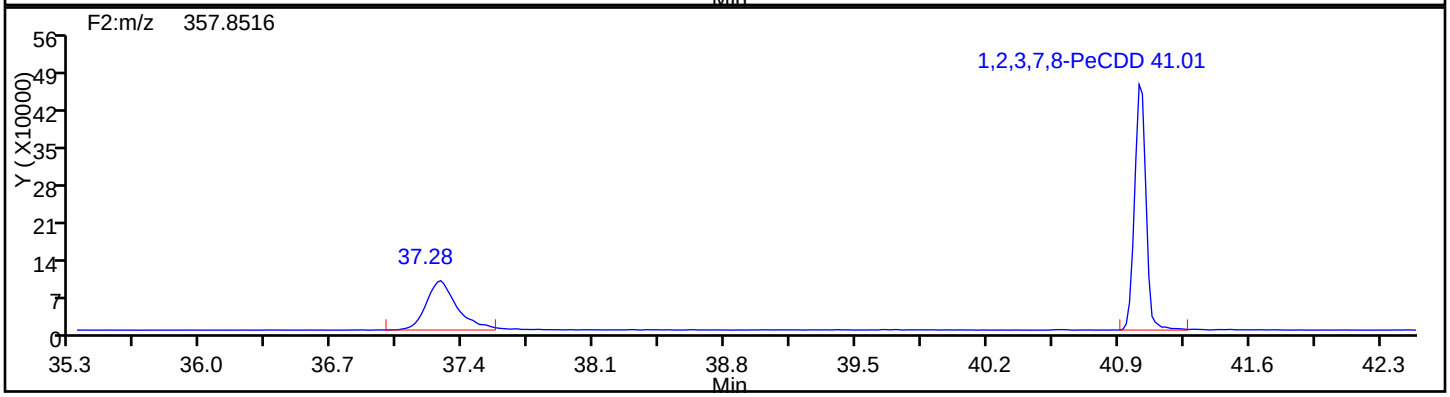
TestAmerica Knoxville

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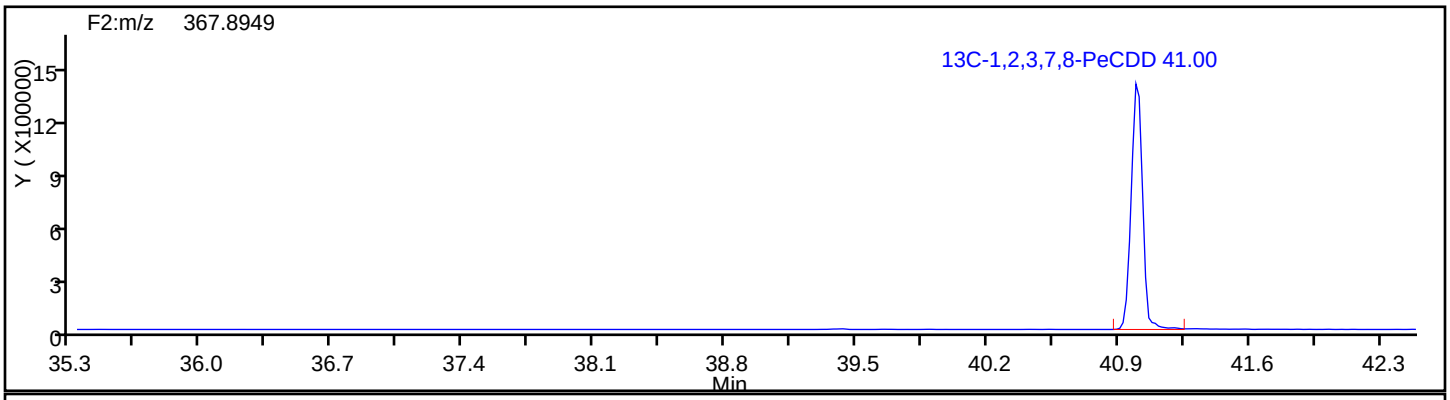
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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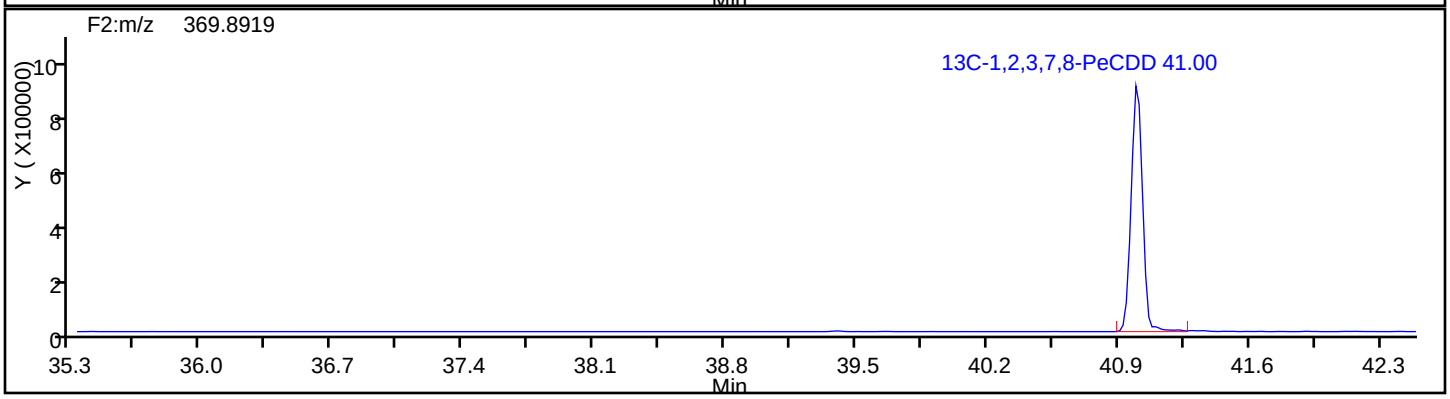
PeCDD




PeCDD Standards



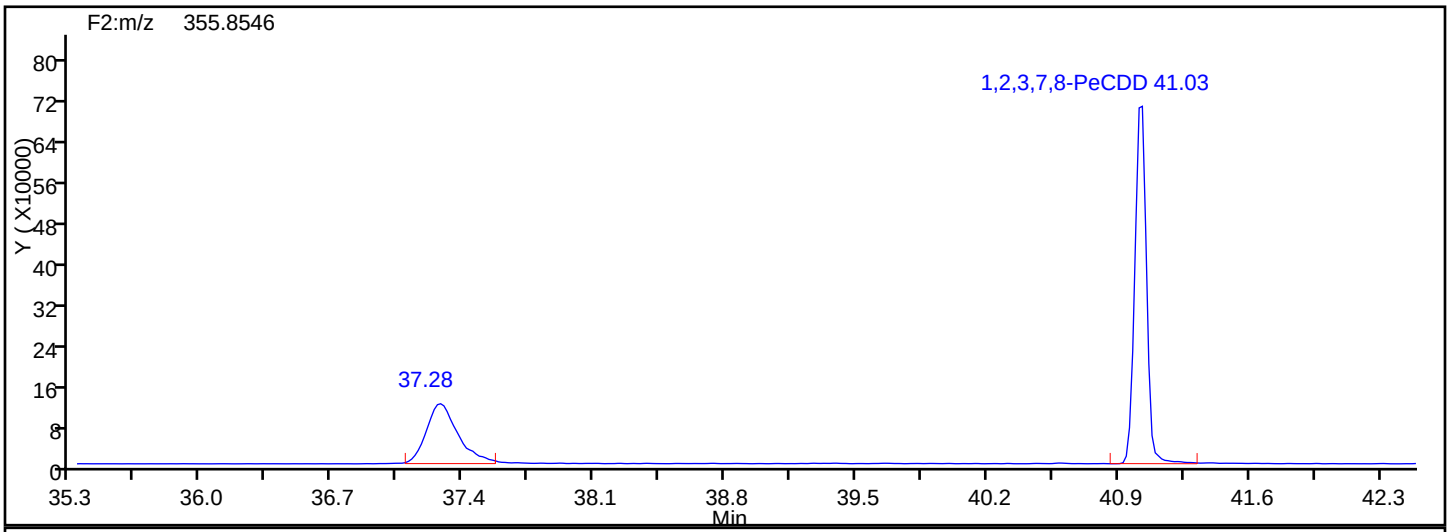
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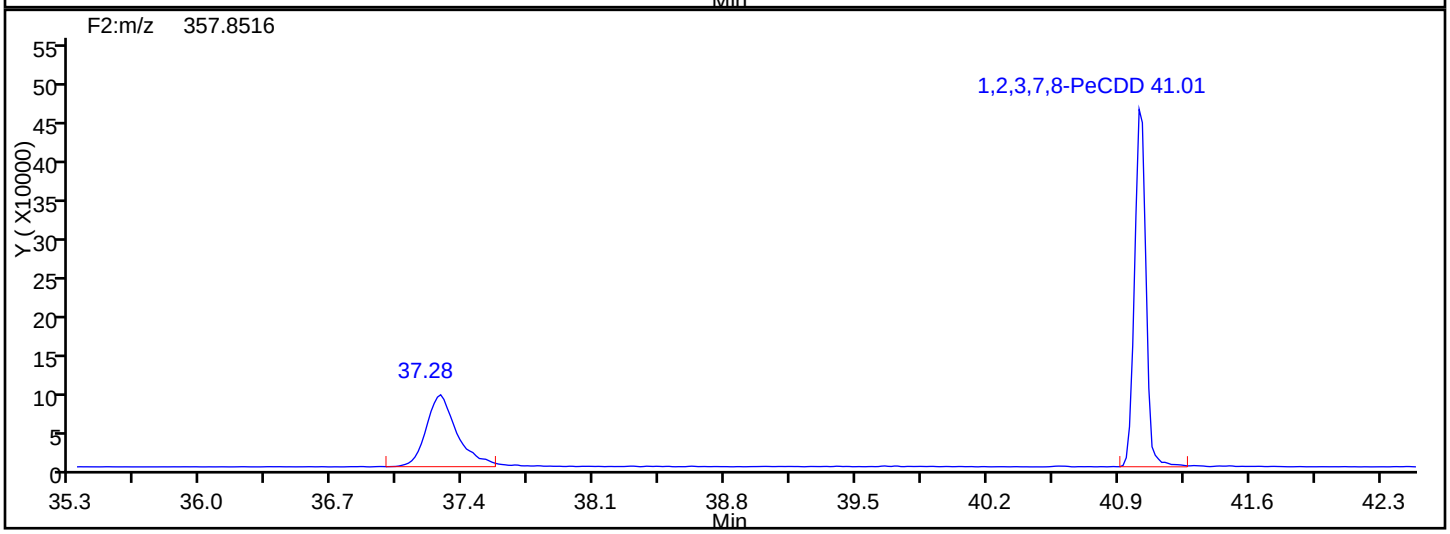
TestAmerica Knoxville

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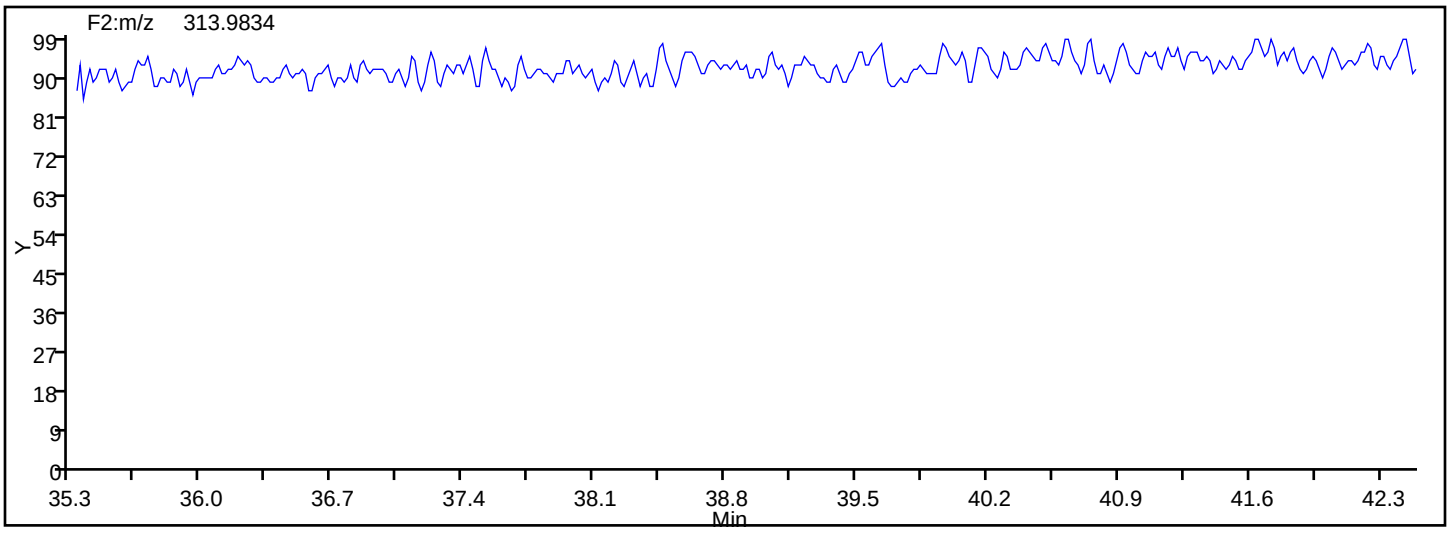
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

PeCDD




PeCDD Lock Mass



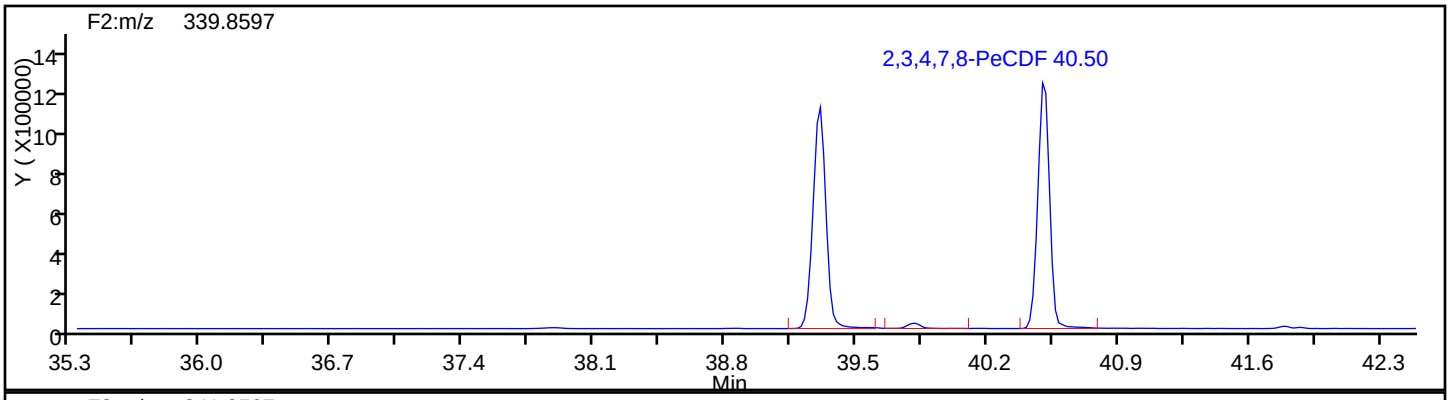
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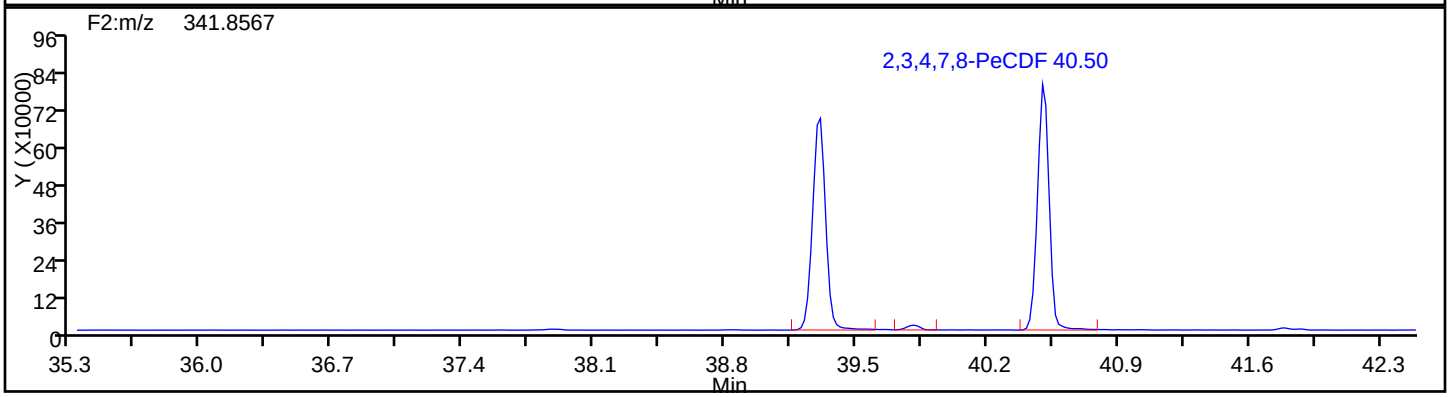
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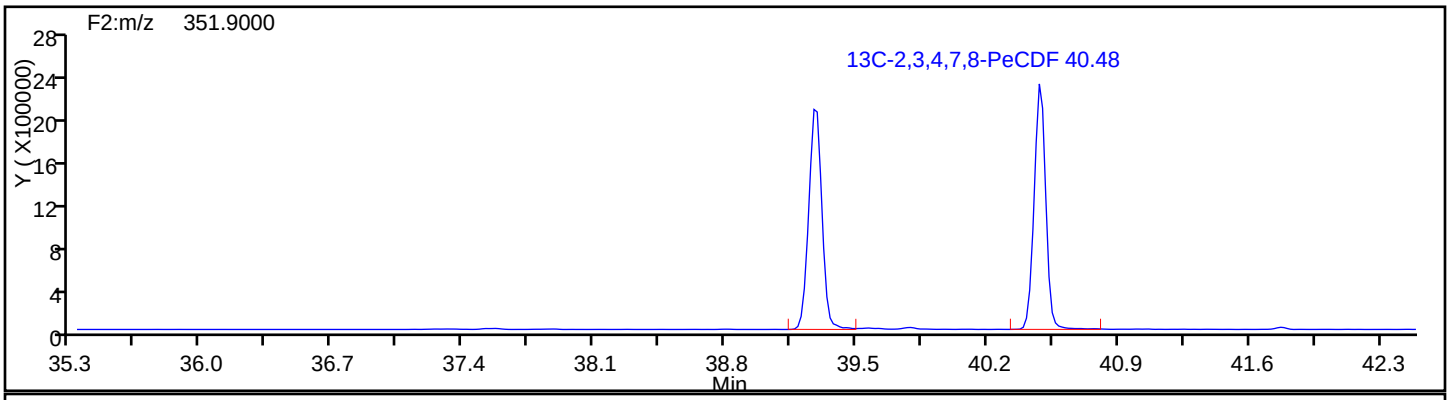
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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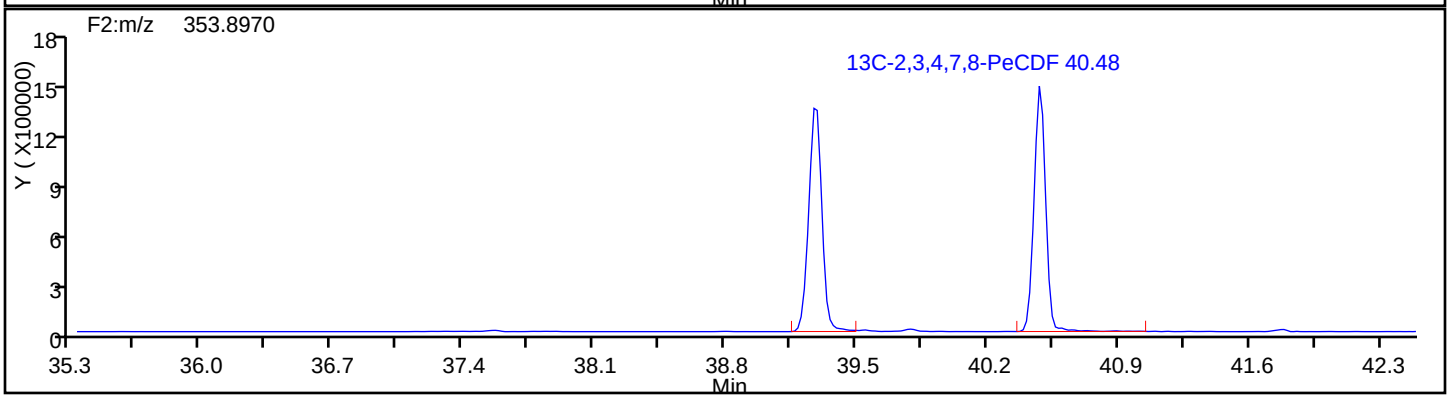
PeCDF




PeCDF Standards



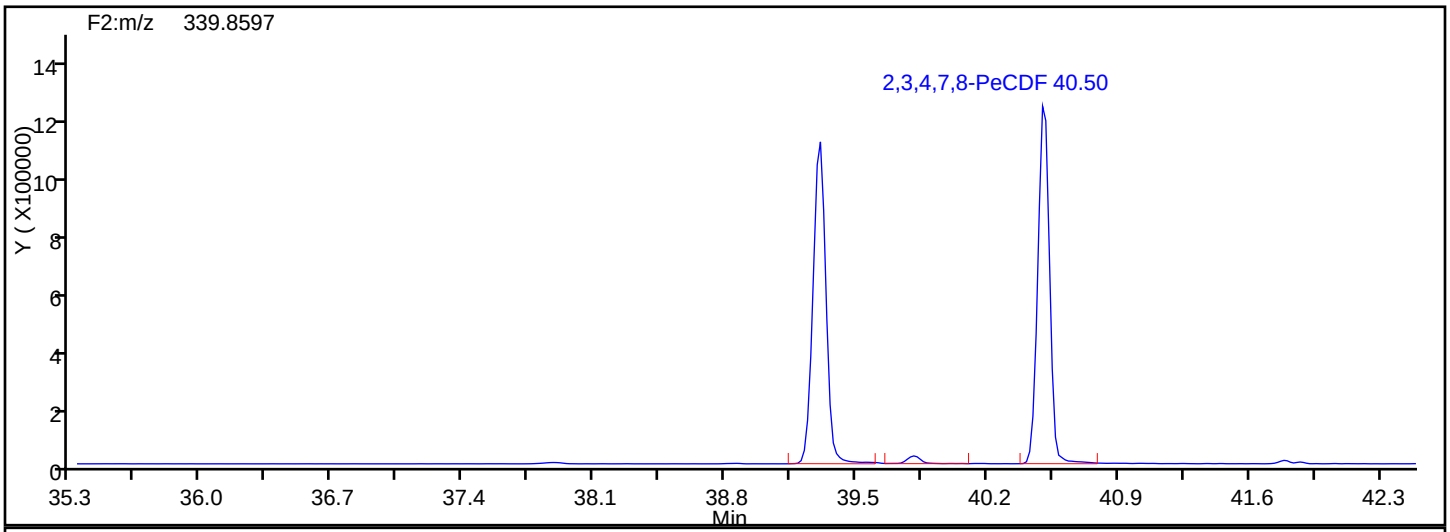
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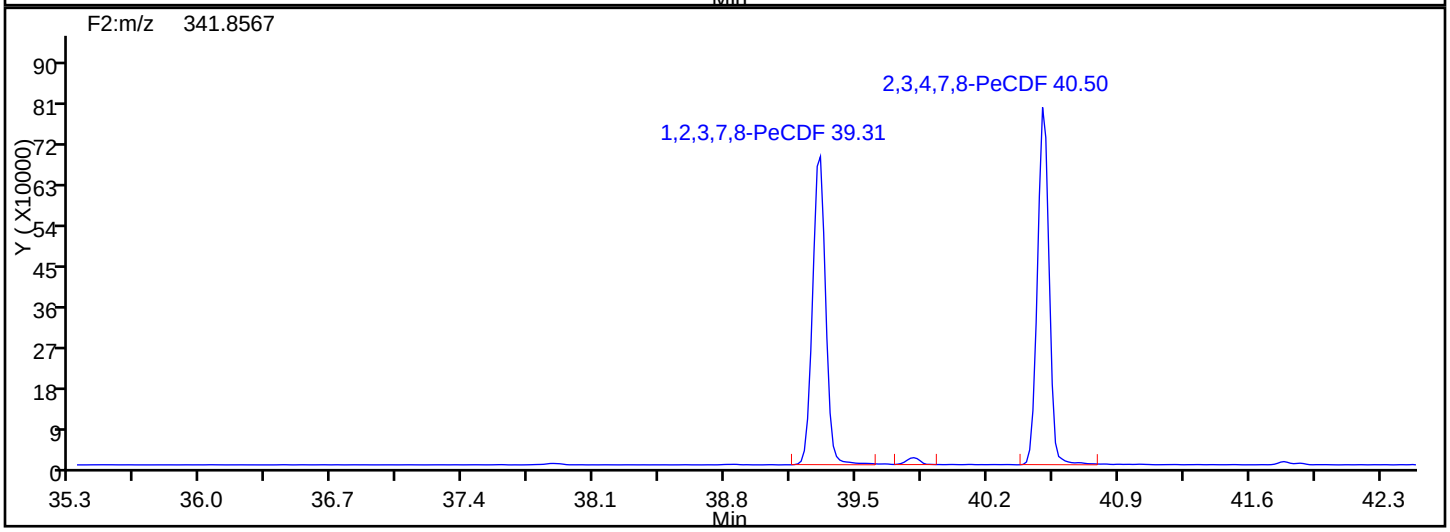
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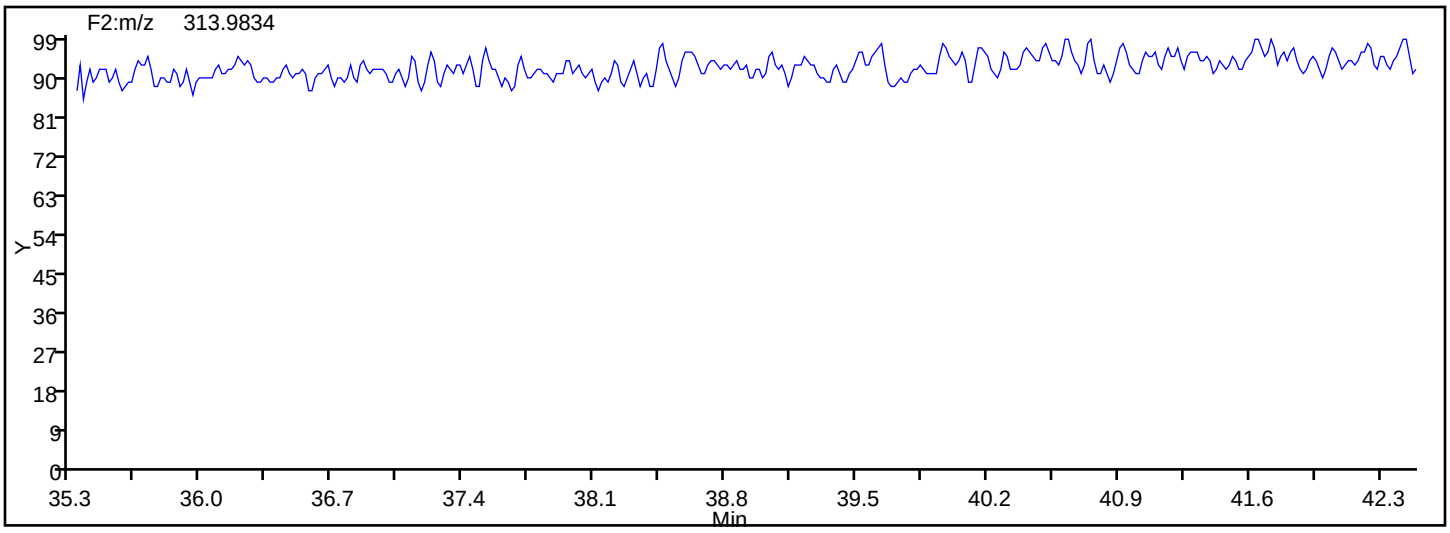
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PeCDF




PeCDF Lock Mass



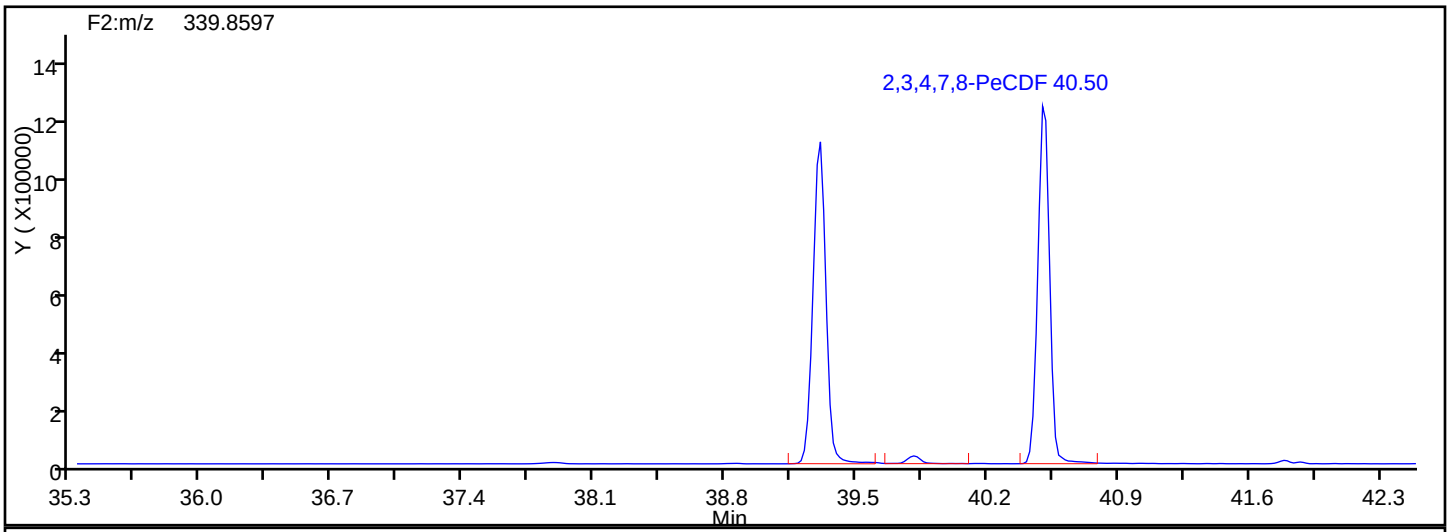
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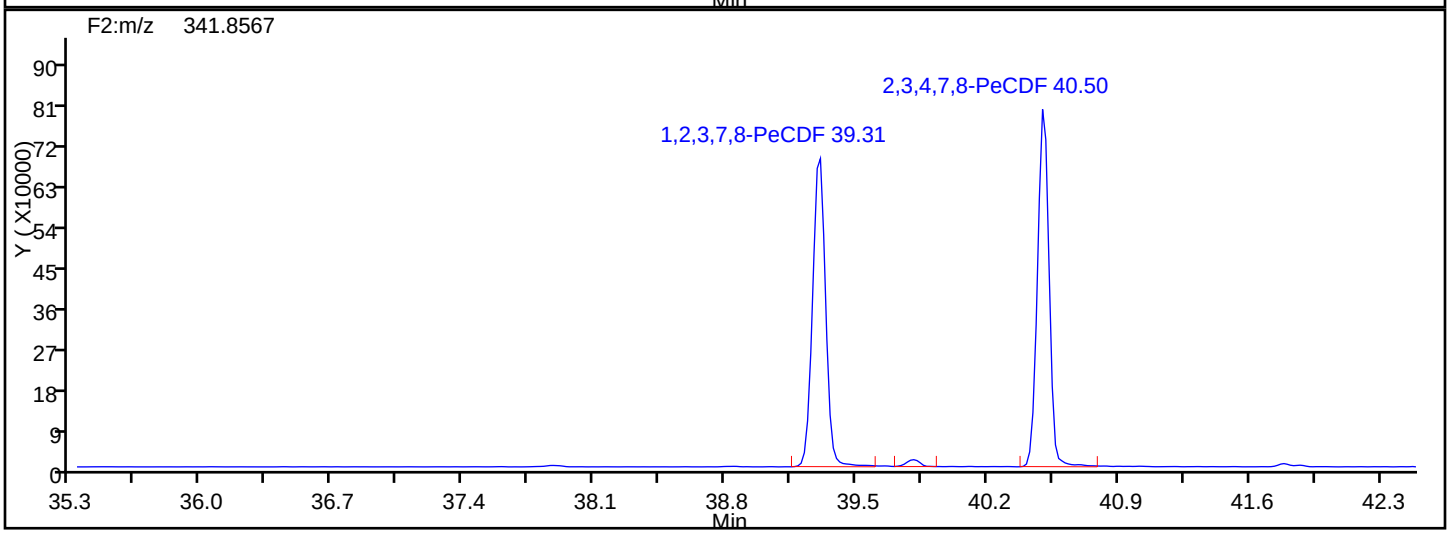
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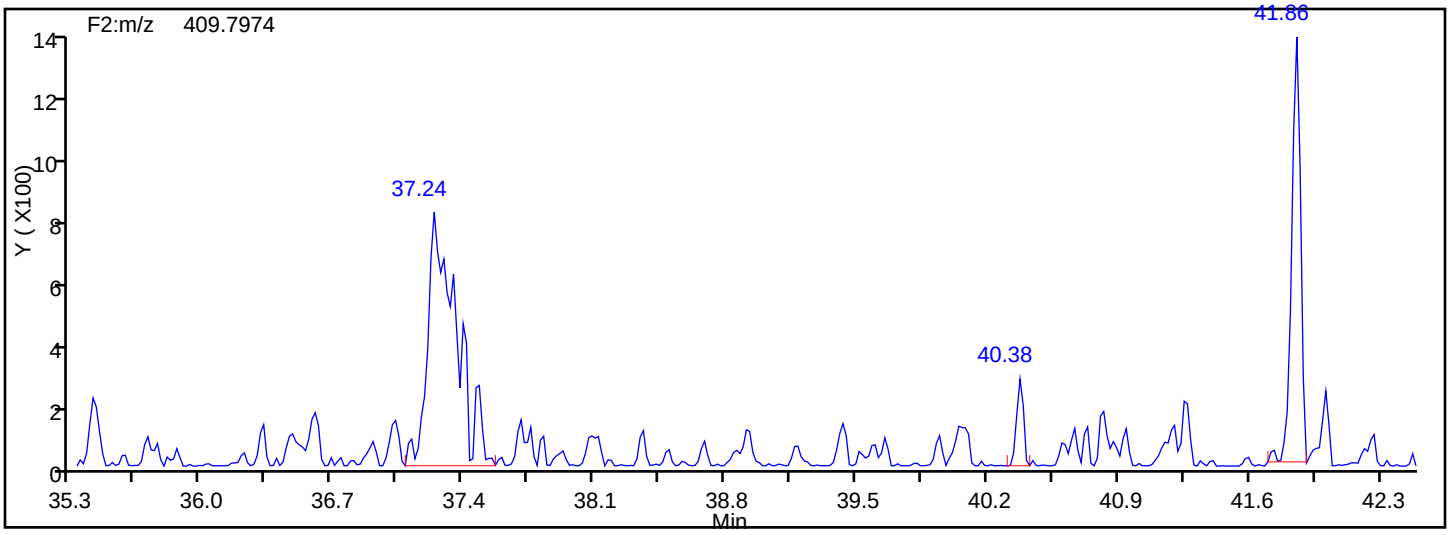
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| Column Type: | | Column Dia: | |

PeCDF




PeCDF Interference Mass



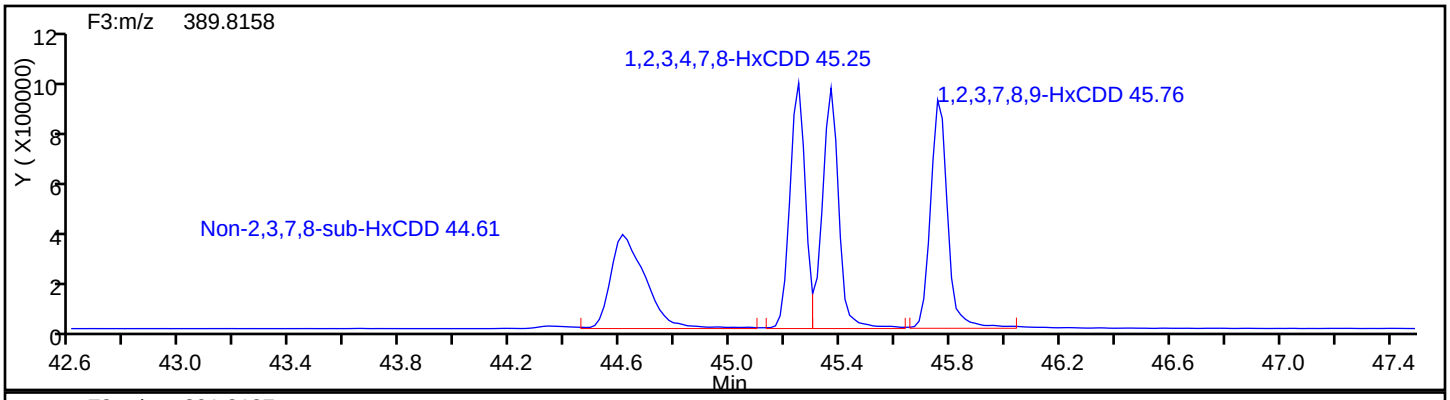
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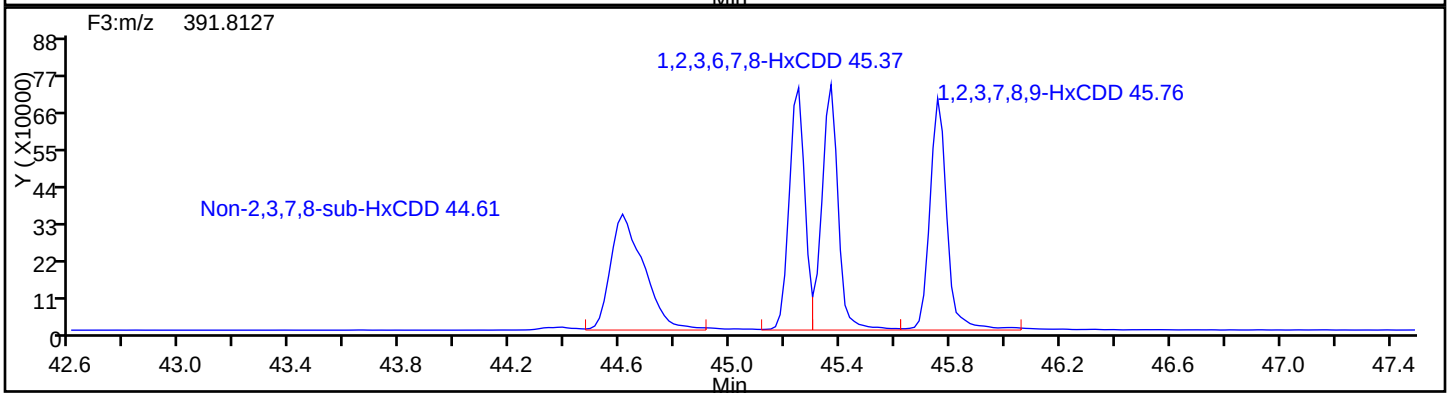
TestAmerica Knoxville

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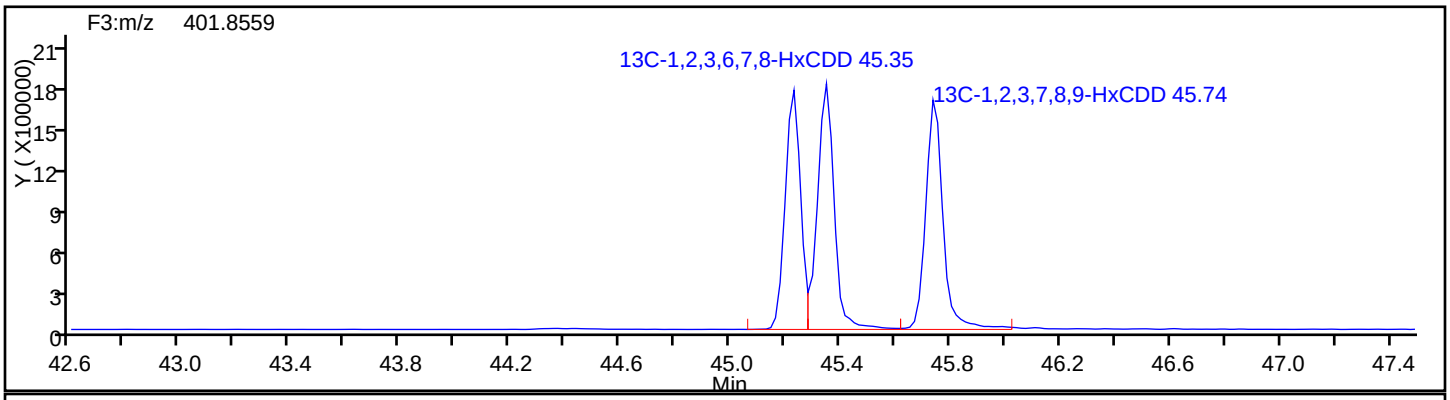
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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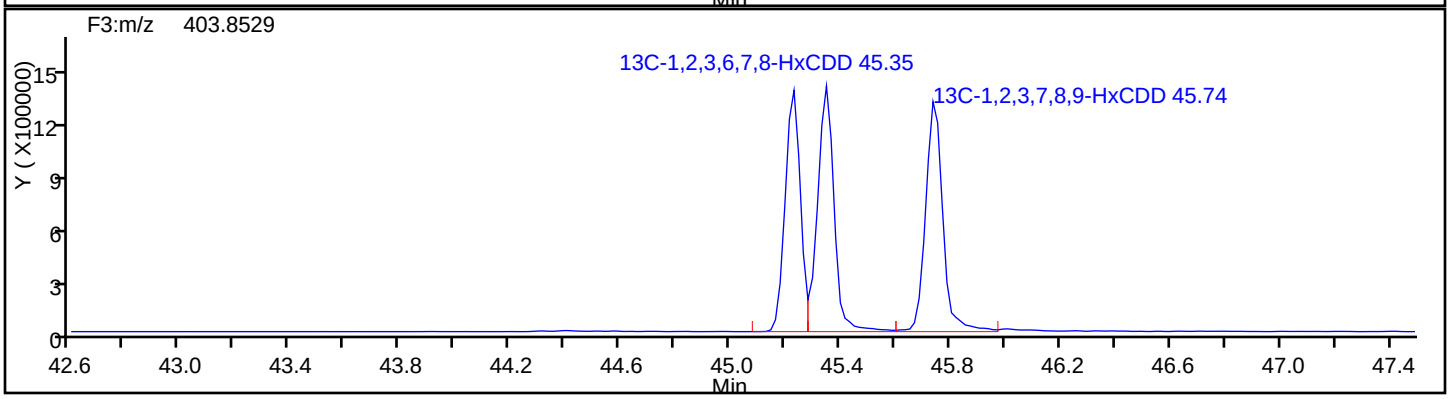
HxCDD




HxCDD Standards



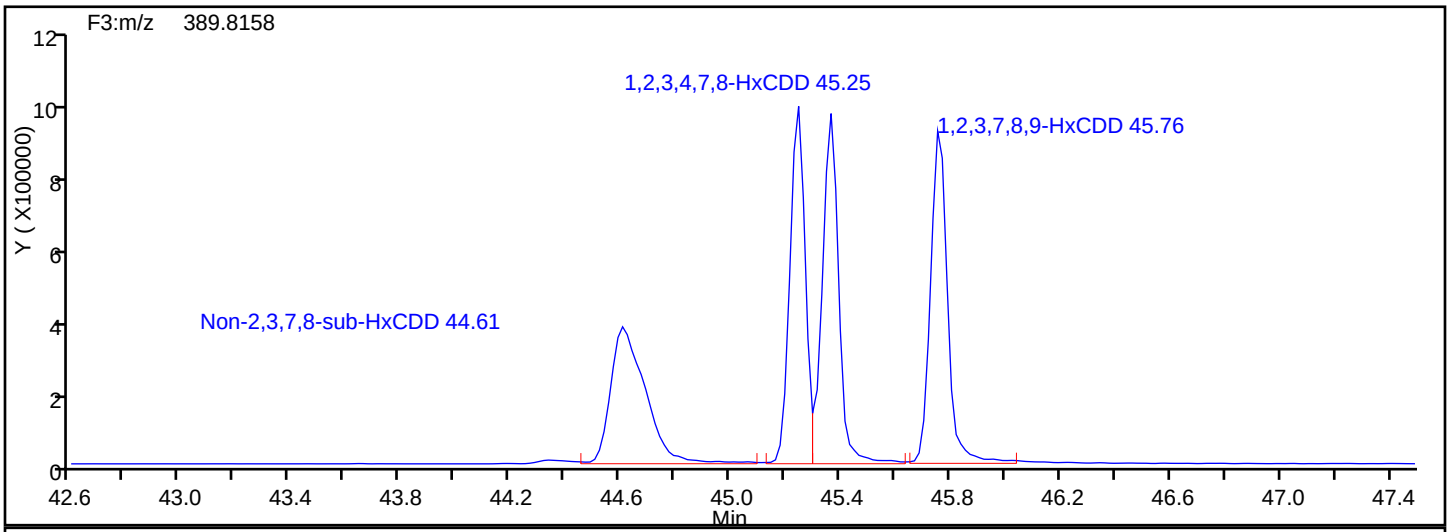
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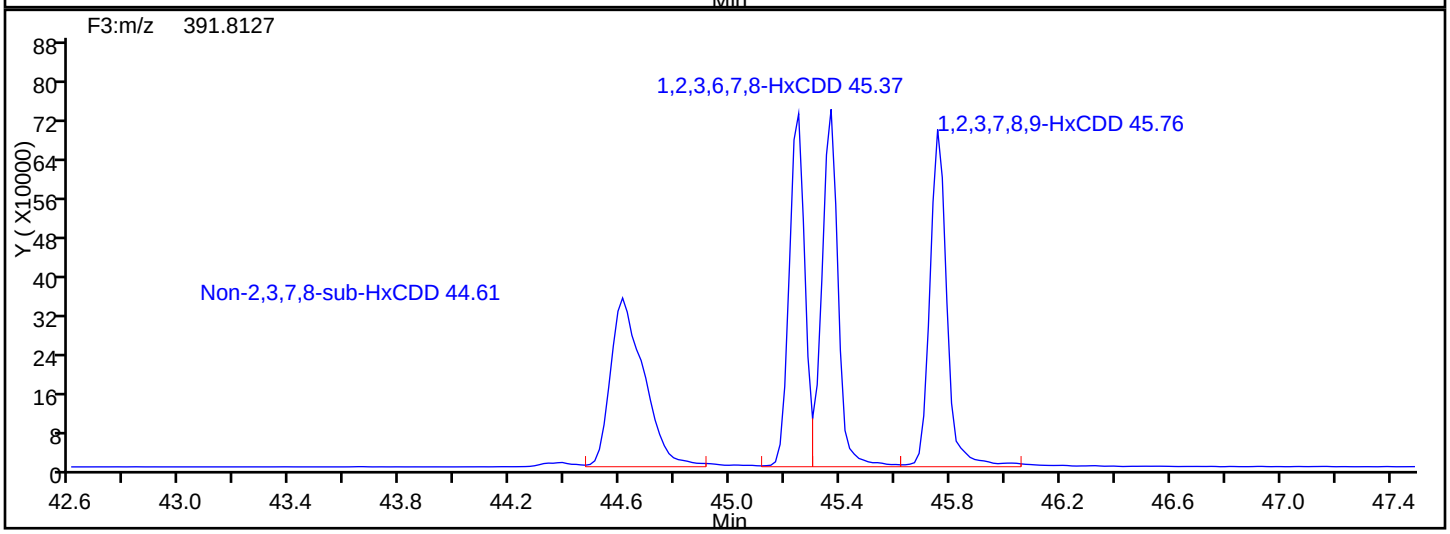
TestAmerica Knoxville

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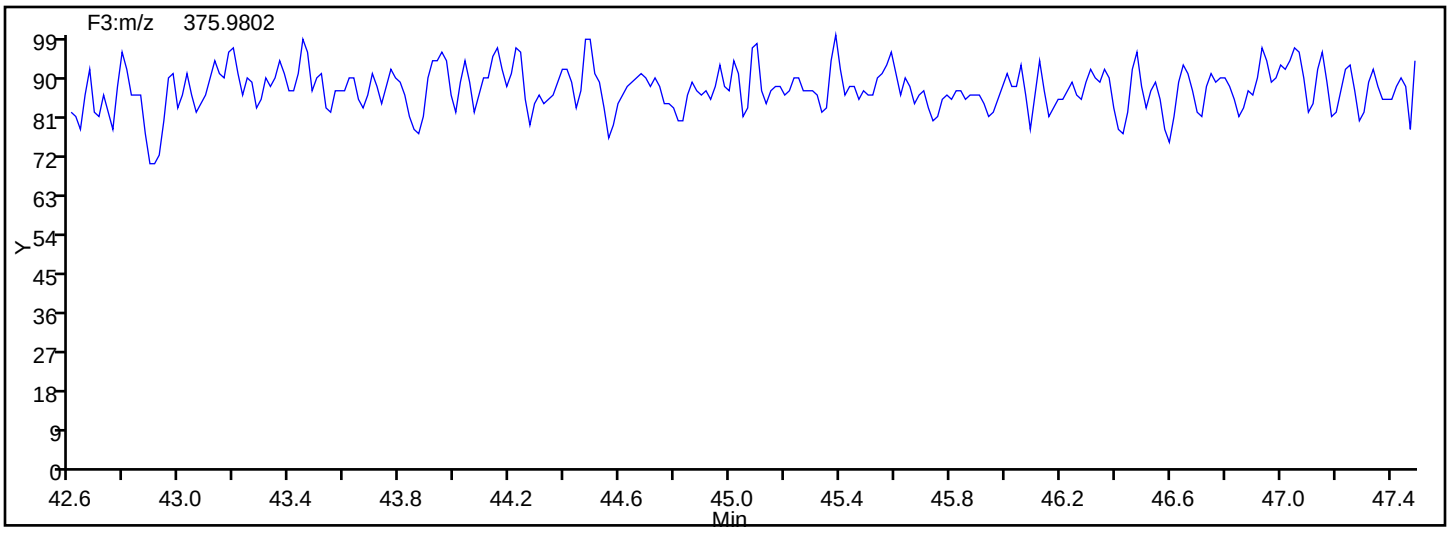
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HxCDD




HxCDD Lock Mass



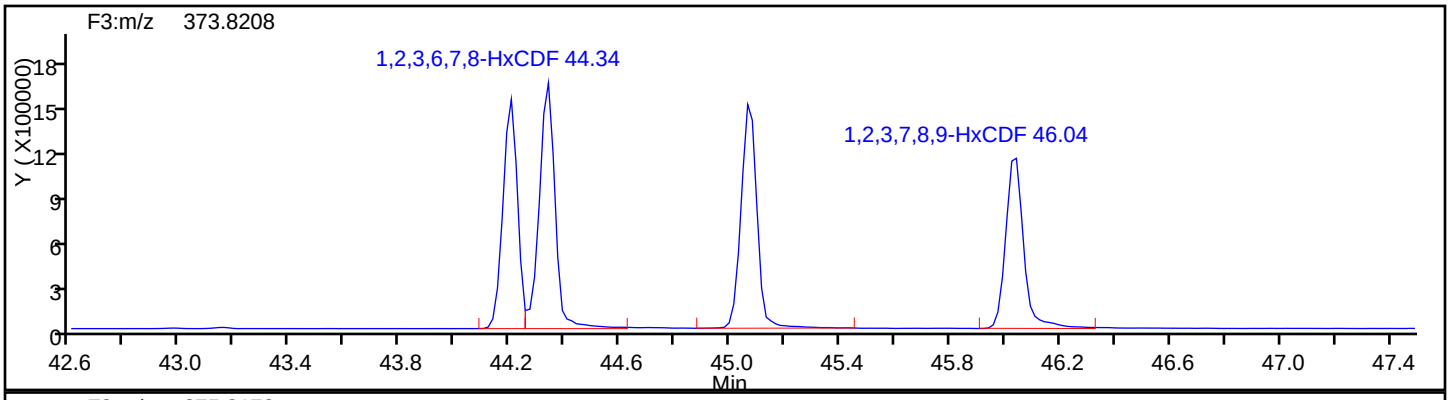
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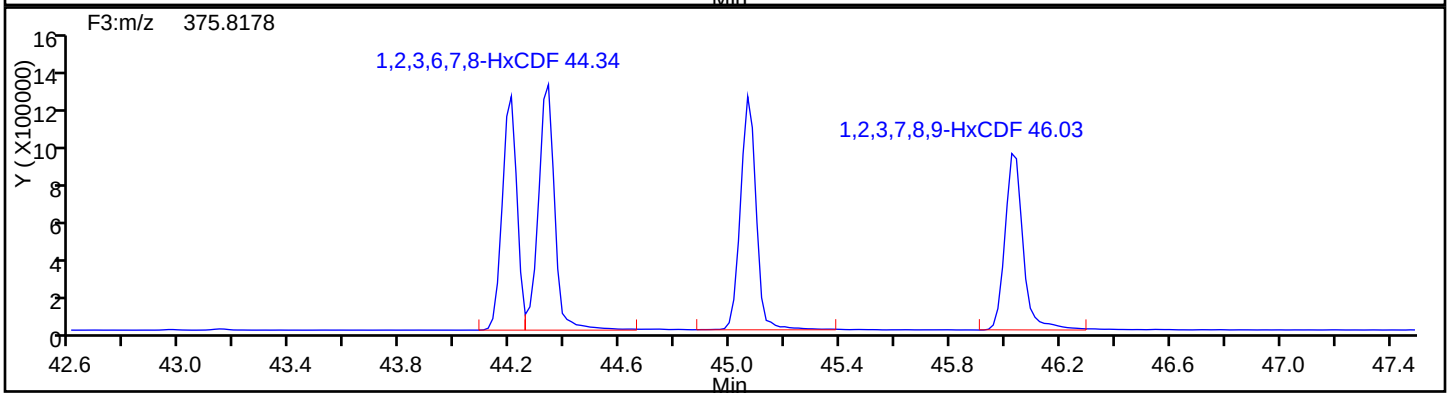
TestAmerica Knoxville

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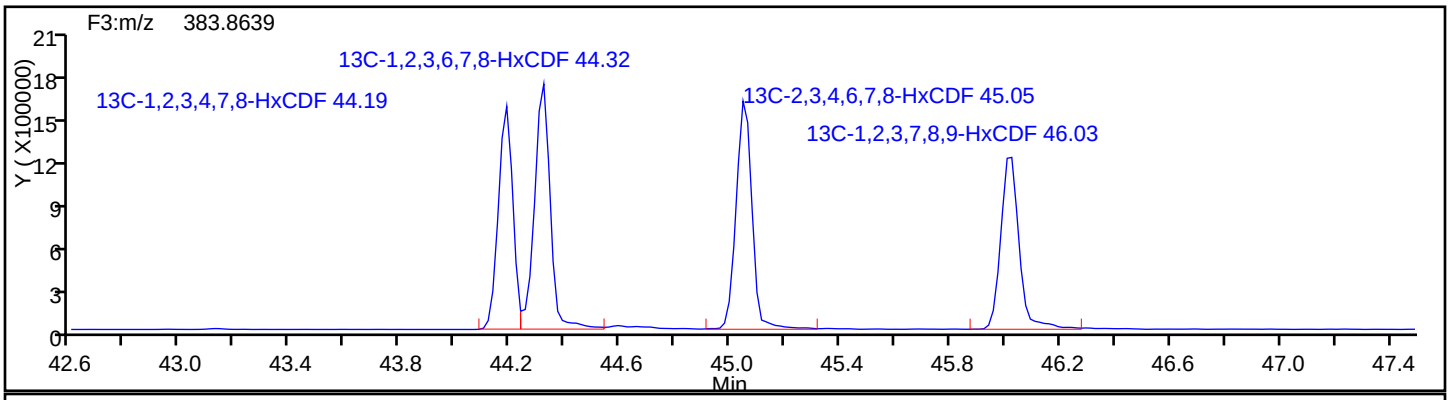
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 7 |
| Column Type: | | Column Dia: | |

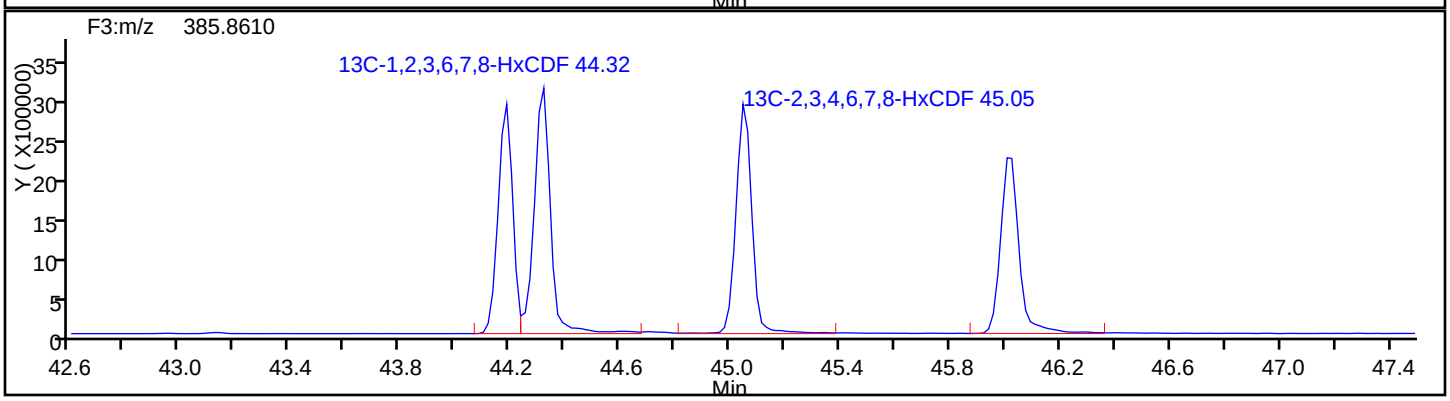
HxCDF




HxCDF Standards



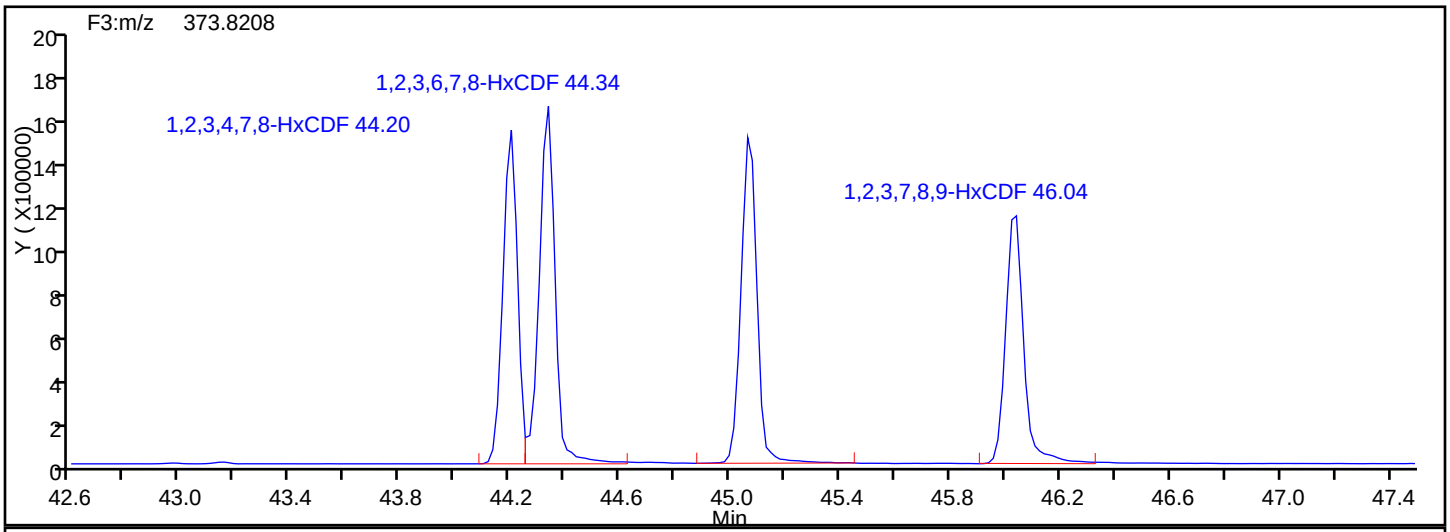
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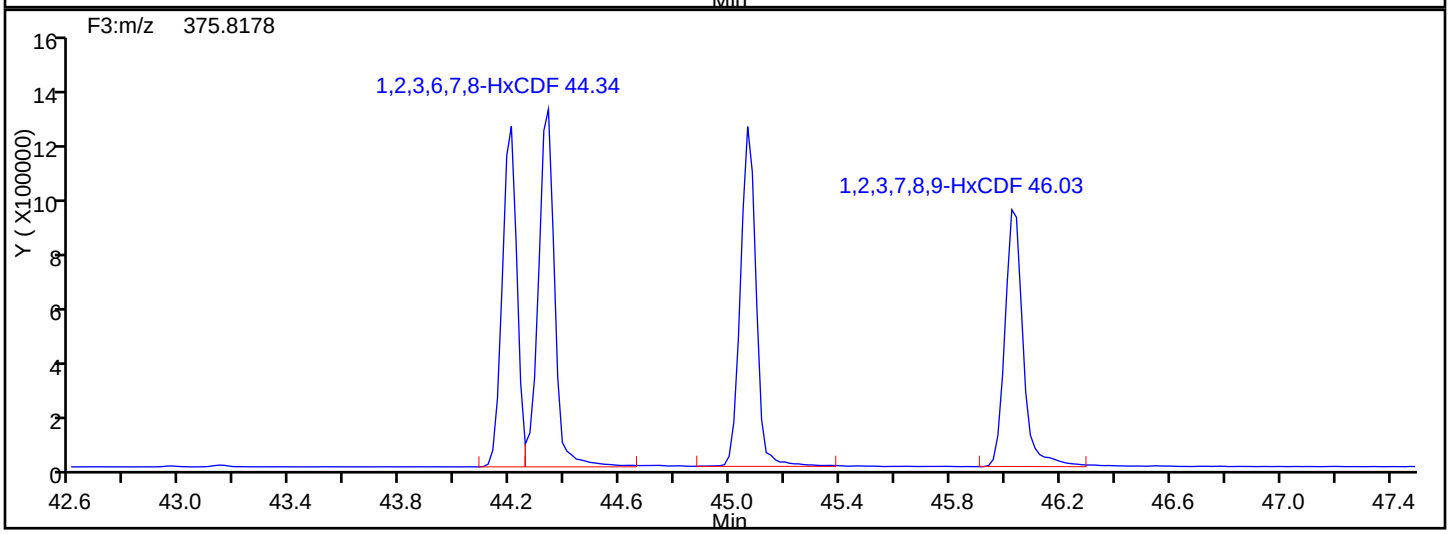
TestAmerica Knoxville

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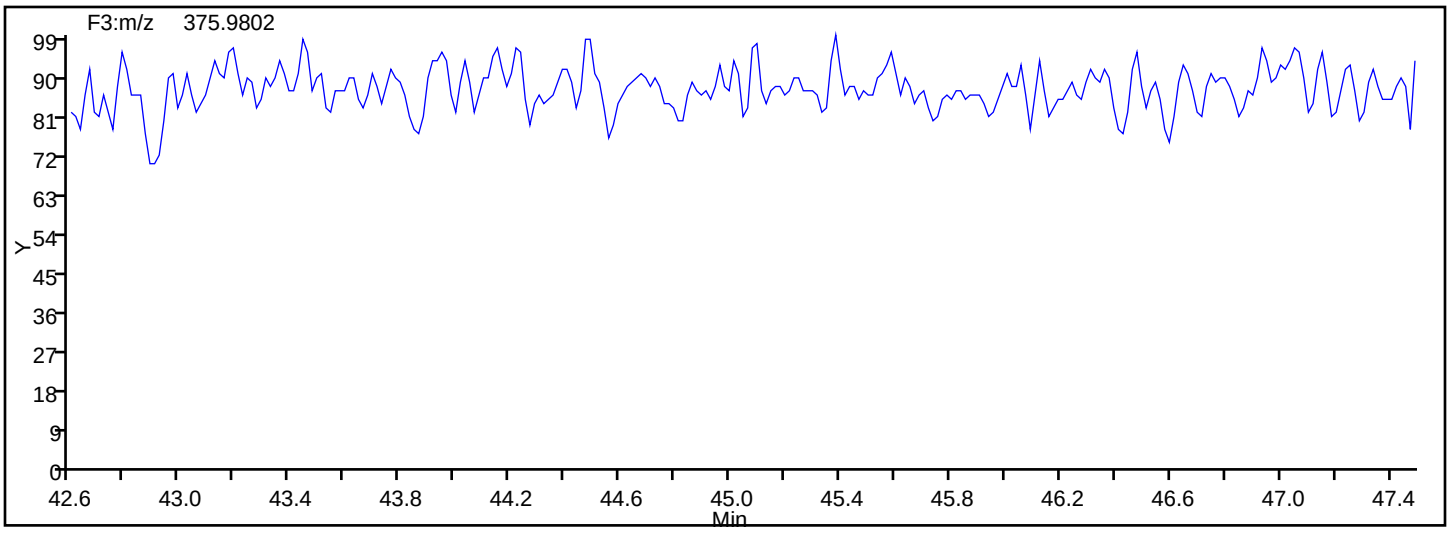
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| Column Type: | | Column Dia: | |

HxCDF




HxCDF Lock Mass



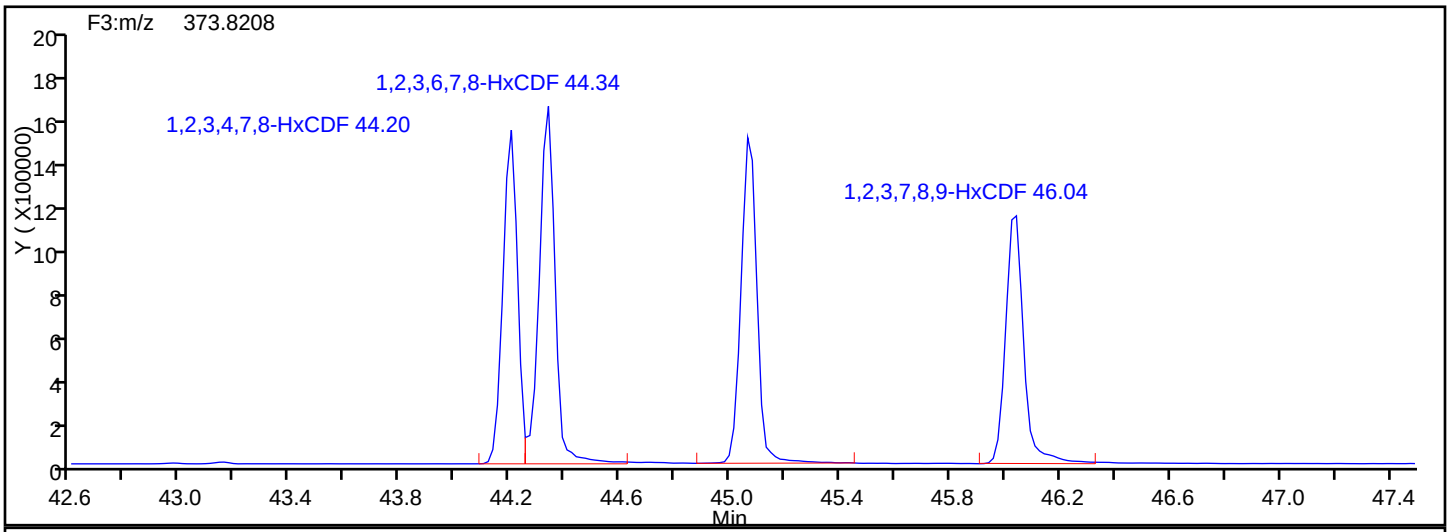
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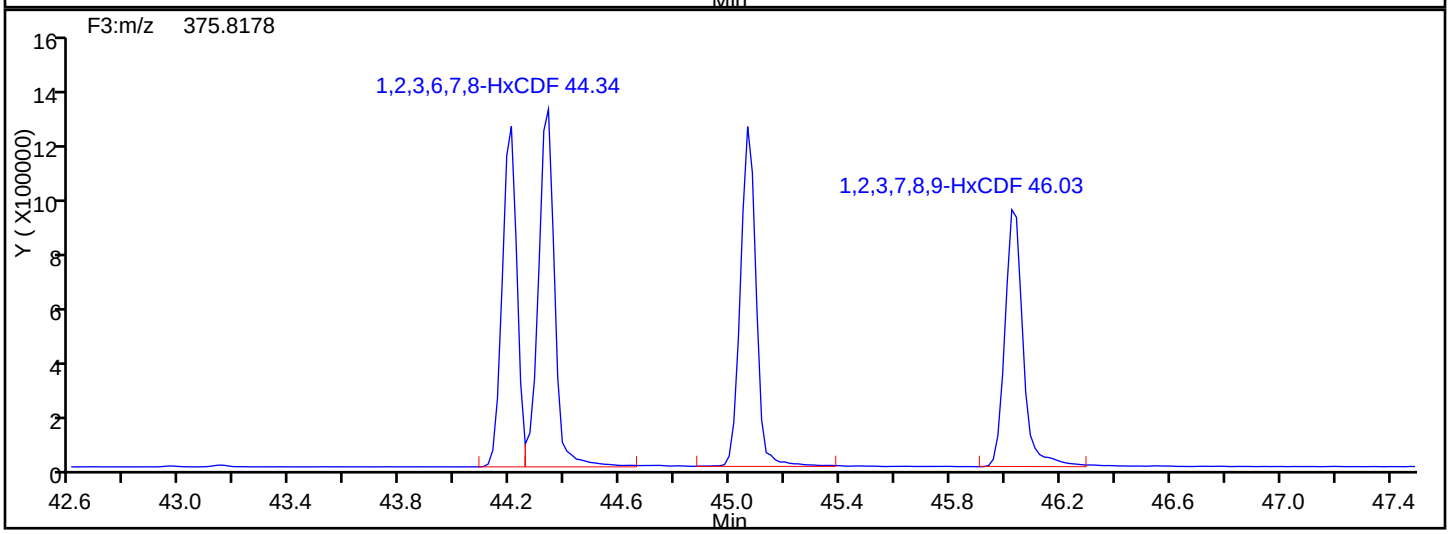
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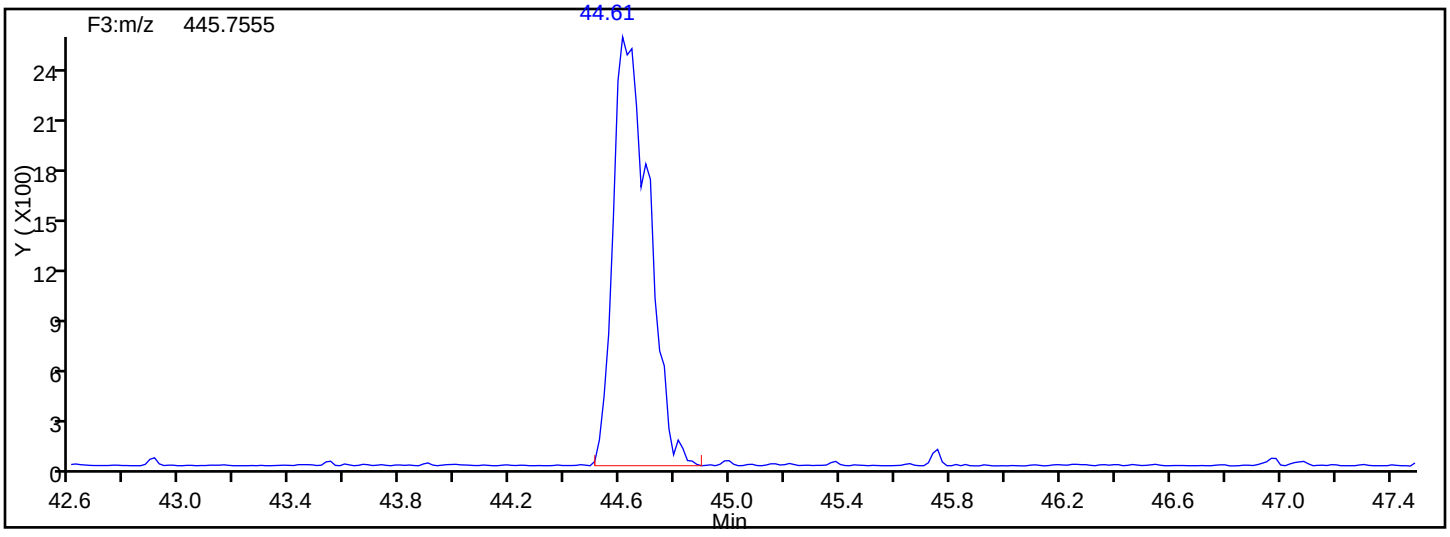
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| Column Type: | | Column Dia: | |

HxCDF




HxCDF Interference Mass



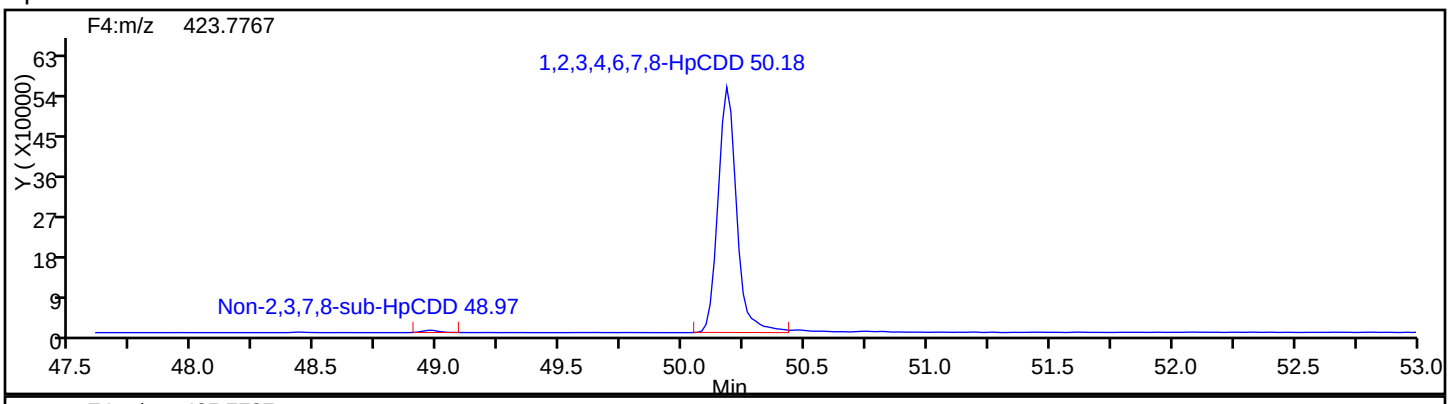
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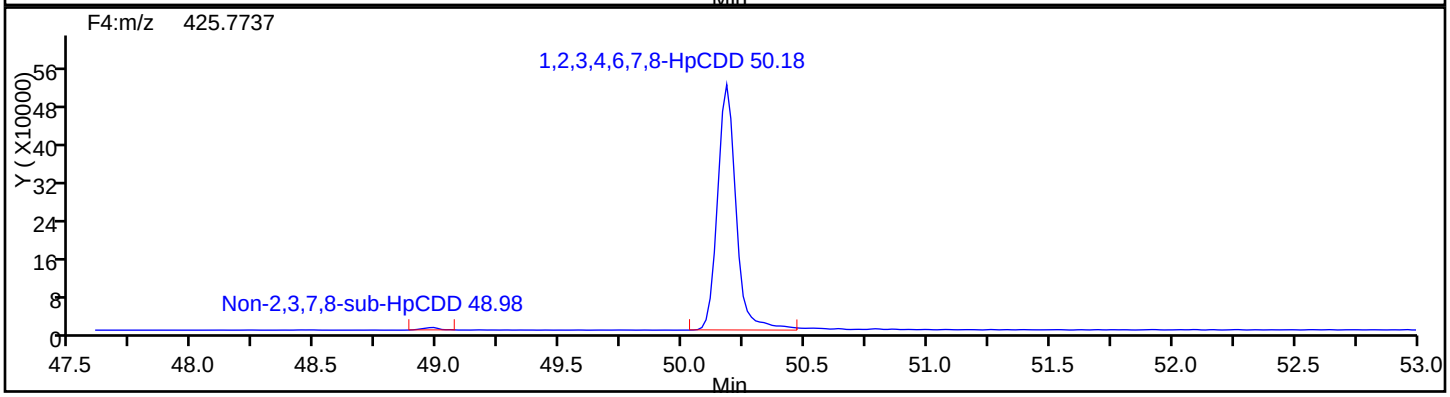
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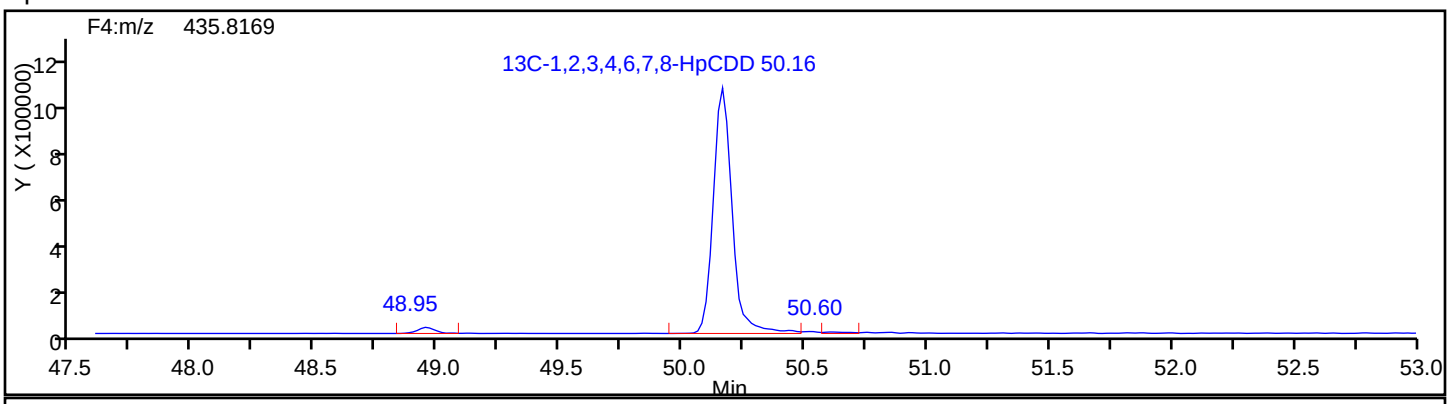
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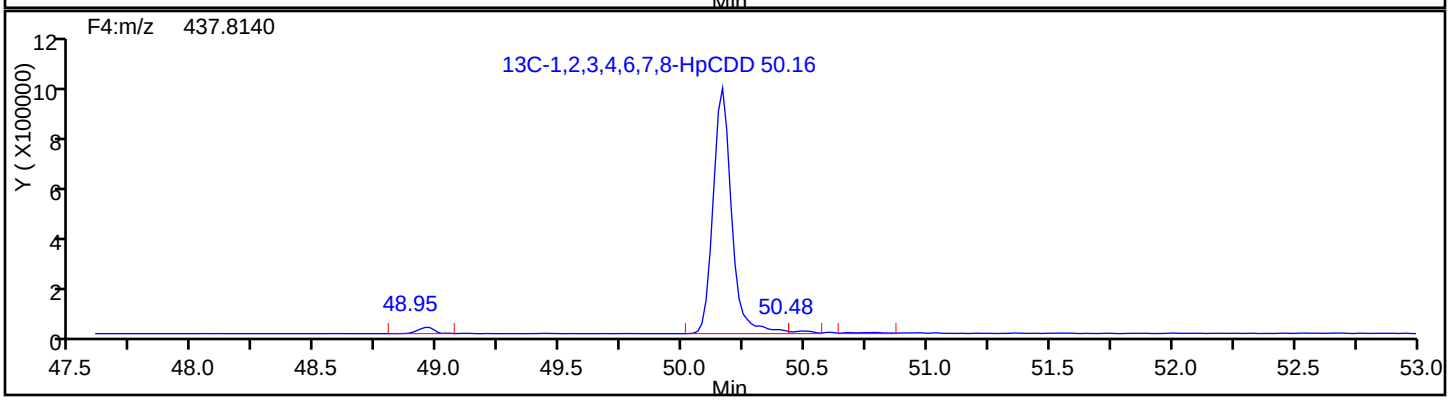
HpCDD




HpCDD Standards



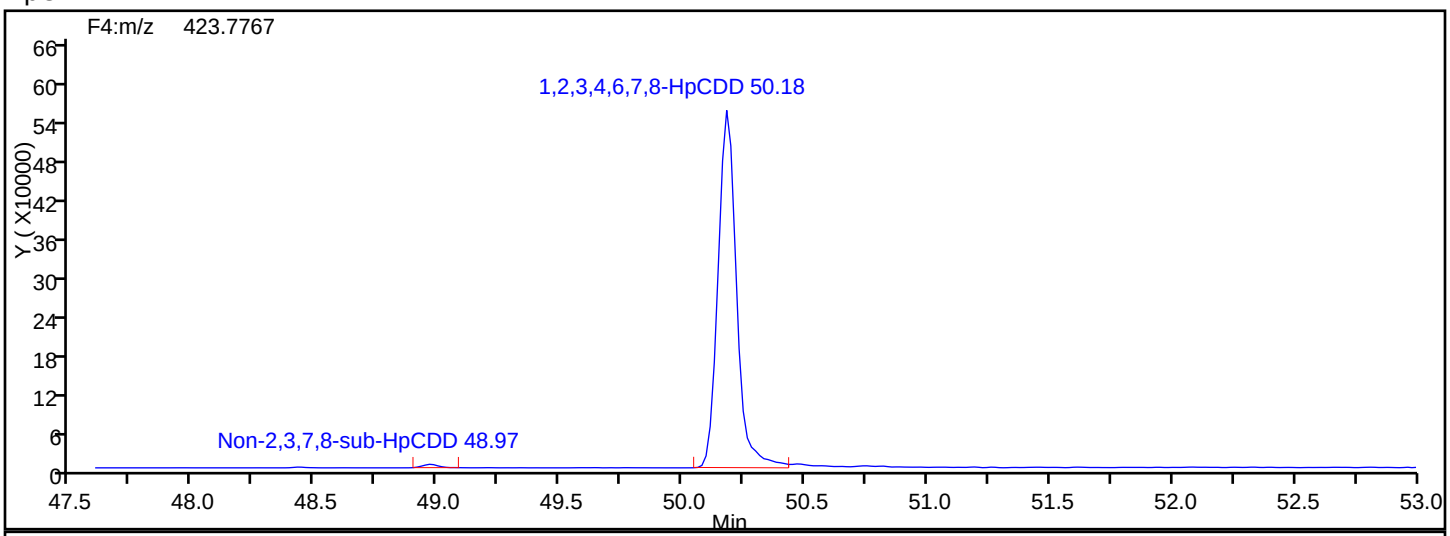
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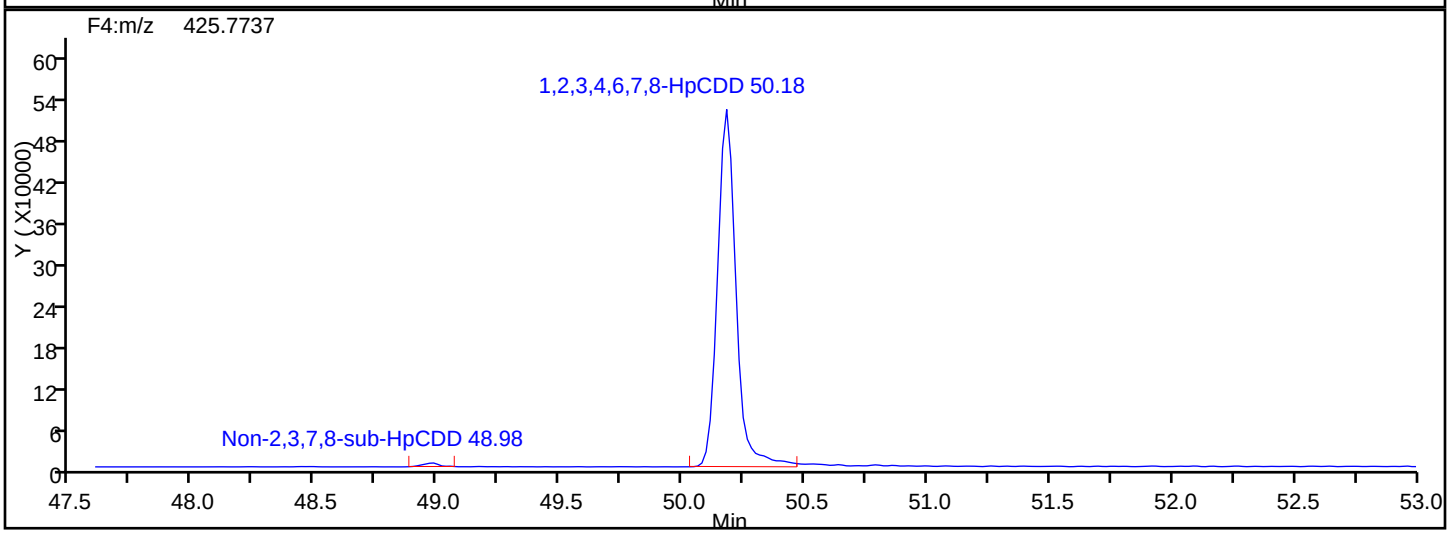
TestAmerica Knoxville

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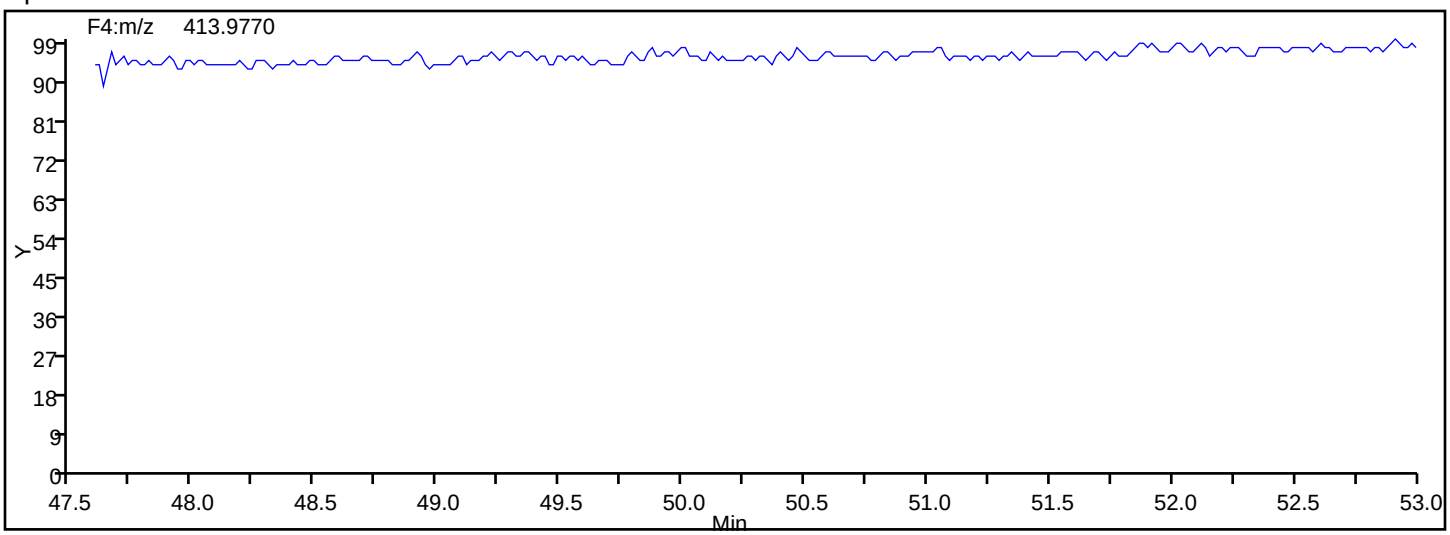
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HpCDD




HpCDD Lock Mass



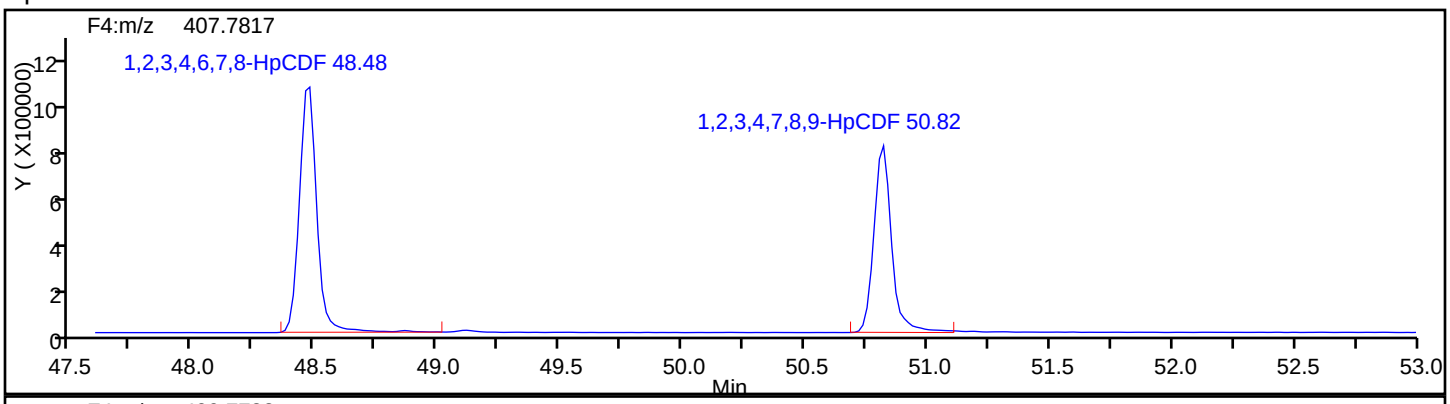
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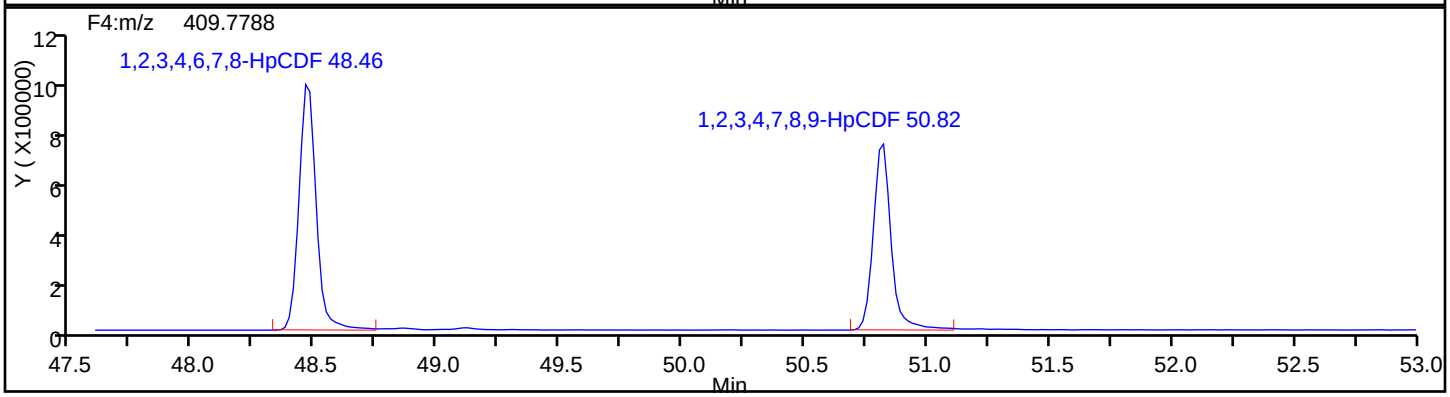
TestAmerica Knoxville

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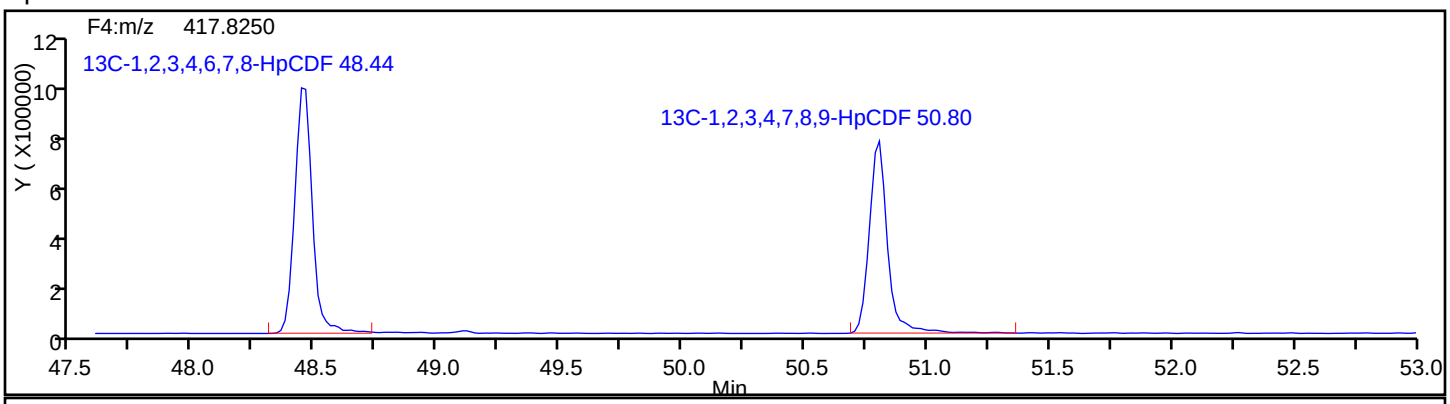
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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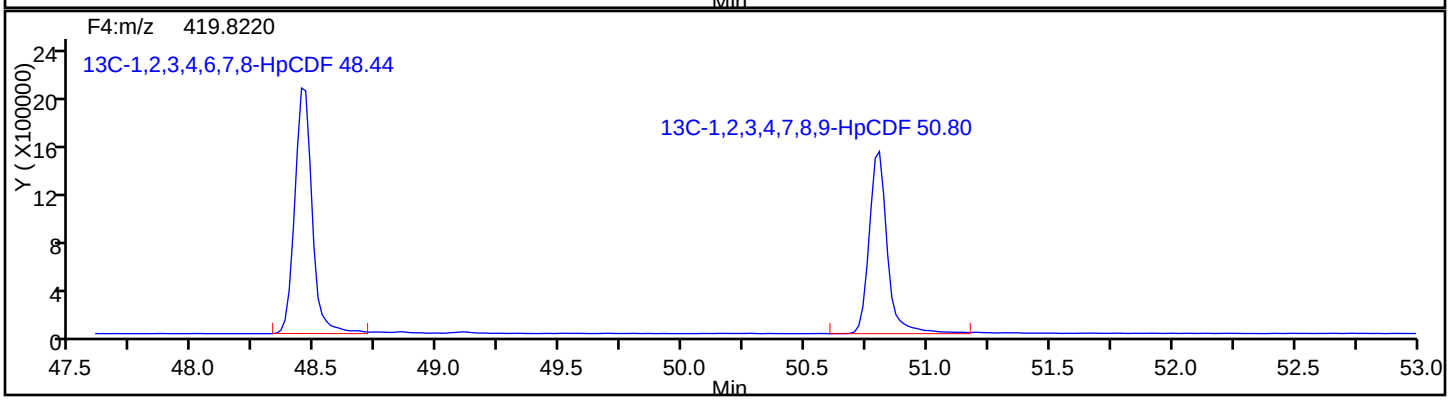
HpCDF




HpCDF Standards



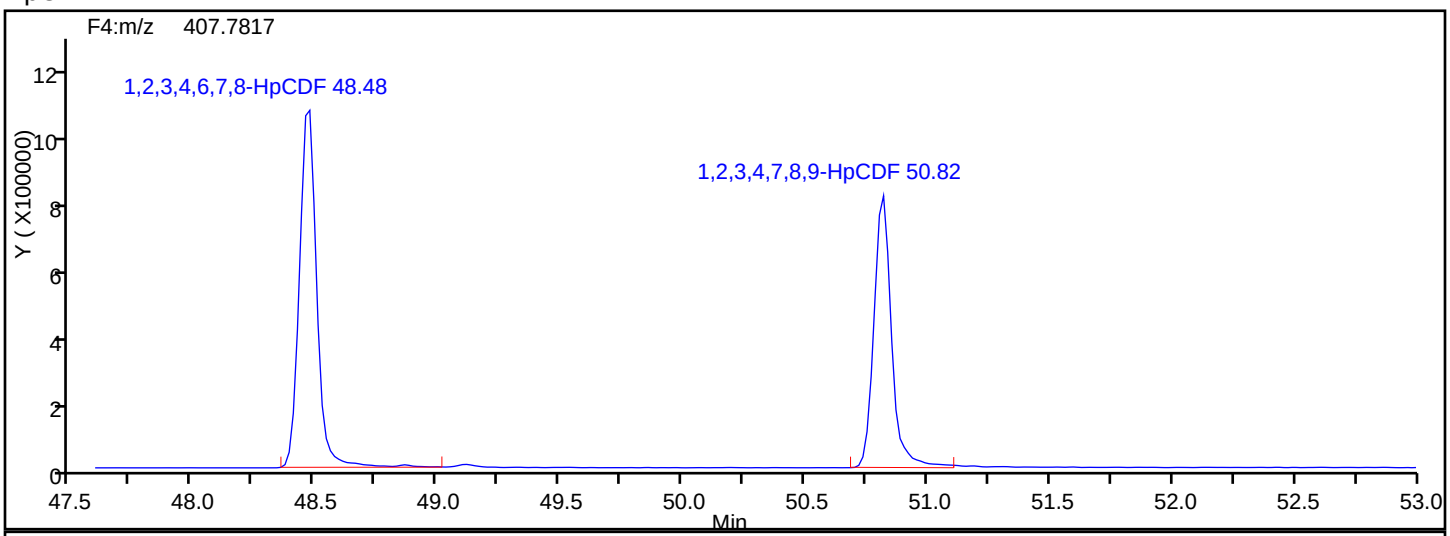
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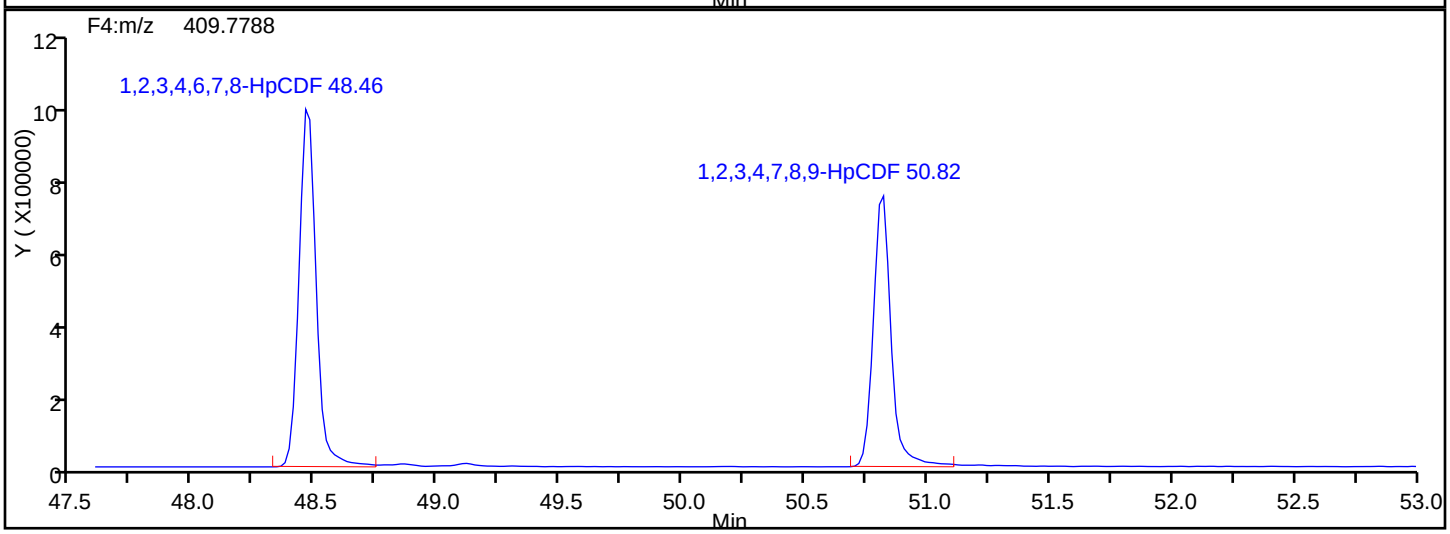
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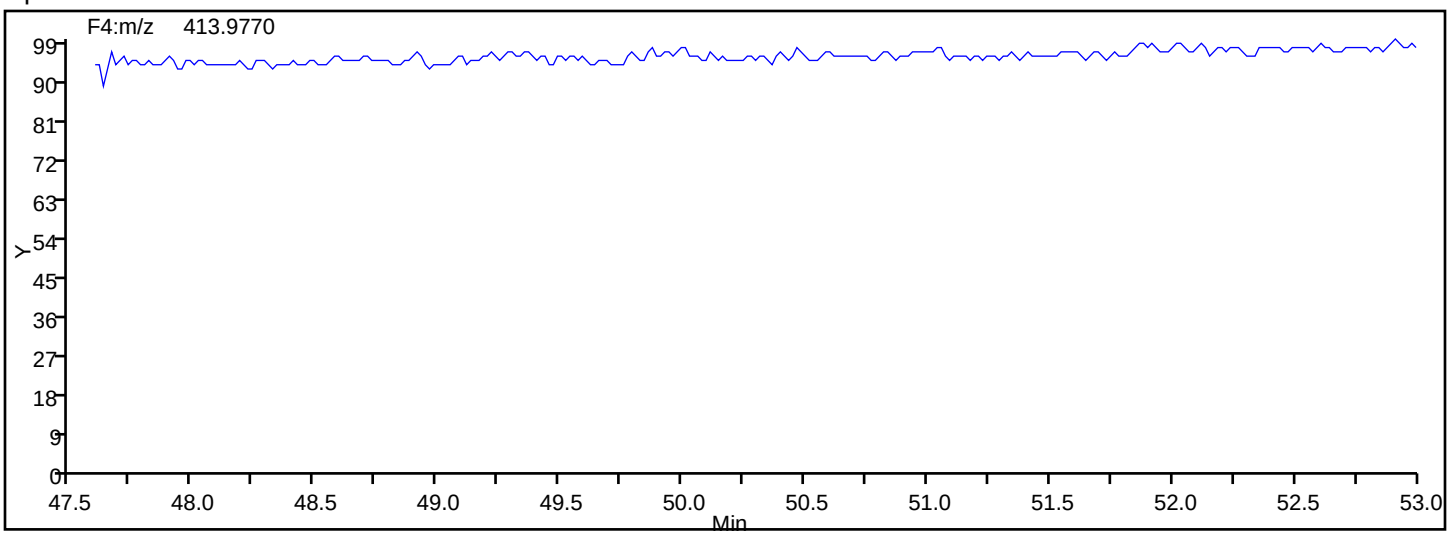
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HpCDF




HpCDF Lock Mass

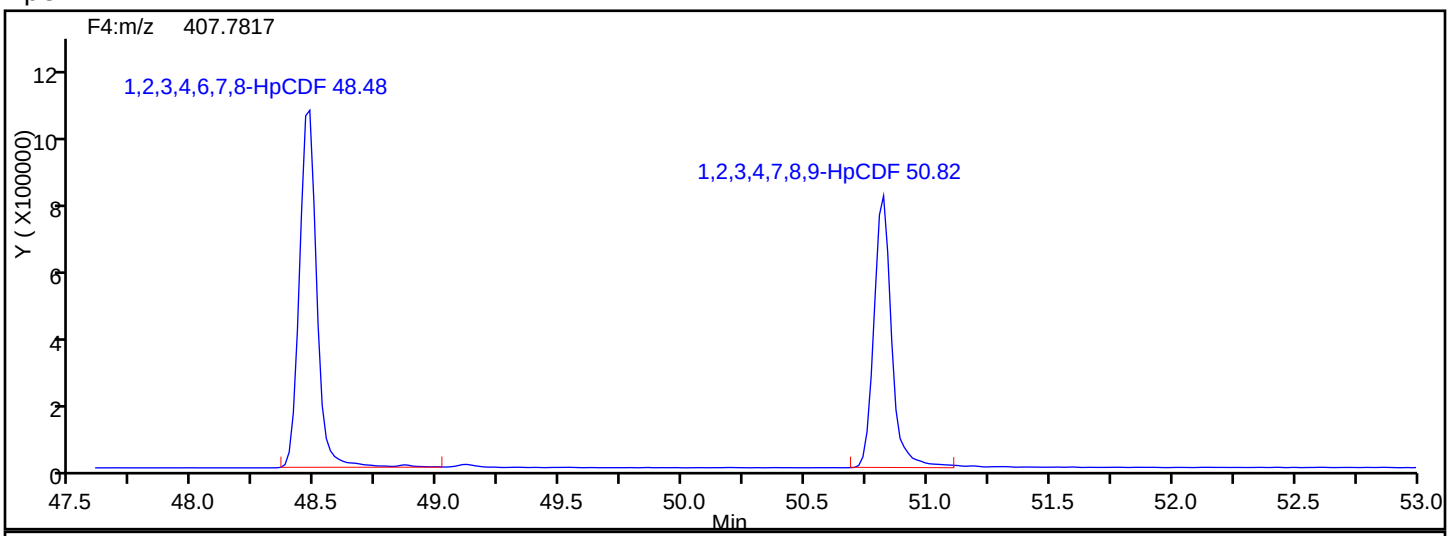


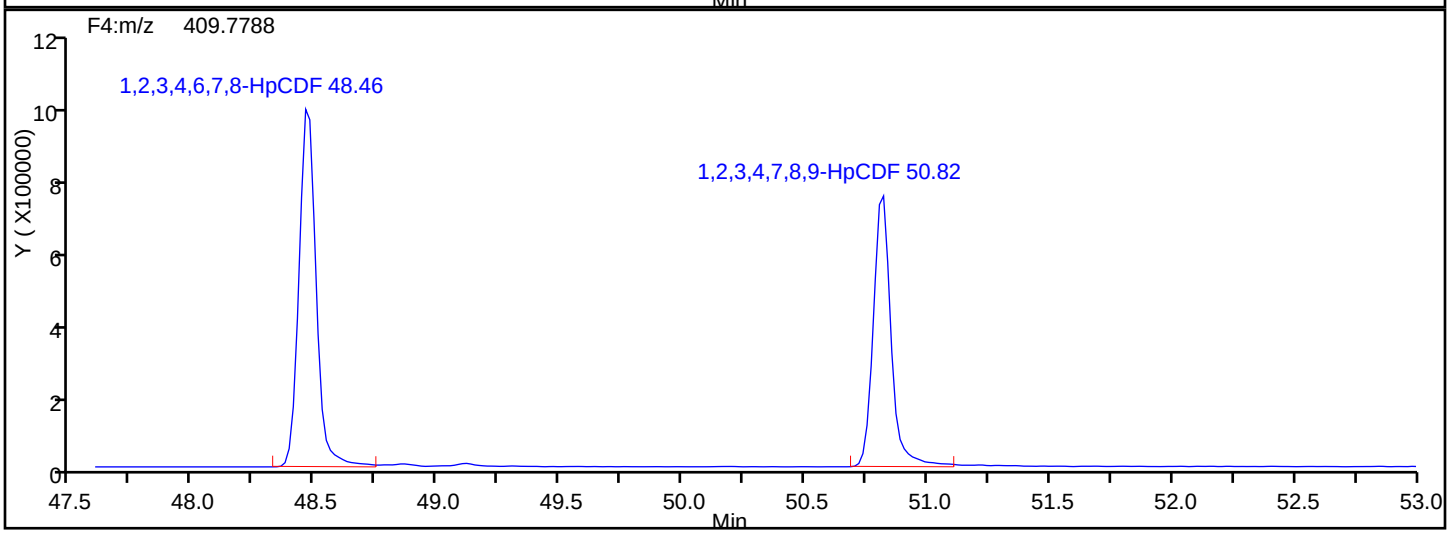
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TestAmerica Knoxville

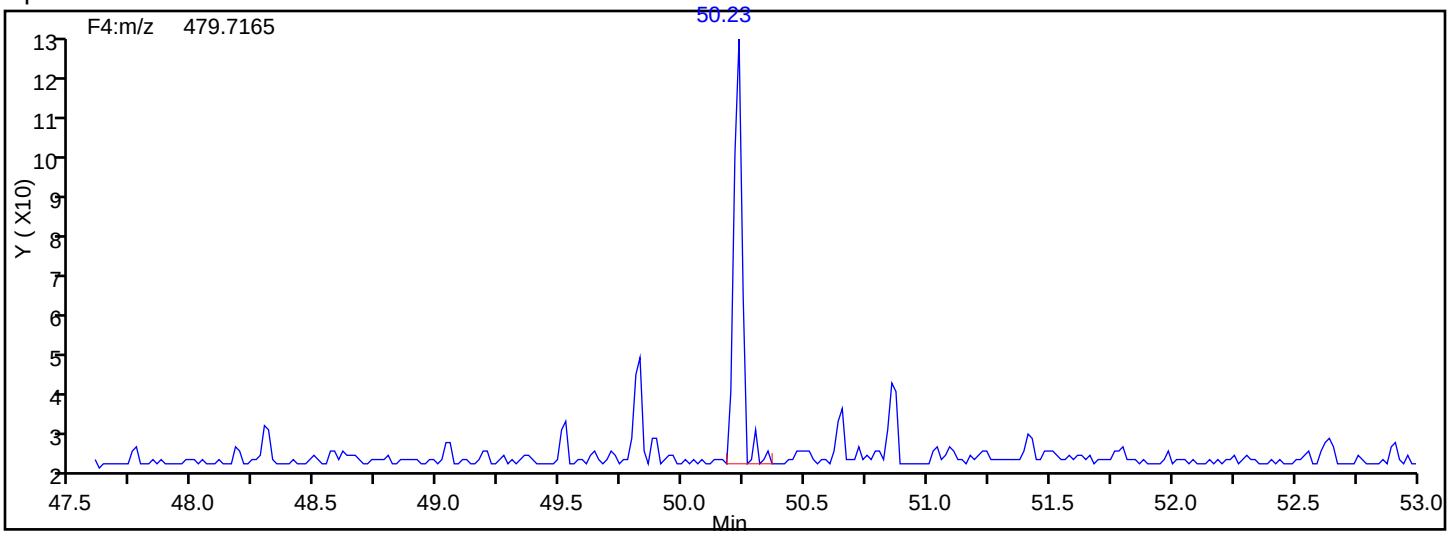
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Method: D2A_Dioxin Limit Group: HR - 1613B - ICAL
Client ID:
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Column Type: Column Dia:

HpCDF




HpCDF Interference Mass



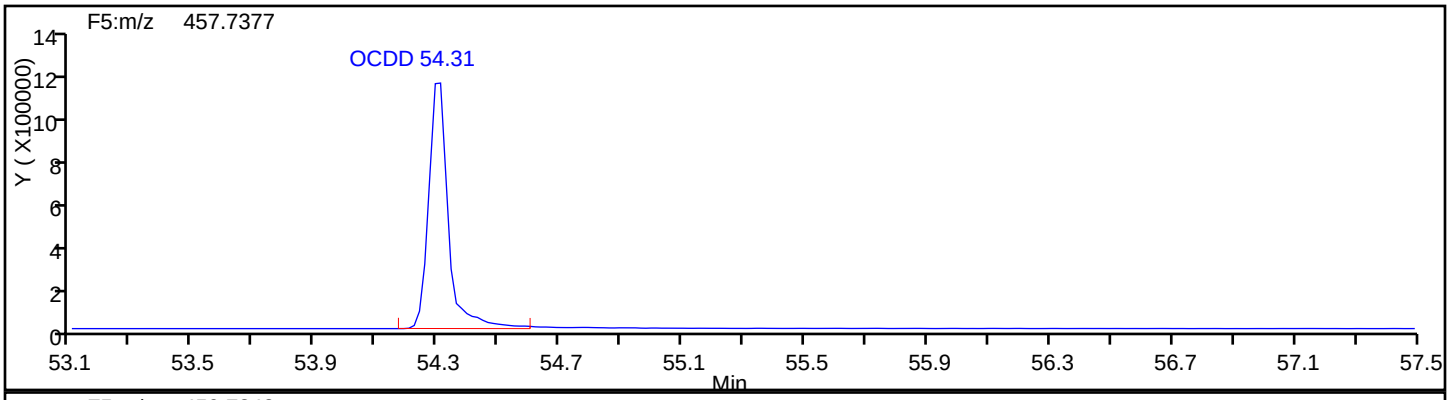
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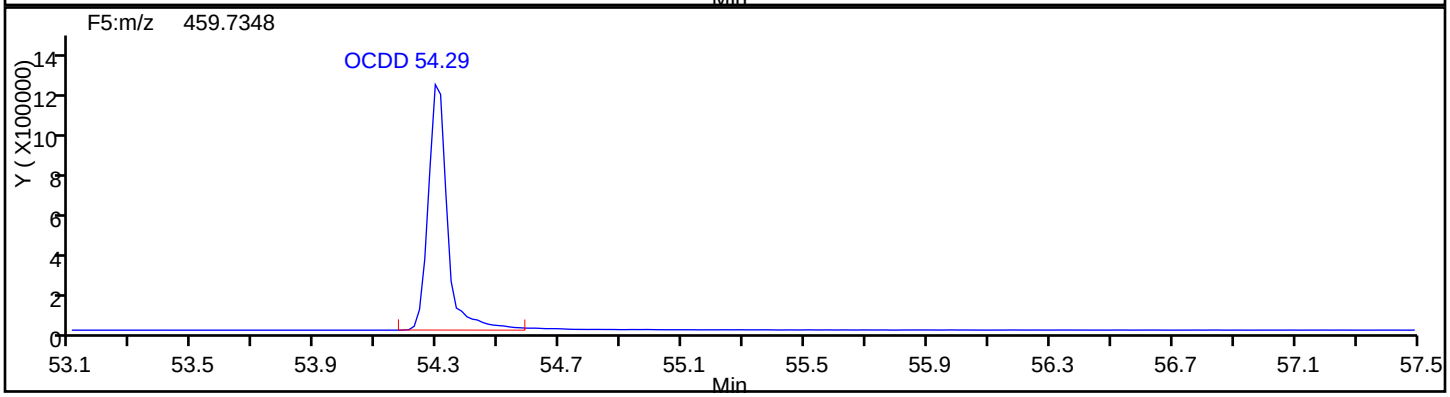
TestAmerica Knoxville

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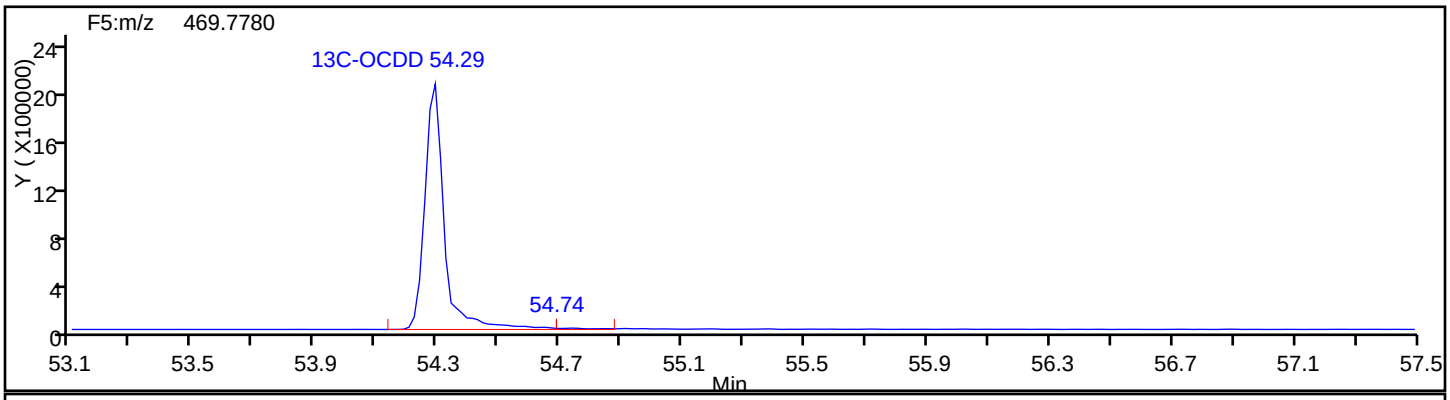
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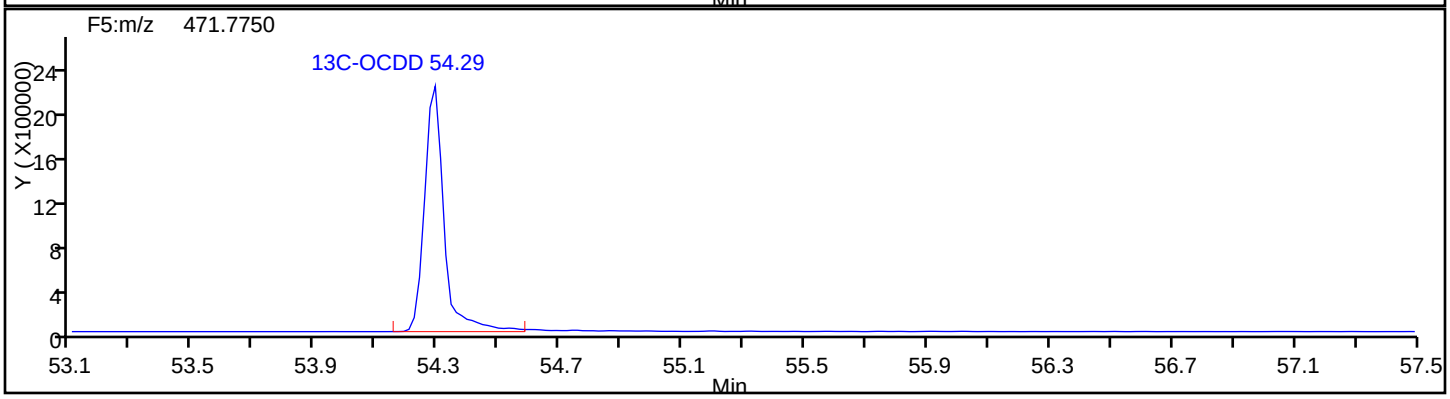
OCDD




OCDD Standards



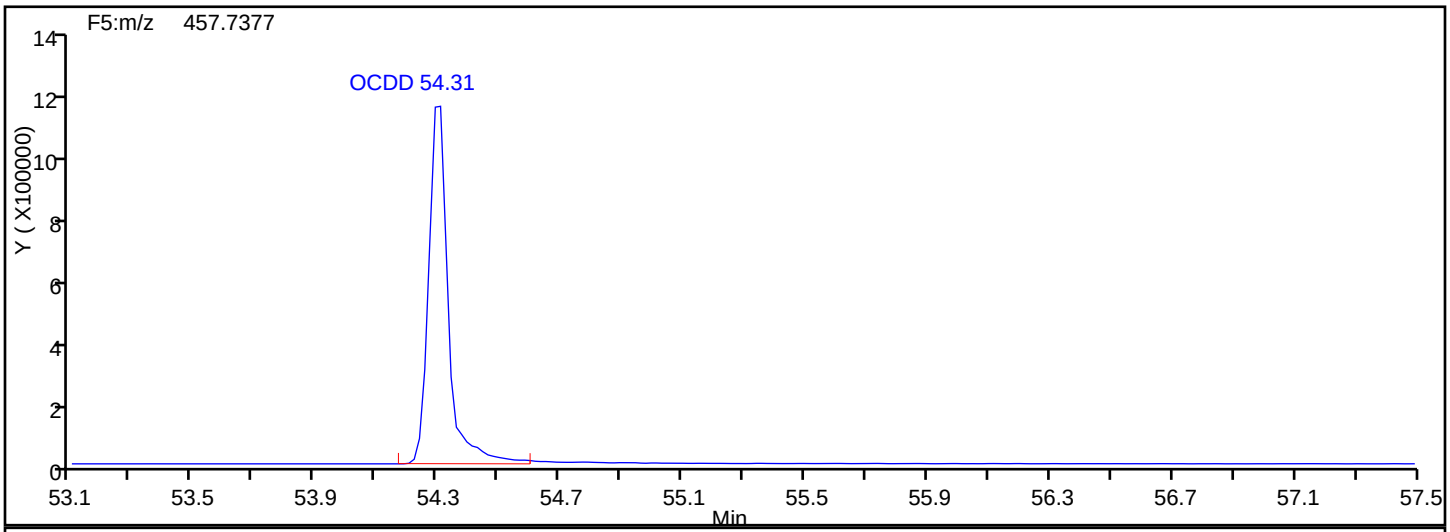
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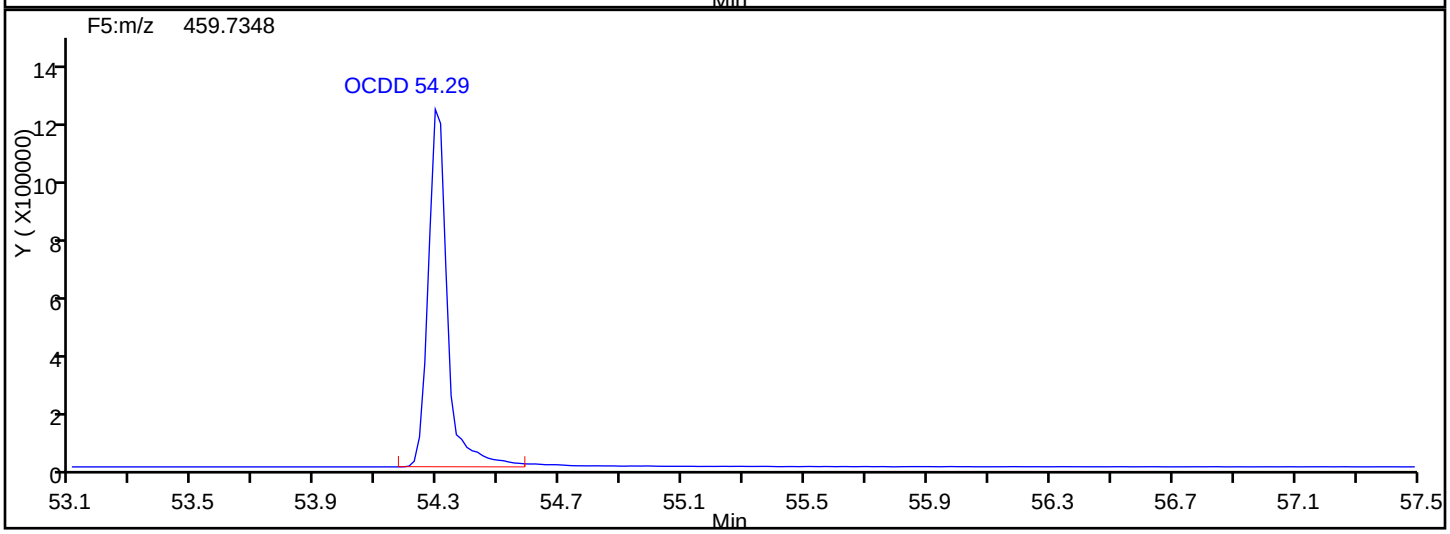
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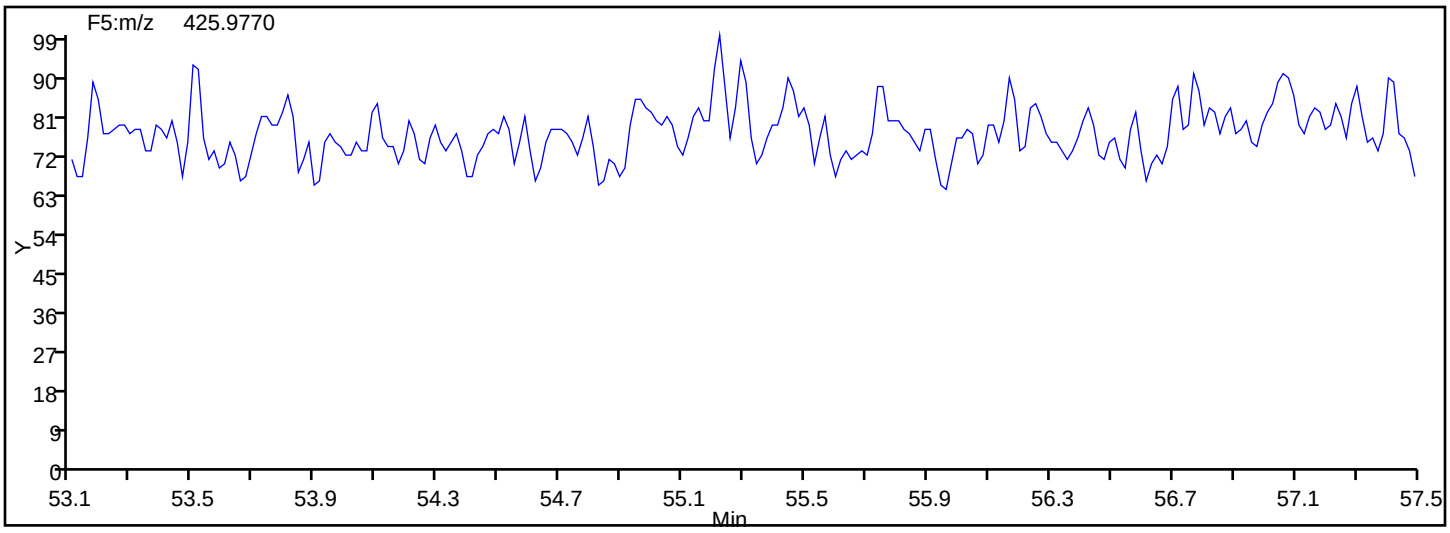
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| Column Type: | | Column Dia: | |

OCDD




OCDD Lock Mass



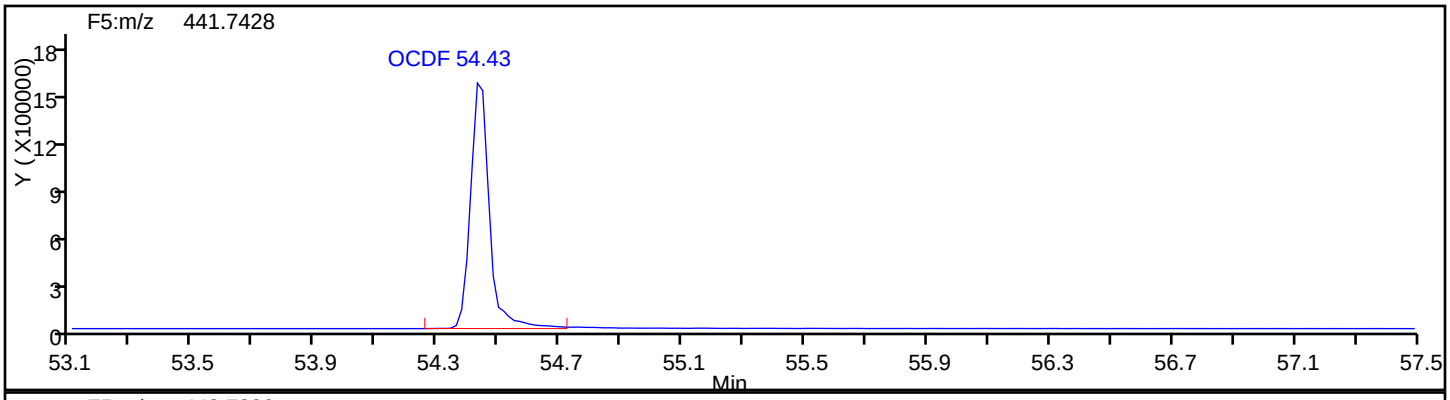
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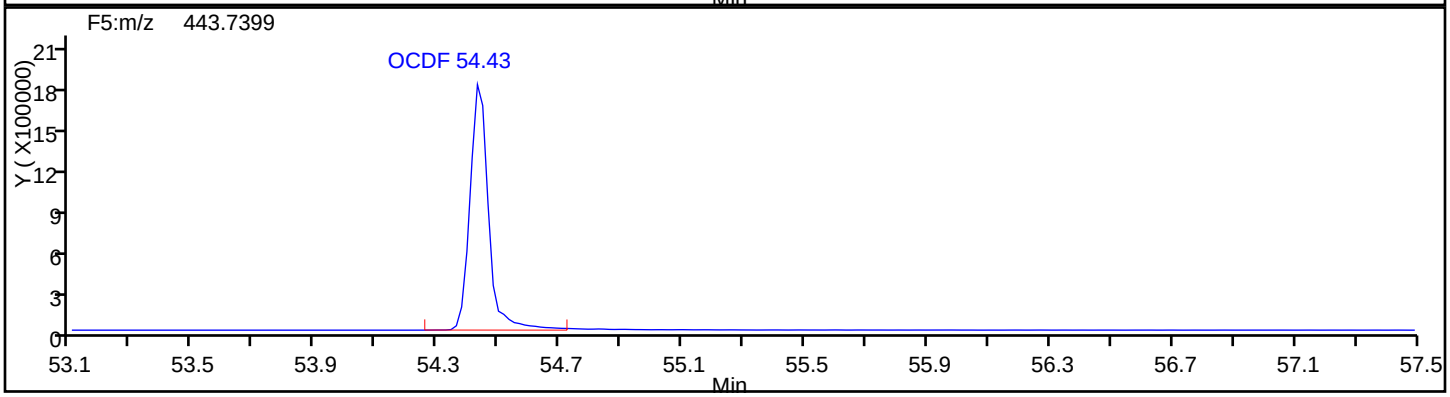
TestAmerica Knoxville

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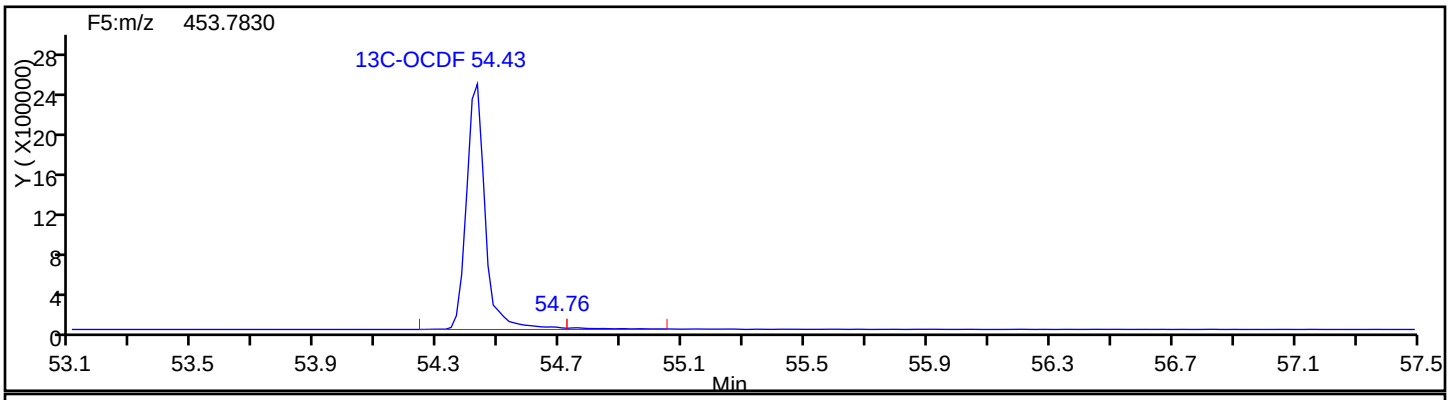
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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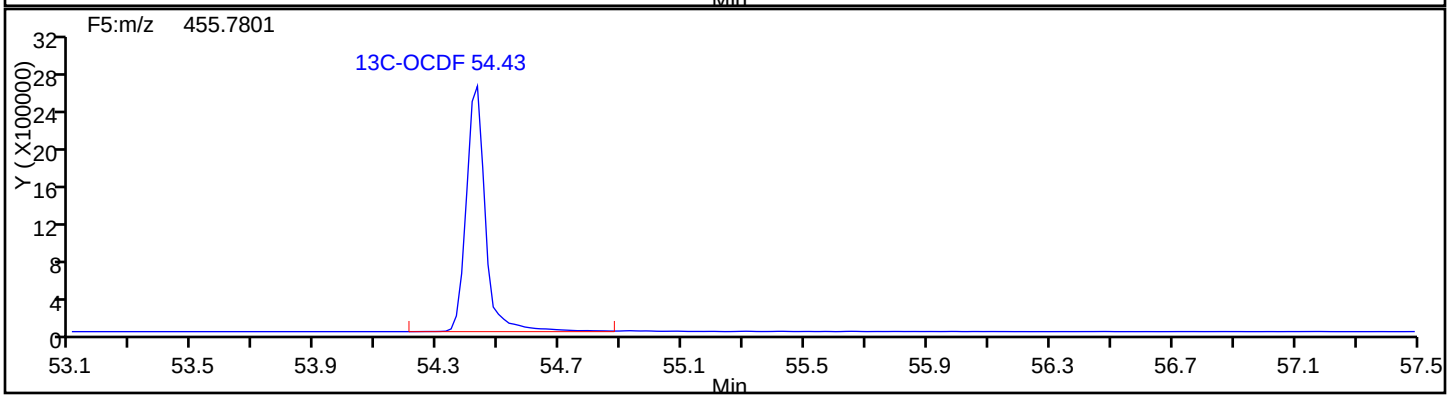
OCDF




OCDF Standards



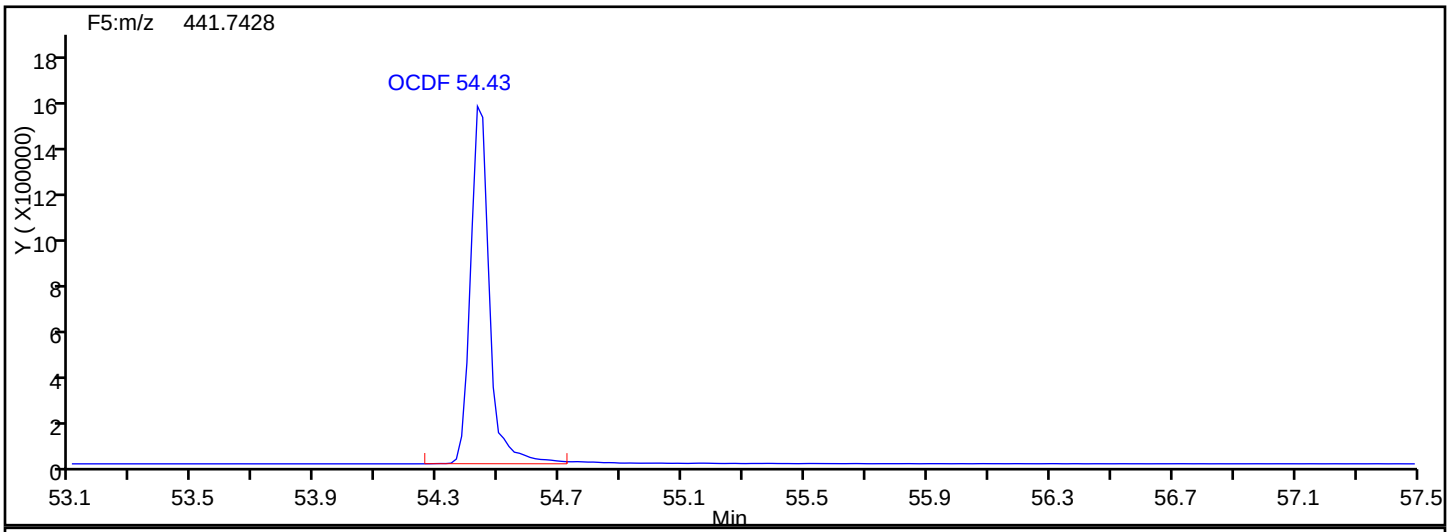
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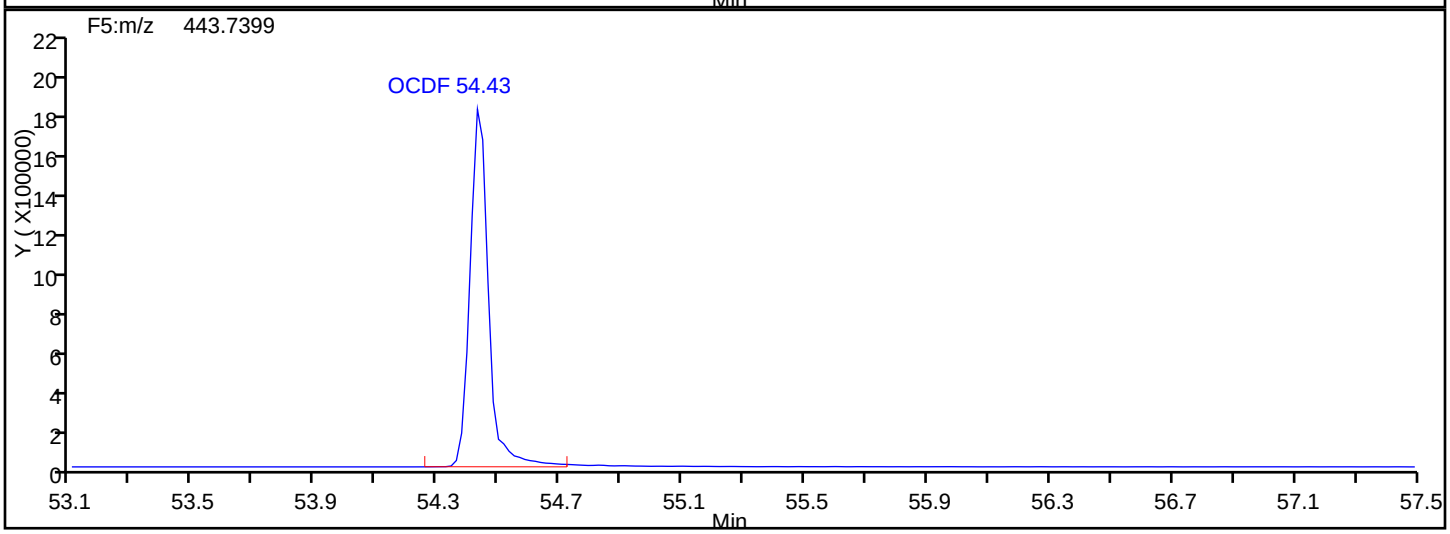
TestAmerica Knoxville

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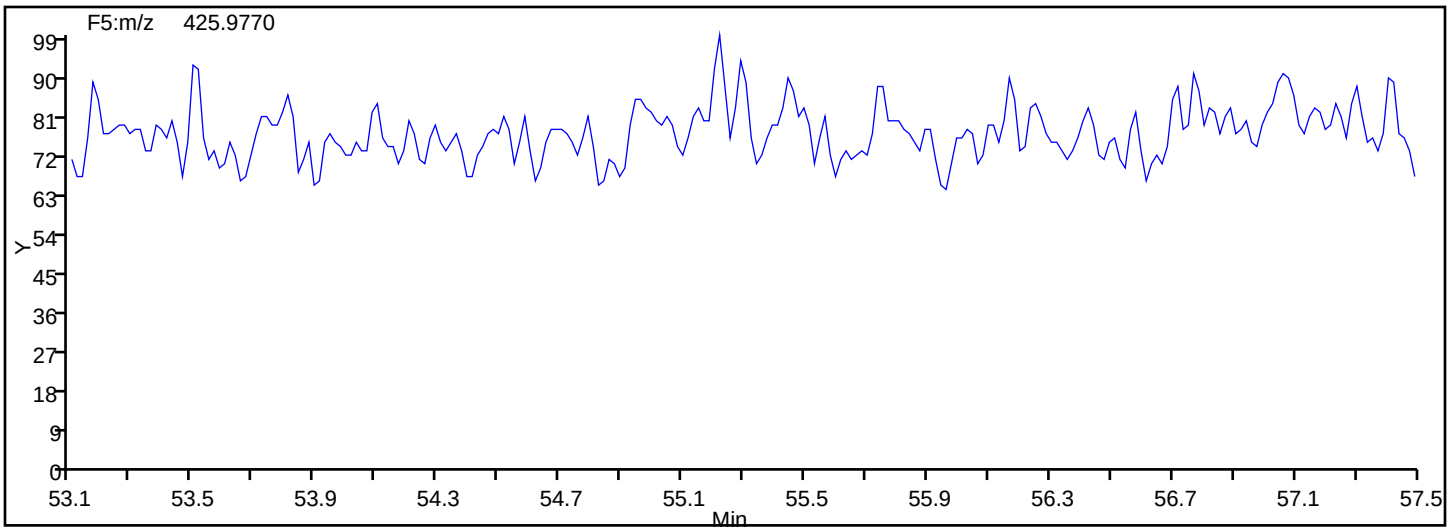
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 20:36:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 7 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Lock Mass



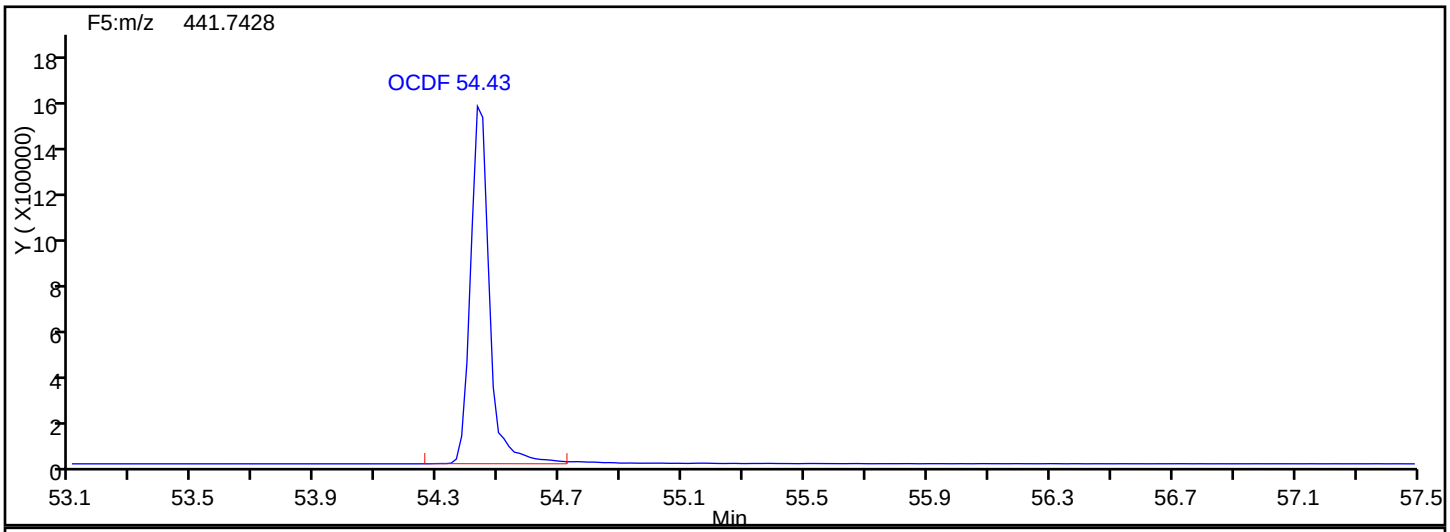
Report Date: 01-Feb-2017 12:30:15 Chrom Revision: 2.2 30-Jan-2017 14:50:44

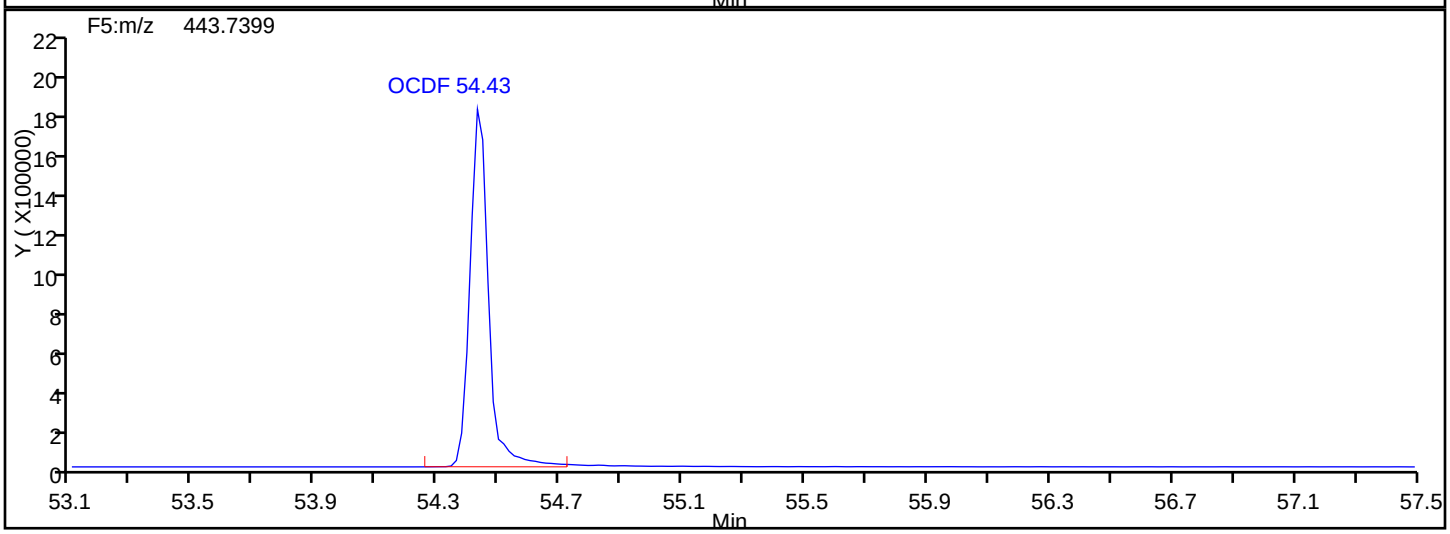
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516ss.d

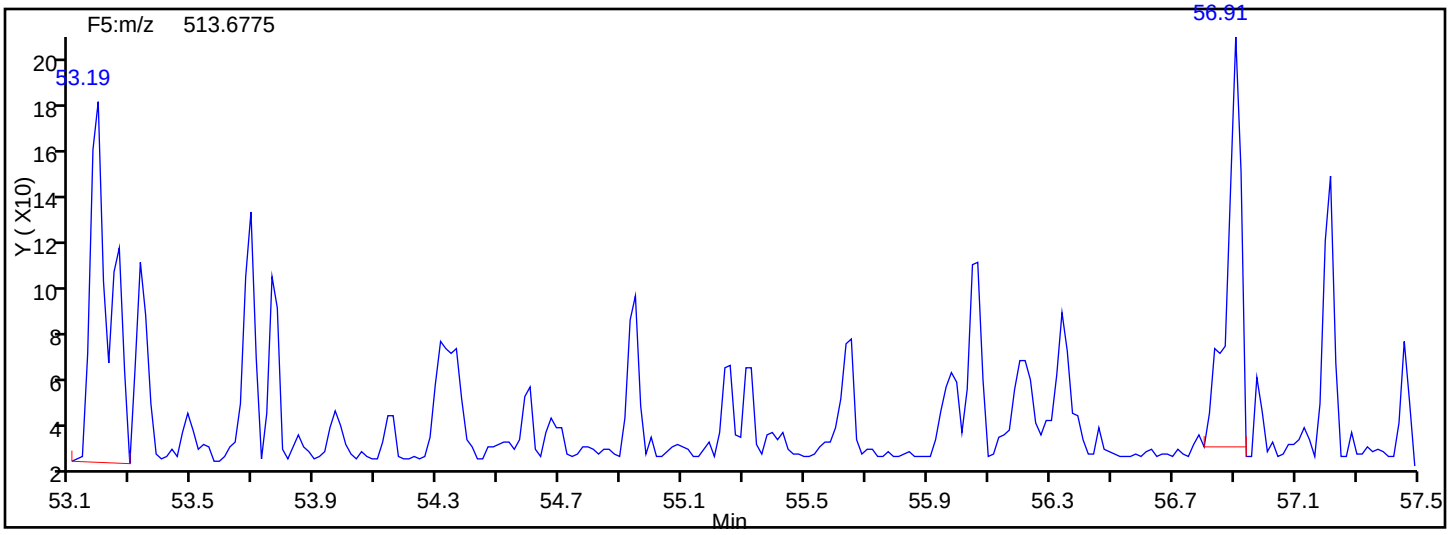
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 20:36:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 7 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Interference Mass



FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville | Job No.: 160-32649-1

SDG No.:

Lab Sample ID: WDMCCV 140-27191/1 | Calibration Date: 01/28/2019 01:01

Instrument ID: D2A | Calib Start Date: 05/16/2014 14:26

GC Column: RTX-5 ID: 0.32(mm) | Calib End Date: 05/16/2014 18:31

Lab File ID: d3190128s1.d | Conc. Units: pg/uL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %REC | %REC LIMITS |
|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDF | AveID | 1.088 | 1.053 | | 9.68 | 10.0 | 97 | 84-120 |
| 2,3,7,8-TCDD | AveID | 1.173 | 1.136 | | 9.68 | 10.0 | 97 | 78-129 |
| 1,2,3,7,8-PeCDF | AveID | 1.190 | 1.095 | | 46.0 | 50.0 | 92 | 82-120 |
| 2,3,4,7,8-PeCDF | AveID | 1.109 | 1.013 | | 45.6 | 50.0 | 91 | 82-122 |
| 1,2,3,7,8-PeCDD | AveID | 1.043 | 0.9775 | | 46.8 | 50.0 | 94 | 78-130 |
| 1,2,3,4,7,8-HxCDF | AveID | 1.363 | 1.331 | | 48.8 | 50.0 | 98 | 90-112 |
| 1,2,3,6,7,8-HxCDF | AveID | 1.276 | 1.235 | | 48.4 | 50.0 | 97 | 88-114 |
| 2,3,4,6,7,8-HxCDF | AveID | 1.265 | 1.240 | | 49.0 | 50.0 | 98 | 88-114 |
| 1,2,3,4,7,8-HxCDD | AveID | 1.141 | 1.142 | | 50.1 | 50.0 | 100 | 78-128 |
| 1,2,3,6,7,8-HxCDD | AveID | 1.148 | 1.107 | | 48.2 | 50.0 | 96 | 78-128 |
| 1,2,3,7,8,9-HxCDD | AveID | 1.221 | 1.233 | | 50.5 | 50.0 | 101 | 82-122 |
| 1,2,3,7,8,9-HxCDF | AveID | 1.257 | 1.189 | | 47.3 | 50.0 | 95 | 90-112 |
| 1,2,3,4,6,7,8-HpCDF | AveID | 1.498 | 1.526 | | 50.9 | 50.0 | 102 | 90-110 |
| 1,2,3,4,6,7,8-HpCDD | AveID | 1.120 | 1.122 | | 50.1 | 50.0 | 100 | 86-116 |
| 1,2,3,4,7,8,9-HpCDF | AveID | 1.381 | 1.427 | | 51.7 | 50.0 | 103 | 86-116 |
| OCDD | AveID | 1.207 | 1.216 | | 101 | 100 | 101 | 79-126 |
| OCDF | AveID | 1.116 | 1.174 | | 105 | 100 | 105 | 63-159 |
| 13C-2,3,7,8-TCDF | Ave | 1.755 | 1.628 | | 92.8 | 100 | 93 | 71-140 |
| 13C-2,3,7,8-TCDD | Ave | 1.071 | 1.041 | | 97.2 | 100 | 97 | 82-121 |
| 13C-1,2,3,7,8-PeCDF | Ave | 1.370 | 1.410 | | 103 | 100 | 103 | 76-130 |
| 13C-2,3,4,7,8-PeCDF | Ave | 1.384 | 1.406 | | 102 | 100 | 102 | 77-130 |
| 13C-1,2,3,7,8-PeCDD | Ave | 0.8743 | 0.997 | | 114 | 100 | 114 | 62-160 |
| 13C-1,2,3,4,7,8-HxCDF | Ave | 1.189 | 1.240 | | 104 | 100 | 104 | 76-131 |
| 13C-1,2,3,6,7,8-HxCDF | Ave | 1.462 | 1.386 | | 94.8 | 100 | 95 | 70-143 |
| 13C-2,3,4,6,7,8-HxCDF | Ave | 1.320 | 1.283 | | 97.2 | 100 | 97 | 73-137 |
| 13C-1,2,3,4,7,8-HxCDD | Ave | 0.8772 | 0.8758 | | 99.8 | 100 | 100 | 85-117 |
| 13C-1,2,3,6,7,8-HxCDD | Ave | 0.9171 | 0.8777 | | 95.7 | 100 | 96 | 85-118 |
| 13C-1,2,3,7,8,9-HxCDF | Ave | 1.200 | 1.193 | | 99.4 | 100 | 99 | 74-135 |
| 13C-1,2,3,4,6,7,8-HpCDF | Ave | 1.050 | 1.027 | | 97.9 | 100 | 98 | 78-129 |
| 13C-1,2,3,4,6,7,8-HpCDD | Ave | 0.8155 | 0.8079 | | 99.1 | 100 | 99 | 72-138 |
| 13C-1,2,3,4,7,8,9-HpCDF | Ave | 0.8947 | 0.8332 | | 93.1 | 100 | 93 | 77-129 |
| 13C-OCDD | Ave | 0.7044 | 0.6360 | | 181 | 200 | 90 | 48-208 |
| 13C-OCDF | Ave | 1.061 | 0.8188 | | 154 | 200 | 77 | 48-208 |
| 37Cl4-2,3,7,8-TCDD | Ave | 1.227 | 1.156 | | 9.43 | 10.0 | 94 | 79-127 |

# Resolution Check Report ( DFS SN: 3190 )

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

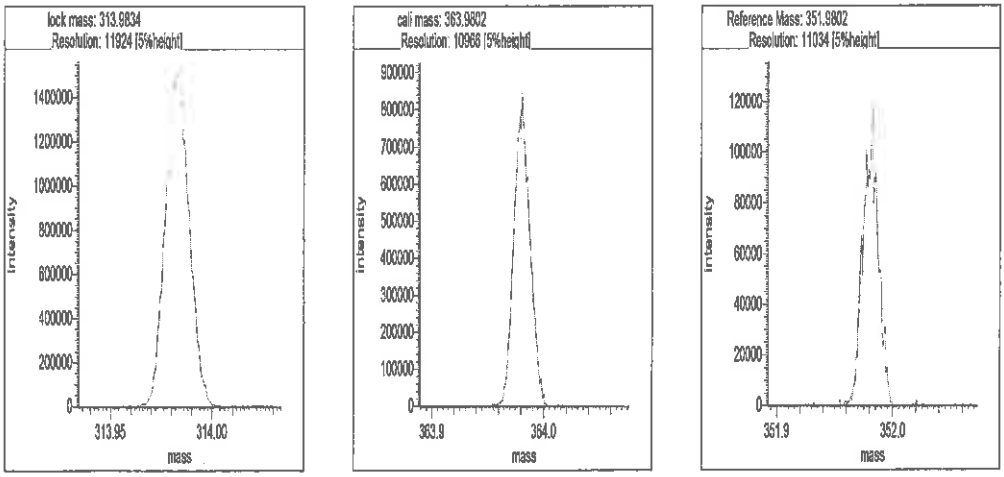
| | |
|---|---|
| Date: | 28 Jan 2019 00:47 |
| MID Experiment: | 5w_db5_fc43_singleGC_OCDF_ResCheck |
| Target Resolution: | 10000 |
| Resolution Warning : | 9500 |
| Resolution Error : | 9000 |
| Reference: | FC43Knx.lua |
| Status: | RESOLUTION PASSED |

Segment 1

Lock mass 313.9834 [m/z] Resolution: 11924 [5%height]

Cali. mass 363.9802 [m/z] Resolution: 10966 [5%height]

Ref. mass 351.9802 [m/z] Resolution: 11034 [5%height]




Segment 2

Lock mass 313.9834 [m/z] Resolution: 11463 [5%height]

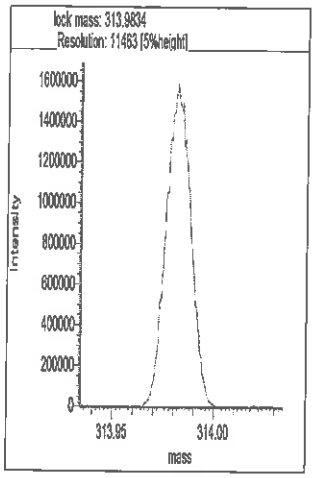
Cali. mass 375.9802 [m/z] Resolution: 10741 [5%height]

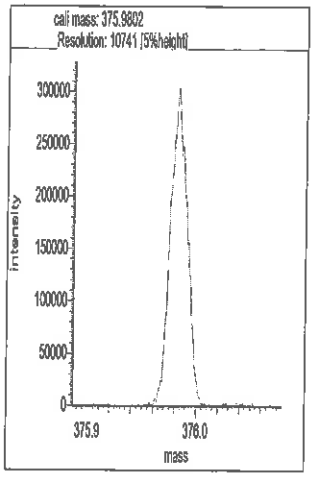
Ref. mass 351.9802 [m/z] Resolution: 11068 [5%height]

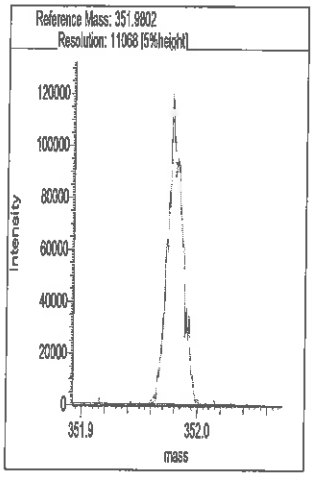
Ref. mass 363.9802 [m/z] Resolution: 10724 [5%height]

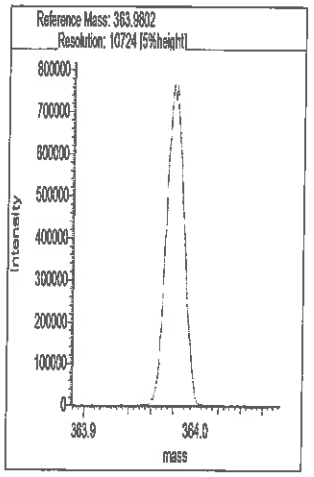
Ref. mass 401.9770 [m/z] Resolution: 10577 [5%height]

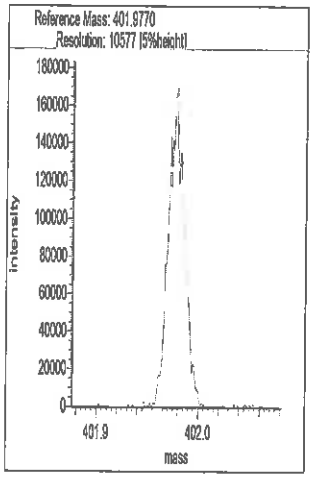
_190128s1b



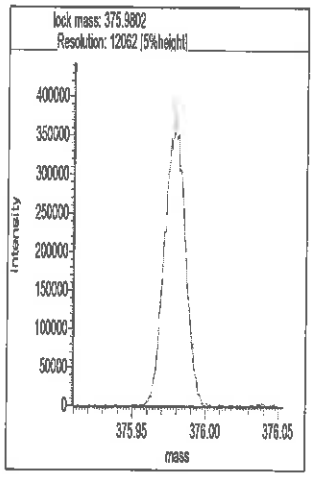

Segment 3

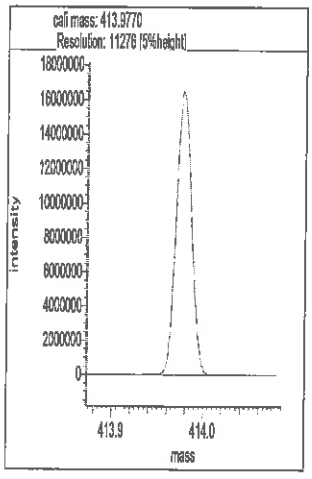
Lock mass 375.9802 [m/z] Resolution: 12062 [5%height]

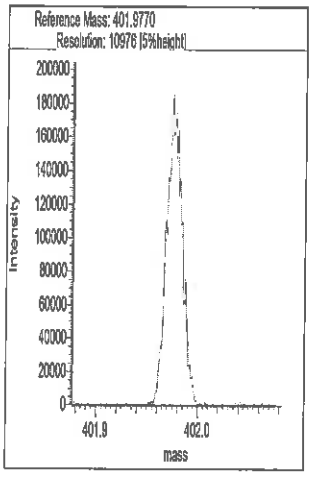
Cali. mass 413.9770 [m/z] Resolution: 11276 [5%height]

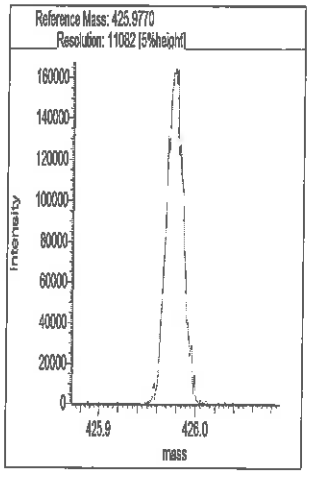
Ref. mass 401.9770 [m/z] Resolution: 10976 [5%height]

Ref. mass 425.9770 [m/z] Resolution: 11082 [5%height]



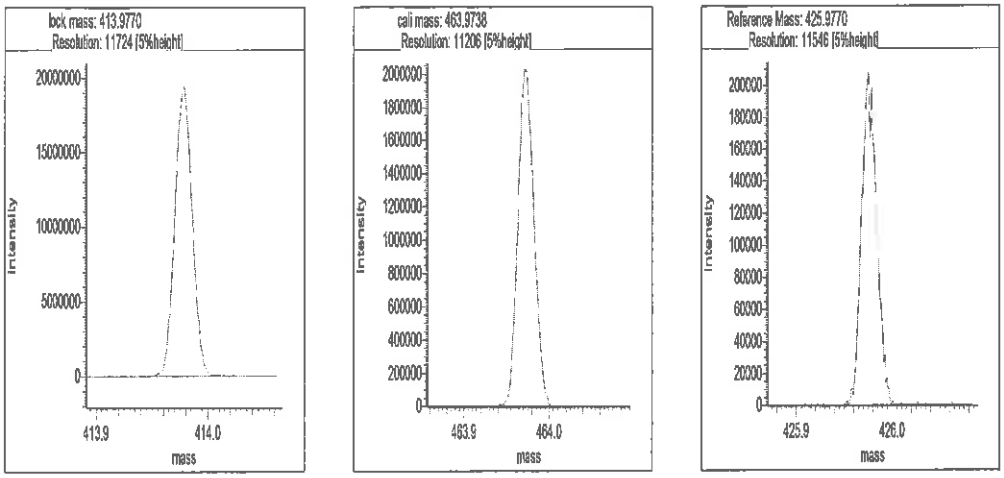




Segment 4

Lock mass 413.9770 [m/z] Resolution: 11724 [5%height]

Cali. mass 463.9738 [m/z] Resolution: 11206 [5%height]

Ref. mass 425.9770 [m/z] Resolution: 11546 [5%height]

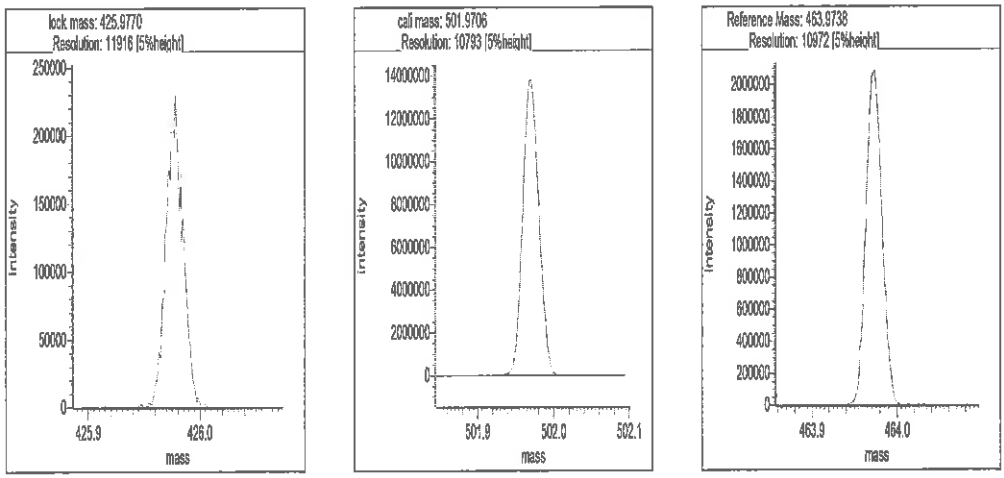



Segment 5

Lock mass 425.9770 [m/z] Resolution: 11916 [5%height]

Cali. mass 501.9706 [m/z] Resolution: 10793 [5%height]

Ref. mass 463.9738 [m/z] Resolution: 10972 [5%height]



```
Reports
00:58:59:  Peak matching procedure started
00:58:59:
00:59:00:  Reference mass: 313.98336
00:59:00:  Sample mass: 364.0
00:59:01:
00:59:01:  Finding reference mass
00:59:02:  Finding sample mass
00:59:03:
00:59:09:  [1]    363.9804 amu, mean: 363.9804
00:59:12:  [2]    363.9810 amu, mean: 363.9807      SD: 0.47 mmu or: 1.30 ppm
00:59:15:  [3]    363.9814 amu, mean: 363.9809      SD: 0.52 mmu or: 1.43 ppm
00:59:18:  [4]    363.9816 amu, mean: 363.9811      SD: 0.55 mmu or: 1.51 ppm
00:59:21:  [5]    363.9814 amu, mean: 363.9812      SD: 0.49 mmu or: 1.36 ppm
00:59:25:  [6]    363.9812 amu, mean: 363.9812      SD: 0.44 mmu or: 1.22 ppm
00:59:28:  [7]    363.9816 amu, mean: 363.9812      SD: 0.43 mmu or: 1.19 ppm
00:59:31:  [8]    363.9811 amu, mean: 363.9812      SD: 0.40 mmu or: 1.11 ppm
00:59:34:  [9]    363.9807 amu, mean: 363.9812      SD: 0.42 mmu or: 1.15 ppm
00:59:37:  [10]    363.9817 amu, mean: 363.9812      SD: 0.43 mmu or: 1.19 ppm
00:59:38:
00:59:38:  Stop requested. Please wait for procedure to finish.
00:59:38:
00:59:40:
00:59:41:  Peakmatching stopped
```

Signature LK 1.28-19

# Resolution Check Report ( DFS SN: 3190 )

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | |
|---|---|
| Date: | 28 Jan 2019 11:40 |
| MID Experiment: | 5w_db5_fc43_singleGC_OCDF_ResCheck |
| Target Resolution: | 10000 |
| Resolution Warning : | 9500 |
| Resolution Error : | 9000 |
| Reference: | FC43Knx.lua |
| Status: | RESOLUTION PASSED |

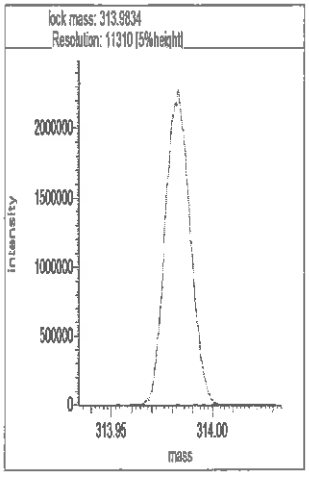
## Segment 1

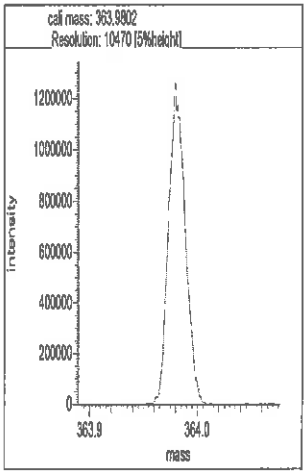
_190128s2b

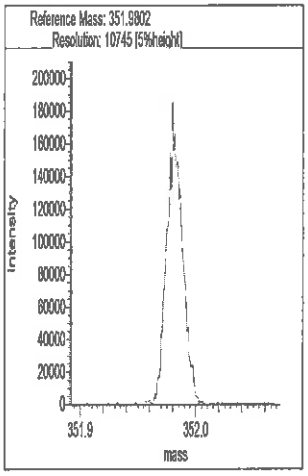
Lock mass 313.9834 [m/z] Resolution: 11310 [5%height]

Cali. mass 363.9802 [m/z] Resolution: 10470 [5%height]

Ref. mass 351.9802 [m/z] Resolution: 10745 [5%height]




## Segment 2

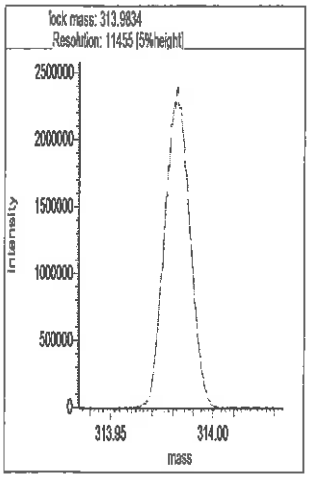
Lock mass 313.9834 [m/z] Resolution: 11455 [5%height]

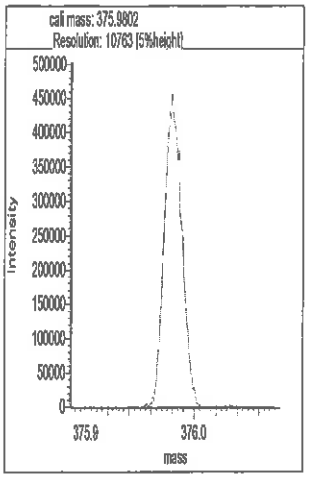
Cali. mass 375.9802 [m/z] Resolution: 10763 [5%height]

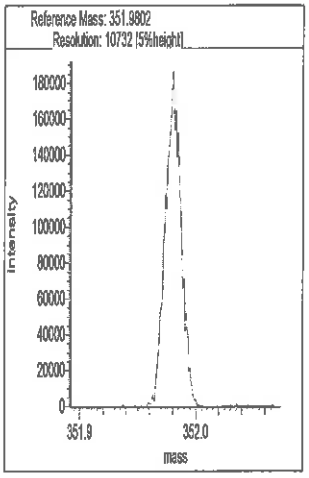
Ref. mass 351.9802 [m/z] Resolution: 10732 [5%height]

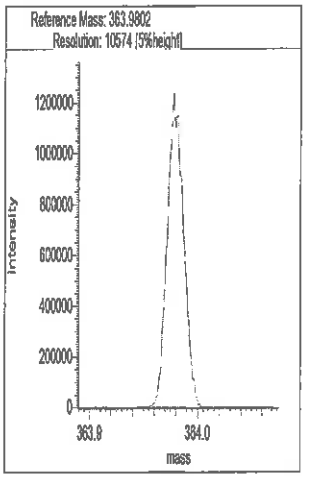
Ref. mass 363.9802 [m/z] Resolution: 10574 [5%height]

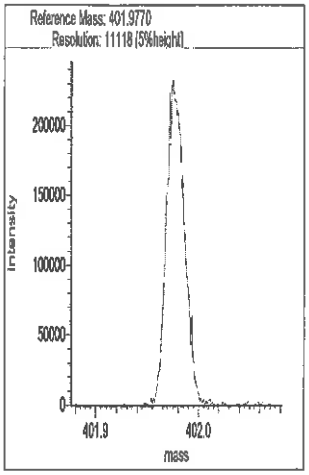
Ref. mass 401.9770 [m/z] Resolution: 11118 [5%height]



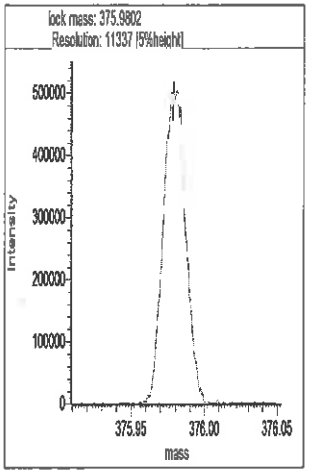

Segment 3

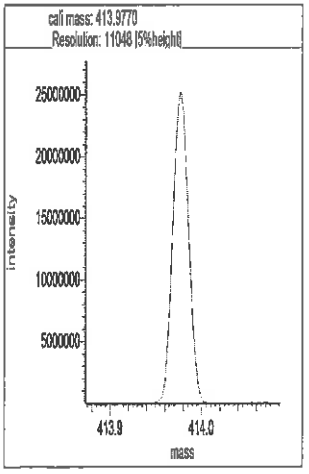
Lock mass 375.9802 [m/z] Resolution: 11337 [5%height]

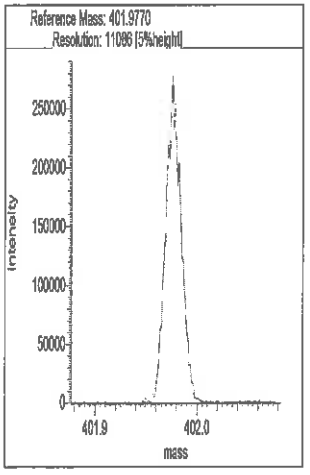
Cali. mass 413.9770 [m/z] Resolution: 11048 [5%height]

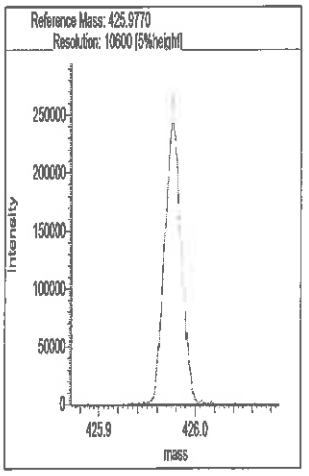
Ref. mass 401.9770 [m/z] Resolution: 11086 [5%height]

Ref. mass 425.9770 [m/z] Resolution: 10600 [5%height]



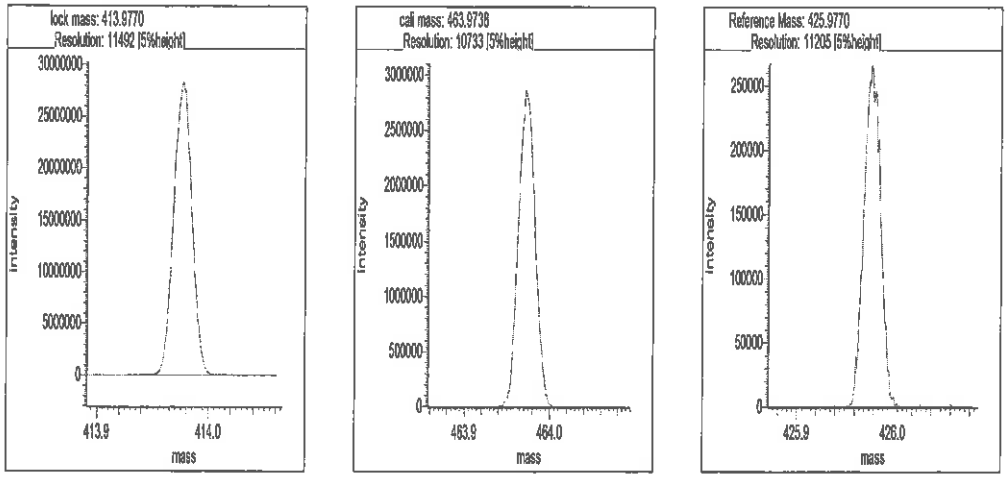




Segment 4

Lock mass 413.9770 [m/z] Resolution: 11492 [5%height]

Cali. mass 463.9738 [m/z] Resolution: 10733 [5%height]

Ref. mass 425.9770 [m/z] Resolution: 11205 [5%height]

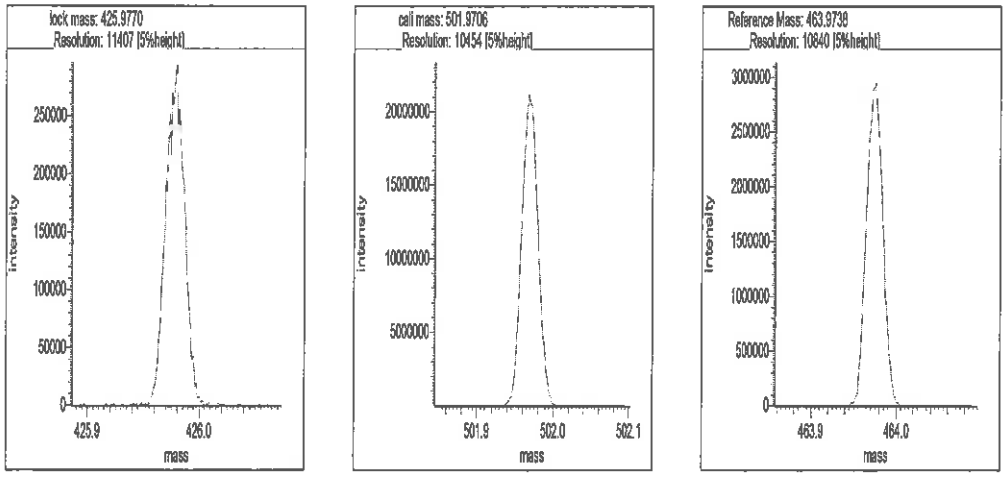



Segment 5

Lock mass 425.9770 [m/z] Resolution: 11407 [5%height]

Cali. mass 501.9706 [m/z] Resolution: 10454 [5%height]

Ref. mass 463.9738 [m/z] Resolution: 10840 [5%height]



Reports

```
11:51:29:  Peak matching procedure started
11:51:29:
11:51:30:  Reference mass: 313.98336
11:51:30:  Sample mass: 364.0
11:51:31:
11:51:31:  Finding reference mass
11:51:32:  Finding sample mass
11:51:33:
11:51:39:  [1]    363.9800 amu, mean: 363.9800
11:51:42:  [2]    363.9797 amu, mean: 363.9799      SD: 0.23 mmu or: 0.62 ppm
11:51:45:  [3]    363.9796 amu, mean: 363.9798      SD: 0.22 mmu or: 0.60 ppm
11:51:48:  [4]    363.9800 amu, mean: 363.9798      SD: 0.22 mmu or: 0.59 ppm
11:51:51:  [5]    363.9803 amu, mean: 363.9799      SD: 0.28 mmu or: 0.77 ppm
11:51:55:  [6]    363.9802 amu, mean: 363.9800      SD: 0.28 mmu or: 0.76 ppm
11:51:58:  [7]    363.9796 amu, mean: 363.9799      SD: 0.28 mmu or: 0.77 ppm
11:52:01:  [8]    363.9812 amu, mean: 363.9801      SD: 0.54 mmu or: 1.48 ppm
11:52:04:  [9]    363.9800 amu, mean: 363.9801      SD: 0.51 mmu or: 1.39 ppm
11:52:07:  [10]    363.9799 amu, mean: 363.9801     SD: 0.48 mmu or: 1.32 ppm
11:52:08:
11:52:08:  Stop requested. Please wait for procedure to finish.
11:52:08:
```

Signature 1/28/19

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d
Lims ID: WDMCCV
Client ID:
Sample Type: WDMCCV
Inject. Date: 28-Jan-2019 01:01:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010654-001
Operator ID: Xcalibur_System Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 28-Jan-2019 02:09:05 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX0314

First Level Reviewer: mcwhirterl Date: 28-Jan-2019 02:09:05

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 31:00 | 584233 | 0.75 | 1.1733 | 9.681 | 9.681 | 0.0399 | 0.0399 | 96.81 | |
| A Non-2,3,7,8-sub-TCDD | 29:38 | 1572295 | 0.79 | 1.1733 | 26.1 | 26.1 | 0.0399 | 9.374 | 0.00 | |
| S Total TCDD | | | | | 35.7 | 35.7 | 0.0399 | 0.0399 | | |
| 2,3,7,8-TCDF | 29:00 | 846634 | 0.79 | 1.0881 | 9.678 | 9.678 | 0.0202 | 0.0202 | 96.78 | |
| A Non-2,3,7,8-sub-TCDF | 28:21 | | | | | | 0.0202 | 0.2354 | | RQU |
| S Total TCDF | | | | | 9.678 | 9.678 | 0.0202 | 0.0202 | | |
| 1,2,3,7,8-PeCDD | 40:40 | 2405958 | 1.56 | 1.0434 | 46.8 | 46.8 | 0.007449 | 0.007449 | 93.68 | Ma |
| A Non-2,3,7,8-sub-PeCDD | 39:32 | | | | | | 0.007449 | 0.6441 | | U |
| S Total PeCDD | | | | | 46.8 | 46.8 | 0.007449 | 0.007449 | | |
| 1,2,3,7,8-PeCDF | 38:53 | 3812370 | 1.59 | 1.1898 | 46.0 | 46.0 | 0.0655 | 0.0655 | 92.03 | |
| 2,3,4,7,8-PeCDF | 40:08 | 3516619 | 1.55 | 1.1095 | 45.6 | 45.6 | 0.0619 | 0.0619 | 91.30 | |
| A Non-2,3,7,8-sub-PeCDF | 38:08 | | | | | | 0.0635 | 0.7499 | | U |
| S Total PeCDF | | | | | 91.7 | 91.7 | 0.0637 | 0.0637 | | |
| 1,2,3,4,7,8-HxCDD | 44:55 | 2571987 | 1.26 | 1.1409 | 50.1 | 50.1 | 0.0164 | 0.0164 | 100 | |
| 1,2,3,6,7,8-HxCDD | 45:03 | 2499214 | 1.27 | 1.1481 | 48.2 | 48.2 | 0.0167 | 0.0167 | 96.46 | |
| 1,2,3,7,8,9-HxCDD | 45:26 | 2779903 | 1.28 | 1.2212 | 50.5 | 50.5 | 0.0155 | 0.0155 | 101 | |
| A Non-2,3,7,8-sub-HxCDD | 44:24 | | | | | | 0.0162 | 0.0162 | | |
| S Total HxCDD | | | | | 148.8 | 148.8 | 0.0162 | 0.0162 | | |
| 1,2,3,4,7,8-HxCDF | 43:54 | 4242125 | 1.25 | 1.3629 | 48.8 | 48.8 | 0.1948 | 0.1948 | 97.64 | |
| 1,2,3,6,7,8-HxCDF | 44:02 | 4400690 | 1.26 | 1.2762 | 48.4 | 48.4 | 0.1902 | 0.1902 | 96.78 | |
| 2,3,4,6,7,8-HxCDF | 44:45 | 4092188 | 1.26 | 1.2654 | 49.0 | 49.0 | 0.2159 | 0.2159 | 98.03 | |
| 1,2,3,7,8,9-HxCDF | 45:41 | 3648782 | 1.27 | 1.2573 | 47.3 | 47.3 | 0.2556 | 0.2556 | 94.59 | |
| A Non-2,3,7,8-sub-HxCDF | 44:14 | | | | | | 0.2115 | 0.2115 | | |
| S Total HxCDF | | | | | 193.5 | 193.5 | 0.2141 | 0.2141 | | |
| 1,2,3,4,6,7,8-HpCDD | 49:45 | 2331451 | 1.06 | 1.1204 | 50.1 | 50.1 | 0.0464 | 0.0464 | 100 | |
| A Non-2,3,7,8-sub-HpCDD | 49:10 | | | | | | 0.0464 | 0.0464 | | |
| S Total HpCDD | | | | | 50.1 | 50.1 | 0.0464 | 0.0464 | | |
| 1,2,3,4,6,7,8-HpCDF | 48:04 | 4030518 | 1.04 | 1.4984 | 50.9 | 50.9 | 0.0406 | 0.0406 | 102 | |
| 1,2,3,4,7,8,9-HpCDF | 50:24 | 3056217 | 1.06 | 1.3807 | 51.7 | 51.7 | 0.0613 | 0.0613 | 103 | |

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HpCDF | 49:25 | | | | | | 0.0491 | 2.143 | | U |
| S Total HpCDF | | | | | 102.6 | 102.6 | 0.0509 | 0.0509 | | |
| OCDD | 53:59 | 3976688 | 0.89 | 1.2073 | 100.7 | 100.7 | 0.0118 | 0.0118 | 101 | |
| OCDF | 54:07 | 4945288 | 0.90 | 1.1162 | 105.2 | 105.2 | 0.009773 | 0.009773 | 105 | |
| D 13C-2,3,7,8-TCDD | 30:58 | 5143407 | 0.81 | 1.0709 | 97.2 | 97.2 | 0.2178 | 0.2178 | 97.25 | |
| D 13C-2,3,7,8-TCDF | 28:58 | 8039168 | 0.80 | 1.7545 | 92.8 | 92.8 | 0.1381 | 0.1381 | 92.78 | |
| D 13C-1,2,3,7,8-PeCDD | 40:39 | 4922796 | 1.59 | 0.8743 | 114.0 | 114.0 | 0.4123 | 0.4123 | 114 | |
| D 13C-1,2,3,7,8-PeCDF | 38:51 | 6963696 | 1.59 | 1.3704 | 102.9 | 102.9 | 1.386 | 1.386 | 103 | |
| D 13C-2,3,4,7,8-PeCDF | 40:06 | 6943490 | 1.61 | 1.3837 | 101.6 | 101.6 | 1.373 | 1.373 | 102 | |
| D 13C-1,2,3,4,7,8-HxCDD | 44:54 | 4503767 | 1.26 | 0.8772 | 99.8 | 99.8 | 0.2807 | 0.2807 | 99.84 | |
| D 13C-1,2,3,6,7,8-HxCDD | 45:02 | 4513356 | 1.26 | 0.9171 | 95.7 | 95.7 | 0.2685 | 0.2685 | 95.71 | |
| D 13C-1,2,3,4,7,8-HxCDF | 43:53 | 6375808 | 0.54 | 1.1892 | 104.3 | 104.3 | 0.5667 | 0.5667 | 104 | |
| D 13C-1,2,3,6,7,8-HxCDF | 44:01 | 7126139 | 0.54 | 1.4625 | 94.8 | 94.8 | 0.4608 | 0.4608 | 94.76 | |
| D 13C-2,3,4,6,7,8-HxCDF | 44:44 | 6597806 | 0.53 | 1.3197 | 97.2 | 97.2 | 0.5107 | 0.5107 | 97.23 | |
| D 13C-1,2,3,7,8,9-HxCDF | 45:40 | 6136108 | 0.53 | 1.2001 | 99.4 | 99.4 | 0.5616 | 0.5616 | 99.43 | |
| D 13C-1,2,3,4,6,7,8-HpCDD | 49:43 | 4154438 | 1.06 | 0.8155 | 99.1 | 99.1 | 0.5629 | 0.5629 | 99.07 | |
| D 13C-1,2,3,4,6,7,8-HpCDF | 48:03 | 5281911 | 0.46 | 1.0496 | 97.9 | 97.9 | 0.8792 | 0.8792 | 97.86 | |
| D 13C-1,2,3,4,7,8,9-HpCDF | 50:23 | 4284350 | 0.46 | 0.8947 | 93.1 | 93.1 | 1.031 | 1.031 | 93.12 | |
| D 13C-OCDD | 53:58 | 6540759 | 0.88 | 0.7044 | 180.6 | 180.6 | 0.4557 | 0.4557 | 90.29 | |
| D 13C-OCDF | 54:06 | 8421274 | 0.90 | 1.0615 | 154.3 | 154.3 | 0.1777 | 0.1777 | 77.14 | |
| $ 37Cl4-2,3,7,8-TCDD | 31:01 | 571062 | | 1.2266 | 9.427 | 9.427 | 0.0156 | 0.0156 | 94.27 | |
| * 13C-1,2,3,4-TCDD | 30:28 | 4938720 | 0.82 | 9.1E+04 | 100.0 | 100.0 | | | 100 | |
| * 13C-1,2,3,7,8,9-HxCDD | 45:25 | 5142254 | 1.24 | 1E+05 | 100.0 | 100.0 | | | 100 | |
| 1,3,6,8-TCDF | 22:40 | 1012063 | 0.82 | | | | | | 0.00 | |
| 1,3,6,8-TCDD | 25:06 | 557171 | 0.79 | | | | | | 0.00 | |
| 1,2,8,9-TCDF | 34:02 | 810990 | 0.79 | | | | | | 0.00 | |
| 1,2,8,9-TCDD | 34:10 | 529639 | 0.80 | | | | | | 0.00 | |
| 1,3,4,6,8-PeCDF | 34:49 | 3559553 | 1.57 | | | | | | 0.00 | |
| 1,2,4,7,9-PeCDD | 37:44 | 2209725 | 1.57 | | | | | | 0.00 | |
| 1,2,3,8,9-PeCDD | 41:19 | 2518119 | 1.58 | | | | | | 0.00 | |
| 1,2,3,8,9-PeCDF | 41:27 | 3481939 | 1.57 | | | | | | 0.00 | |
| 1,2,3,4,6,8-HxCDF | 42:40 | 4041599 | 1.24 | | | | | | 0.00 | |
| 1,2,4,6,7,9-HxCDD | 43:21 | 2868758 | 1.25 | | | | | | 0.00 | |
| 1,2,3,4,8,9-HxCDF | 45:49 | 3649266 | 1.30 | | | | | | 0.00 | |
| 1,2,3,4,6,7,9-HpCDD | 48:35 | 2518944 | 1.06 | | | | | | 0.00 | |

## QC Flag Legend

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

## Reagents:

61WDML3OP_F/L_00052 Amount Added: 20.00 Units: uL

Report Date: 28-Jan-2019 02:09:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d
Lims ID: WDMCCV
Client ID:
Sample Type: WDMCCV
Inject. Date: 28-Jan-2019 01:01:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010654-001
Operator ID: Xcalibur_System Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 28-Jan-2019 02:09:05 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX0314

First Level Reviewer: mcwhirterl Date: 28-Jan-2019 02:09:05

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | |
| 319.8965 | 31:00 | 31:00 | 0 | 1.001 | 250059 | 26714 | 34 | 85 | 786 | | |
| 321.8936 | 31:01 | 31:00 | 1 | 1.002 | 334174 | 35038 | 68 | 170 | 515 | 0.75(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | |
| 319.8965 | 30:31 | 29:38 | 53 | 0.985 | 219864 | 24645 | 34 | 85 | 725 | | |
| 321.8936 | 30:31 | 29:38 | 53 | 0.985 | 280239 | 31801 | 68 | 170 | 468 | 0.78(0.65-0.89) | |
| 319.8965 | 30:43 | 29:38 | 65 | 0.992 | 224380 | 23534 | 34 | 85 | 692 | | |
| 321.8936 | 30:44 | 29:38 | 66 | 0.992 | 282121 | 28595 | 68 | 170 | 421 | 0.80(0.65-0.89) | |
| 319.8965 | 31:30 | 29:38 | 111 | 1.017 | 249987 | 26831 | 34 | 85 | 789 | | |
| 321.8936 | 31:29 | 29:38 | 110 | 1.016 | 315704 | 31295 | 68 | 170 | 460 | 0.79(0.65-0.89) | |
| 2,3,7,8-TCDF | | | | | | | | | | | |
| 303.9016 | 29:00 | 29:00 | 0 | 1.001 | 373155 | 42643 | 41 | 102 | 1040 | | |
| 305.8987 | 29:00 | 29:00 | 0 | 1.001 | 473479 | 54364 | 41 | 102 | 1326 | 0.79(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | U |
| 303.9016 | 25:10 | 28:21 | -191 | 0.869 | 1822 | 302 | 41 | 102 | 7 | | |
| | Empc Correction | | | | 1215 | 237 | 41 | 102 | 6 | | |
| 305.8987 | 25:12 | 28:21 | -189 | 0.870 | 1579 | 309 | 41 | 102 | 8 | 1.15(0.65-0.89) | |
| 1,2,3,7,8-PeCDD | | | | | | | | | | | Ma |
| 355.8546 | 40:40 | 40:40 | 0 | 1.000 | 1466172 | 360578 | 18 | 45 | 20032 | | M |
| 357.8516 | 40:40 | 40:40 | 0 | 1.000 | 939786 | 227169 | 19 | 47 | 11956 | 1.56(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | U |
| 355.8546 | 39:32 | 39:32 | 0 | 0.972 | 18990 | 3257 | 18 | 45 | | | |
| 357.8516 | 39:32 | 39:32 | 0 | 0.972 | 14094 | 2240 | 19 | 47 | | 1.35(1.32-1.78) | |
| 1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 38:53 | 38:53 | 0 | 1.000 | 2342774 | 465724 | 292 | 730 | 1595 | | |
| 341.8567 | 38:53 | 38:53 | 0 | 1.000 | 1469596 | 293809 | 139 | 347 | 2114 | 1.59(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 40:08 | 40:08 | 0 | 1.001 | 2139768 | 477999 | 292 | 730 | 1637 | | |
| 341.8567 | 40:07 | 40:08 | -1 | 1.000 | 1376851 | 308200 | 139 | 347 | 2217 | 1.55(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | U |
| 339.8597 | 37:20 | 38:08 | -47 | 0.961 | 36918 | 4485 | 292 | 730 | 15 | | |
| 341.8567 | 37:19 | 38:08 | -48 | 0.961 | 23027 | 3192 | 139 | 347 | 23 | 1.60(1.32-1.78) | |
| 1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 44:55 | 44:55 | 0 | 1.000 | 1434645 | 371547 | 50 | 125 | 7431 | | |
| 391.8127 | 44:55 | 44:55 | 0 | 1.000 | 1137342 | 298413 | 37 | 92 | 8065 | 1.26(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:03 | 45:03 | 0 | 1.000 | 1398767 | 356646 | 50 | 125 | 7133 | | |
| 391.8127 | 45:03 | 45:03 | 0 | 1.000 | 1100447 | 285363 | 37 | 92 | 7713 | 1.27(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:26 | 45:26 | 0 | 1.012 | 1562645 | 380585 | 50 | 125 | 7612 | | |
| 391.8127 | 45:26 | 45:26 | 0 | 1.012 | 1217258 | 294970 | 37 | 92 | 7972 | 1.28(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | |
| 389.8158 | 44:24 | | | | | | 50 | 125 | | | |
| 391.8127 | 44:24 | | | | | | 37 | 92 | | | |
| 1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 43:54 | 43:54 | 0 | 1.000 | 2358572 | 654752 | 1103 | 2757 | 594 | | |
| 375.8178 | 43:54 | 43:54 | 0 | 1.000 | 1883553 | 527973 | 747 | 1867 | 707 | 1.25(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:02 | 44:02 | 0 | 1.000 | 2453856 | 668869 | 1103 | 2757 | 606 | | |
| 375.8178 | 44:02 | 44:02 | 0 | 1.000 | 1946834 | 522433 | 747 | 1867 | 699 | 1.26(1.05-1.43) | |
| 2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:45 | 44:45 | 0 | 1.000 | 2278951 | 592001 | 1103 | 2757 | 537 | | |
| 375.8178 | 44:44 | 44:45 | -1 | 1.000 | 1813237 | 462302 | 747 | 1867 | 619 | 1.26(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 45:41 | 45:41 | 0 | 1.000 | 2042888 | 498300 | 1103 | 2757 | 452 | | |
| 375.8178 | 45:41 | 45:41 | 0 | 1.000 | 1605894 | 395681 | 747 | 1867 | 530 | 1.27(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:14 | | | | | | 1103 | 2757 | | | |
| 375.8178 | 44:14 | | | | | | 747 | 1867 | | | |
| 1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 423.7767 | 49:45 | 49:45 | 0 | 1.000 | 1197453 | 231791 | 102 | 255 | 2272 | | |
| 425.7737 | 49:45 | 49:45 | 0 | 1.000 | 1133998 | 220998 | 66 | 165 | 3348 | 1.06(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | |
| 423.7767 | 49:10 | | | | | | 102 | 255 | | | |
| 425.7737 | 49:10 | | | | | | 66 | 165 | | | |
| 1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 407.7817 | 48:04 | 48:04 | 0 | 1.000 | 2057209 | 446779 | 111 | 277 | 4025 | | |
| 409.7788 | 48:04 | 48:04 | 0 | 1.000 | 1973309 | 434808 | 168 | 420 | 2588 | 1.04(0.88-1.20) | |
| 1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 407.7817 | 50:24 | 50:24 | 0 | 1.000 | 1571052 | 311184 | 111 | 277 | 2803 | | |
| 409.7788 | 50:24 | 50:24 | 0 | 1.000 | 1485165 | 290462 | 168 | 420 | 1729 | 1.06(0.88-1.20) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | U |
| 407.7817 | 48:27 | 49:25 | -57 | 1.008 | 30993 | 6638 | 111 | 277 | 60 | | |
| 409.7788 | 48:27 | 49:25 | -57 | 1.008 | 34109 | 5133 | 168 | 420 | 31 | 0.91(0.88-1.20) | |
| OCDD | | | | | | | | | | | |
| 457.7377 | 53:59 | 53:59 | 0 | 1.000 | 1878022 | 469264 | 25 | 62 | 18771 | | |
| 459.7348 | 53:59 | 53:59 | 0 | 1.000 | 2098666 | 521064 | 22 | 55 | 23685 | 0.89(0.76-1.02) | |
| OCDF | | | | | | | | | | | |
| 441.7428 | 54:07 | 54:07 | 0 | 1.000 | 2348380 | 582348 | 23 | 57 | 25319 | | |
| 443.7399 | 54:07 | 54:07 | 0 | 1.000 | 2596908 | 620611 | 23 | 57 | 26983 | 0.90(0.76-1.02) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 30:58 | 30:58 | -4 | 1.017 | 2301526 | 240891 | 290 | 725 | 831 | | |
| 333.9338 | 30:58 | 30:58 | -4 | 1.017 | 2841881 | 303198 | 231 | 577 | 1313 | 0.81(0.65-0.89) | |
| 13C-2,3,7,8-TCDF | | | | | | | | | | | |
| 315.9419 | 28:58 | 28:57 | -3 | 0.951 | 3577824 | 405965 | 278 | 695 | 1460 | | |
| 317.9389 | 28:58 | 28:57 | -3 | 0.951 | 4461344 | 525245 | 263 | 657 | 1997 | 0.80(0.65-0.89) | |
| 13C-1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 367.8949 | 40:39 | 40:35 | -1 | 1.334 | 3019250 | 729455 | 407 | 1017 | 1792 | | |
| 369.8919 | 40:39 | 40:35 | -1 | 1.334 | 1903546 | 454274 | 398 | 995 | 1141 | 1.59(1.32-1.78) | |
| 13C-1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 38:51 | 38:48 | -2 | 1.275 | 4272927 | 850707 | 2555 | 6387 | 333 | | |
| 353.8970 | 38:51 | 38:48 | -2 | 1.275 | 2690769 | 531820 | 1686 | 4215 | 315 | 1.59(1.32-1.78) | |
| 13C-2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 40:06 | 40:03 | -2 | 1.316 | 4287292 | 964708 | 2555 | 6387 | 378 | | |
| 353.8970 | 40:06 | 40:03 | -2 | 1.316 | 2656198 | 602419 | 1686 | 4215 | 357 | 1.61(1.32-1.78) | |
| 13C-1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 44:54 | 44:55 | -2 | 0.989 | 2512949 | 647628 | 567 | 1417 | 1142 | | |
| 403.8529 | 44:54 | 44:55 | -2 | 0.989 | 1990818 | 512640 | 685 | 1712 | 748 | 1.26(1.05-1.43) | |
| 13C-1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:02 | 45:03 | -2 | 0.991 | 2515685 | 627914 | 567 | 1417 | 1107 | | |
| 403.8529 | 45:02 | 45:03 | -2 | 0.991 | 1997671 | 505047 | 685 | 1712 | 737 | 1.26(1.05-1.43) | |
| 13C-1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 43:53 | 43:53 | -1 | 0.966 | 2225773 | 607616 | 1135 | 2837 | 535 | | |
| 385.8610 | 43:53 | 43:53 | -1 | 0.966 | 4150035 | 1134380 | 2292 | 5730 | 495 | 0.54(0.43-0.59) | |
| 13C-1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44:01 | 44:01 | -1 | 0.969 | 2492040 | 675704 | 1135 | 2837 | 595 | | |
| 385.8610 | 44:01 | 44:01 | -1 | 0.969 | 4634099 | 1229549 | 2292 | 5730 | 536 | 0.54(0.43-0.59) | |
| 13C-2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44:44 | 44:44 | -1 | 0.985 | 2288598 | 589610 | 1135 | 2837 | 519 | | |
| 385.8610 | 44:44 | 44:44 | -1 | 0.985 | 4309208 | 1103306 | 2292 | 5730 | 481 | 0.53(0.43-0.59) | |
| 13C-1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 383.8639 | 45:40 | 45:41 | -2 | 1.006 | 2125935 | 498956 | 1135 | 2837 | 440 | | |
| 385.8610 | 45:40 | 45:41 | -2 | 1.006 | 4010173 | 940350 | 2292 | 5730 | 410 | 0.53(0.43-0.59) | |
| 13C-1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 435.8169 | 49:43 | 49:44 | -2 | 1.095 | 2140952 | 411135 | 1193 | 2982 | 345 | | |
| 437.8140 | 49:43 | 49:44 | -2 | 1.095 | 2013486 | 396006 | 1141 | 2852 | 347 | 1.06(0.88-1.20) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 417.8250 | 48:03 | 48:04 | -2 | 1.058 | 1657127 | 359502 | 845 | 2112 | 425 | | |
| 419.8220 | 48:03 | 48:04 | -2 | 1.058 | 3624784 | 787283 | 3847 | 9617 | 205 | 0.46(0.37-0.51) | |
| 13C-1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 417.8250 | 50:23 | 50:23 | -1 | 1.109 | 1351074 | 265548 | 845 | 2112 | 314 | | |
| 419.8220 | 50:23 | 50:23 | -1 | 1.109 | 2933276 | 558059 | 3847 | 9617 | 145 | 0.46(0.37-0.51) | |
| 13C-OCDD | | | | | | | | | | | |
| 469.7780 | 53:58 | 53:58 | -1 | 1.188 | 3060186 | 776040 | 568 | 1420 | 1366 | | |
| 471.7750 | 53:58 | 53:58 | -1 | 1.188 | 3480573 | 861249 | 1064 | 2660 | 809 | 0.88(0.76-1.02) | |
| 13C-OCDF | | | | | | | | | | | |
| 453.7830 | 54:06 | 54:06 | -1 | 1.191 | 3989736 | 991732 | 457 | 1142 | 2170 | | |
| 455.7801 | 54:06 | 54:06 | -1 | 1.191 | 4431538 | 1116829 | 502 | 1255 | 2225 | 0.90(0.76-1.02) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31:01 | 31:01 | 0 | 1.018 | 571062 | 60091 | 43 | 107 | 1397 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 30:28 | 30:28 | 0 | | 2231852 | 248891 | 290 | 725 | 858 | | |
| 333.9338 | 30:28 | 30:28 | 0 | | 2706868 | 309221 | 231 | 577 | 1339 | 0.82(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:25 | 45:25 | 0 | | 2848317 | 695399 | 567 | 1417 | 1226 | | |
| 403.8529 | 45:25 | 45:25 | 0 | | 2293937 | 575733 | 685 | 1712 | 840 | 1.24(1.05-1.43) | |
| 1,3,6,8-TCDF | | | | | | | | | | | |
| 303.9016 | 22:40 | 22:40 | 0 | 0.783 | 456455 | 70425 | 41 | 102 | 1718 | | |
| 305.8987 | 22:39 | 22:40 | -1 | 0.782 | 555608 | 85997 | 41 | 102 | 2097 | 0.82(0.65-0.89) | |
| 1,3,6,8-TCDD | | | | | | | | | | | |
| 319.8965 | 25:06 | 25:06 | 0 | 0.810 | 246582 | 33753 | 34 | 85 | 993 | | |
| 321.8936 | 25:06 | 25:06 | 0 | 0.810 | 310589 | 42762 | 68 | 170 | 629 | 0.79(0.65-0.89) | |
| 1,2,8,9-TCDF | | | | | | | | | | | |
| 303.9016 | 34:02 | 34:02 | 0 | 1.175 | 359016 | 39289 | 41 | 102 | 958 | | |
| 305.8987 | 34:02 | 34:02 | 0 | 1.175 | 451974 | 47484 | 41 | 102 | 1158 | 0.79(0.65-0.89) | |
| 1,2,8,9-TCDD | | | | | | | | | | | |
| 319.8965 | 34:10 | 34:10 | 0 | 1.103 | 235141 | 24371 | 34 | 85 | 717 | | |
| 321.8936 | 34:10 | 34:10 | 0 | 1.103 | 294498 | 33752 | 68 | 170 | 496 | 0.80(0.65-0.89) | |
| 1,3,4,6,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 34:49 | 34:49 | 0 | 0.896 | 2172787 | 274910 | 292 | 730 | 941 | | |
| 341.8567 | 34:48 | 34:49 | -1 | 0.896 | 1386766 | 175589 | 139 | 347 | 1263 | 1.57(1.32-1.78) | |
| 1,2,4,7,9-PeCDD | | | | | | | | | | | |
| 355.8546 | 37:44 | 37:44 | 0 | 0.928 | 1348302 | 220316 | 18 | 45 | 12240 | | |
| 357.8516 | 37:44 | 37:44 | 0 | 0.928 | 861423 | 139772 | 19 | 47 | 7356 | 1.57(1.32-1.78) | |
| 1,2,3,8,9-PeCDD | | | | | | | | | | | |
| 355.8546 | 41:19 | 41:19 | 0 | 1.017 | 1542134 | 371615 | 18 | 45 | 20645 | | |
| 357.8516 | 41:19 | 41:19 | 0 | 1.017 | 975985 | 237390 | 19 | 47 | 12494 | 1.58(1.32-1.78) | |
| 1,2,3,8,9-PeCDF | | | | | | | | | | | |
| 339.8597 | 41:27 | 41:27 | 0 | 1.067 | 2128535 | 520106 | 292 | 730 | 1781 | | |
| 341.8567 | 41:27 | 41:27 | 0 | 1.067 | 1353404 | 328320 | 139 | 347 | 2362 | 1.57(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Δ Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 42:40 | 42:40 | 0 | 0.972 | 2237240 | 608009 | 1103 | 2757 | 551 | | |
| 375.8178 | 42:40 | 42:40 | 0 | 0.972 | 1804359 | 491081 | 747 | 1867 | 657 | 1.24(1.05-1.43) | |
| 1,2,4,6,7,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 43:21 | 43:21 | 0 | 0.965 | 1595040 | 425755 | 50 | 125 | 8515 | | |
| 391.8127 | 43:21 | 43:21 | 0 | 0.965 | 1273718 | 351164 | 37 | 92 | 9491 | 1.25(1.05-1.43) | |
| 1,2,3,4,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 45:49 | 45:49 | 0 | 1.044 | 2065506 | 485901 | 1103 | 2757 | 441 | | |
| 375.8178 | 45:49 | 45:49 | 0 | 1.044 | 1583760 | 383305 | 747 | 1867 | 513 | 1.30(1.05-1.43) | |
| 1,2,3,4,6,7,9-HpCDD | | | | | | | | | | | |
| 423.7767 | 48:35 | 48:35 | 0 | 0.977 | 1293219 | 266584 | 102 | 255 | 2614 | | |
| 425.7737 | 48:34 | 48:35 | -1 | 0.977 | 1225725 | 255307 | 66 | 165 | 3868 | 1.06(0.88-1.20) | |

## QC Flag Legend

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

## Reagents:

61WDML3OP_F/L_00052 Amount Added: 20.00 Units: uL

Report Date: 28-Jan-2019 02:09:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Knoxville
CCV Relative RT Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d
Lims ID: WDMCCV
Client ID:
Sample Type: WDMCCV
Inject. Date: 28-Jan-2019 01:01:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010654-001
Operator ID: Xcalibur_System Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 28-Jan-2019 02:09:05 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX0314

First Level Reviewer: mcwhirterl Date: 28-Jan-2019 02:09:05

Start Cal Date: 16-May-2014 14:26:00
End Cal Date: 16-May-2014 18:31:00

| Compound | T/L | ICAL RT | CCV RT | RT (secs) | RT Lmt | ICAL RRT | CCV RRT | RRT Limits |
|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4-TCDD | | 31:17 | 30:28 | -48 | | 1.000 | 1.000 | 0.000 - 0.000 |
| 2,3,7,8-TCDD | | 31:50 | 31:00 | -50 | | 1.001 | 1.001 | 0.999 - 1.002 |
| 37Cl4-2,3,7,8-TCDD | | 31:50 | 31:01 | -49 | | 1.018 | 1.018 | 0.989 - 1.052 |
| 13C-2,3,7,8-TCDD | | 31:48 | 30:58 | -50 | | 1.017 | 1.017 | 0.976 - 1.043 |
| 2,3,7,8-TCDF | | 29:47 | 29:00 | -46 | | 1.002 | 1.001 | 0.999 - 1.003 |
| 13C-2,3,7,8-TCDF | | 29:44 | 28:58 | -45 | | 0.951 | 0.951 | 0.923 - 1.103 |
| 1,2,3,7,8-PeCDD | | 41:01 | 40:40 | -20 | | 1.000 | 1.000 | 0.999 - 1.002 |
| 13C-1,2,3,7,8-PeCDD | | 41:00 | 40:39 | -20 | | 1.311 | 1.334 | 1.000 - 1.567 |
| 1,2,3,7,8-PeCDF | | 39:18 | 38:53 | -25 | | 1.000 | 1.000 | 0.999 - 1.002 |
| 13C-1,2,3,7,8-PeCDF | | 39:17 | 38:51 | -25 | | 1.256 | 1.275 | 1.000 - 1.425 |
| 2,3,4,7,8-PeCDF | | 40:30 | 40:08 | -22 | | 1.000 | 1.001 | 0.999 - 1.002 |
| 13C-2,3,4,7,8-PeCDF | | 40:29 | 40:06 | -23 | | 1.295 | 1.316 | 1.011 - 1.526 |
| 13C-1,2,3,7,8,9-HxCDD | | 45:45 | 45:25 | -19 | | 1.000 | 1.000 | 0.000 - 0.000 |
| 1,2,3,4,7,8-HxCDD | | 45:15 | 44:55 | -19 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-1,2,3,4,7,8-HxCDD | | 45:14 | 44:54 | -19 | | 0.989 | 0.989 | 0.977 - 1.000 |
| 1,2,3,6,7,8-HxCDD | | 45:22 | 45:03 | -19 | | 1.000 | 1.000 | 0.998 - 1.004 |
| 13C-1,2,3,6,7,8-HxCDD | | 45:21 | 45:02 | -19 | | 0.992 | 0.991 | 0.981 - 1.003 |
| 1,2,3,7,8,9-HxCDD | | 45:46 | 45:26 | -19 | | 1.012 | 1.012 | 1.000 - 1.019 |
| 1,2,3,4,7,8-HxCDF | | 44:12 | 43:54 | -18 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-1,2,3,4,7,8-HxCDF | | 44:11 | 43:53 | -18 | | 0.966 | 0.966 | 0.936 - 0.996 |
| 1,2,3,6,7,8-HxCDF | | 44:21 | 44:02 | -18 | | 1.000 | 1.000 | 0.997 - 1.005 |
| 13C-1,2,3,6,7,8-HxCDF | | 44:20 | 44:01 | -18 | | 0.969 | 0.969 | 0.949 - 0.975 |
| 2,3,4,6,7,8-HxCDF | | 45:04 | 44:45 | -18 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-2,3,4,6,7,8-HxCDF | | 45:03 | 44:44 | -18 | | 0.985 | 0.985 | 0.977 - 1.047 |

Report Date: 28-Jan-2019 02:09:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34
Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d

| Compound | T/L | ICAL RT | CCV RT | RT (secs) | RT Lmt | ICAL RRT | CCV RRT | RRT Limits |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,7,8,9-HxCDF | | 46:03 | 45:41 | -21 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-1,2,3,7,8,9-HxCDF | | 46:02 | 45:40 | -21 | | 1.006 | 1.006 | 0.959 - 1.021 |
| 1,2,3,4,6,7,8-HpCDD | | 50:12 | 49:45 | -27 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-1,2,3,4,6,7,8-HpCDD | | 50:11 | 49:43 | -27 | | 1.097 | 1.095 | 1.086 - 1.110 |
| 1,2,3,4,6,7,8-HpCDF | | 48:29 | 48:04 | -24 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-1,2,3,4,6,7,8-HpCDF | | 48:28 | 48:03 | -24 | | 1.059 | 1.058 | 1.043 - 1.085 |
| 1,2,3,4,7,8,9-HpCDF | | 50:49 | 50:24 | -25 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-1,2,3,4,7,8,9-HpCDF | | 50:48 | 50:23 | -25 | | 1.111 | 1.109 | 1.057 - 1.151 |
| OCDD | | 54:19 | 53:59 | -19 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-OCDD | | 54:18 | 53:58 | -19 | | 1.187 | 1.188 | 1.032 - 1.311 |
| OCDF | | 54:27 | 54:07 | -19 | | 1.000 | 1.000 | 0.999 - 1.008 |
| 13C-OCDF | | 54:26 | 54:06 | -19 | | 1.190 | 1.191 | 1.091 - 1.291 |

Report Date: 28-Jan-2019 02:09:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Knoxville

AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d
Lims ID: WDMCCV
Client ID:
Inject. Date: 28-Jan-2019 01:01:00 Dil. Factor: 1.0000
Sample Type: WDMCCV, Combo WDM and CCV
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27191 Lims Sample ID: 1
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDD, RT: 29.626

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 1.173 | D 13C-2,3,7,8-TCDD | 100.000 | 5143407 | 544089 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.173 | | 100.000 | 5143407 | 544089 |

Sum the Uncalibrated Results

| RT | 319.8965 Area | 319.8965 Height | 321.8936 Area | 321.8936 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 30:31 | 219864 | 24645 | 280239 | 31801 | 8.29 | 0.78 | |
| 30:43 | 224380 | 23534 | 282121 | 28595 | 8.39 | 0.80 | |
| 31:30 | 249987 | 26831 | 315704 | 31295 | 9.37 | 0.79 | |
| Signal Totals: | | | | | | | |
| | 694231 | 75010 | 878064 | 91691 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 1572295 | 166701 | | | | 0.79 | |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 26.054 = (1572295 * 100.000) / (5143407 * 1.173)

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d
Lims ID: WDMCCV
Client ID:
Inject. Date: 28-Jan-2019 01:01:00 Dil. Factor: 1.0000
Sample Type: WDMCCV, Combo WDM and CCV
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27191 Lims Sample ID: 1
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDF, RT: 28.346

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 2,3,7,8-TCDF | 1.088 | D 13C-2,3,7,8-TCDF | 100.000 | 8039168 | 931210 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.088 | | 100.000 | 8039168 | 931210 |

Sum the Uncalibrated Results

| RT | 303.9016 Area | 303.9016 Height | 305.8987 Area | 305.8987 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 25:10 | 1822 | 302 | 1579 | 309 | 0.0389 | 1.15 | RnQ |
| 25:10 | 1215 | 237 | 1579 | 309 | 0.0319 | | Empc Correction |
| 27:07 | 2721 | 374 | 3642 | 508 | 0.0727 | 0.75 | n |
| 27:53 | 8959 | 1027 | 13937 | 1798 | 0.2617 | 0.64 | RQ |
| 27:53 | 8959 | 1027 | 11635 | 1333 | 0.2354 | | Empc Correction |

Compound is Marked ND

Report Date: 28-Jan-2019 02:09:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Knoxville

AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d
Lims ID: WDMCCV
Client ID:
Inject. Date: 28-Jan-2019 01:01:00 Dil. Factor: 1.0000
Sample Type: WDMCCV, Combo WDM and CCV
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27191 Lims Sample ID: 1
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-PeCDD, RT: 39.522

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,7,8-PeCDD | 1.043 | D 13C-1,2,3,7,8-PeCDD | 100.000 | 4922796 | 1183729 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.043 | | 100.000 | 4922796 | 1183729 |

Sum the Uncalibrated Results

| RT | 355.8546 Area | 355.8546 Height | 357.8516 Area | 357.8516 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 40:54 | 18990 | 3257 | 14094 | 2240 | 0.6441 | 1.35 | |

Compound is Marked ND

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d
Lims ID: WDMCCV
Client ID:
Inject. Date: 28-Jan-2019 01:01:00 Dil. Factor: 1.0000
Sample Type: WDMCCV, Combo WDM and CCV
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27191 Lims Sample ID: 1
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-PeCDF, RT: 38.126

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,7,8-PeCDF | 1.190 | D 13C-1,2,3,7,8-PeCDF | 100.000 | 6963696 | 1382527 |
| 2,3,4,7,8-PeCDF | 1.109 | D 13C-2,3,4,7,8-PeCDF | 100.000 | 6943490 | 1567127 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.150 | | 100.000 | 6953593 | 1474827 |

Sum the Uncalibrated Results

| RT | 339.8597 Area | 339.8597 Height | 341.8567 Area | 341.8567 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 37:20 | 36918 | 4485 | 23027 | 3192 | 0.7499 | 1.60 | |
| 39:25 | 30578 | 6418 | 19814 | 4297 | 0.6304 | 1.54 | |

Compound is Marked ND

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d
Lims ID: WDMCCV
Client ID:
Inject. Date: 28-Jan-2019 01:01:00 Dil. Factor: 1.0000
Sample Type: WDMCCV, Combo WDM and CCV
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27191 Lims Sample ID: 1
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-HpCDF, RT: 49.404

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDF | 1.498 | D 13C-1,2,3,4,6,7,8-HpCDF | 100.000 | 5281911 | 1146785 |
| 1,2,3,4,7,8,9-HpCDF | 1.381 | D 13C-1,2,3,4,7,8,9-HpCDF | 100.000 | 4284350 | 823607 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.440 | | 100.000 | 4783130 | 985196 |

Sum the Uncalibrated Results

| RT | 407.7817 Area | 407.7817 Height | 409.7788 Area | 409.7788 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 48:27 | 30993 | 6638 | 34109 | 5133 | 0.9455 | 0.91 | |
| 48:43 | 72794 | 15996 | 74783 | 14340 | 2.14 | 0.97 | |

Compound is Marked ND

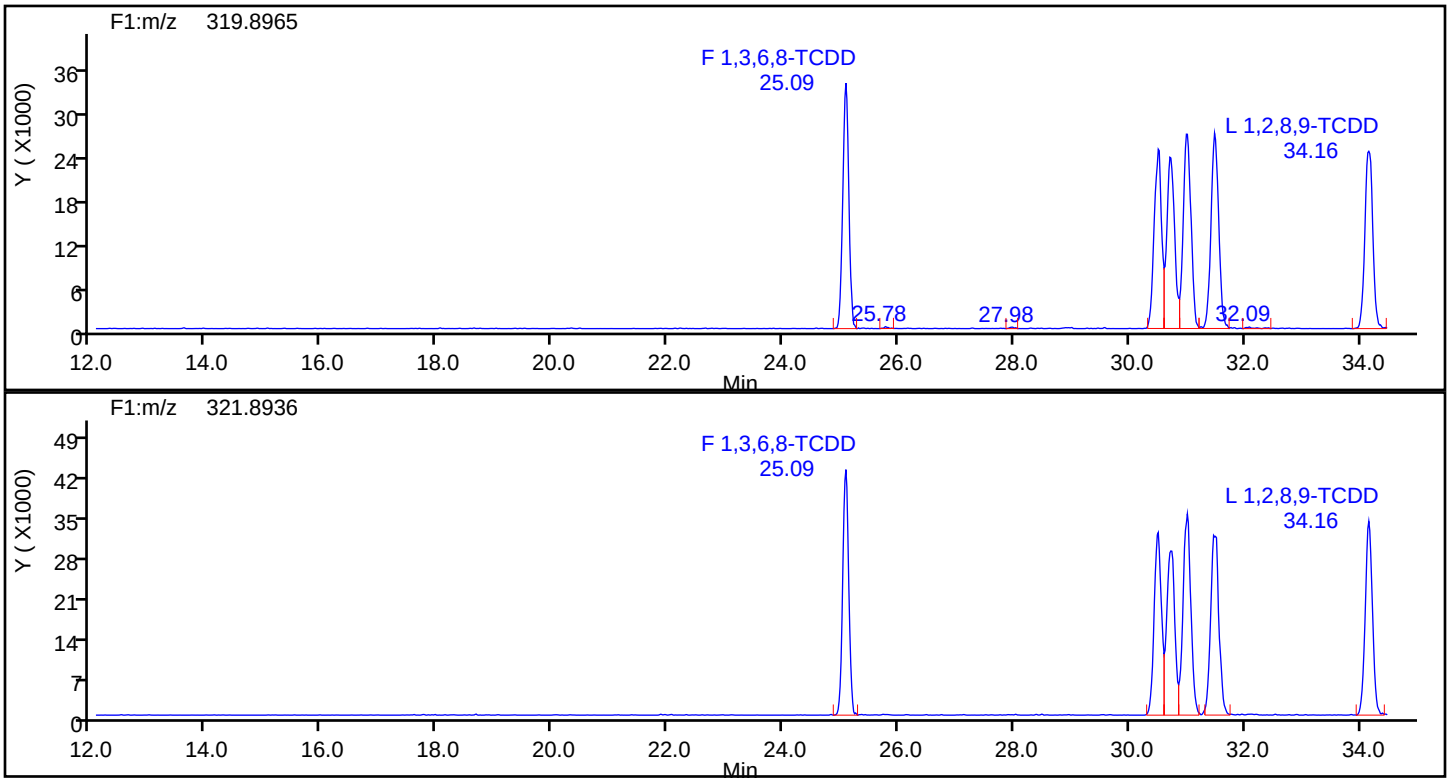
Report Date: 28-Jan-2019 02:09:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Knoxville

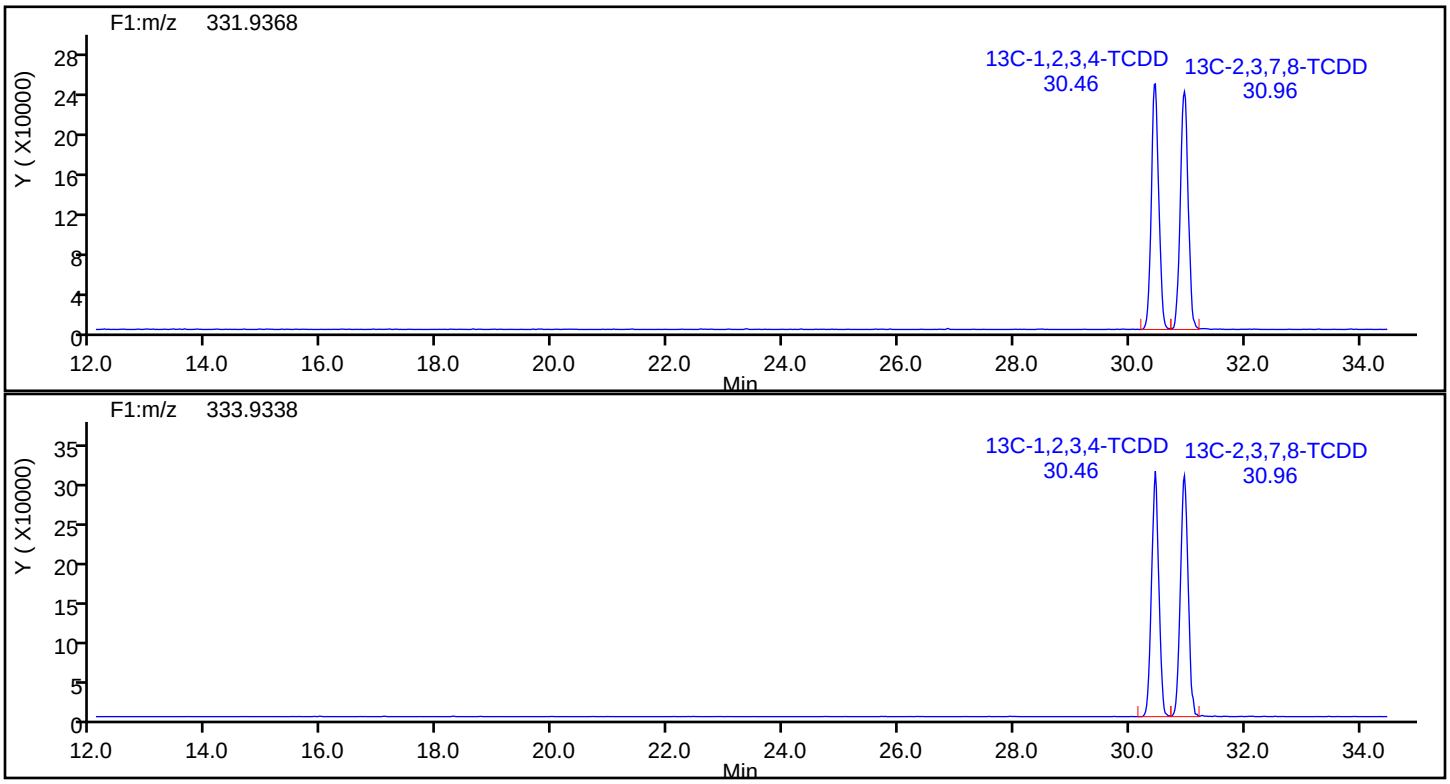
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| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 01:01:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Standards



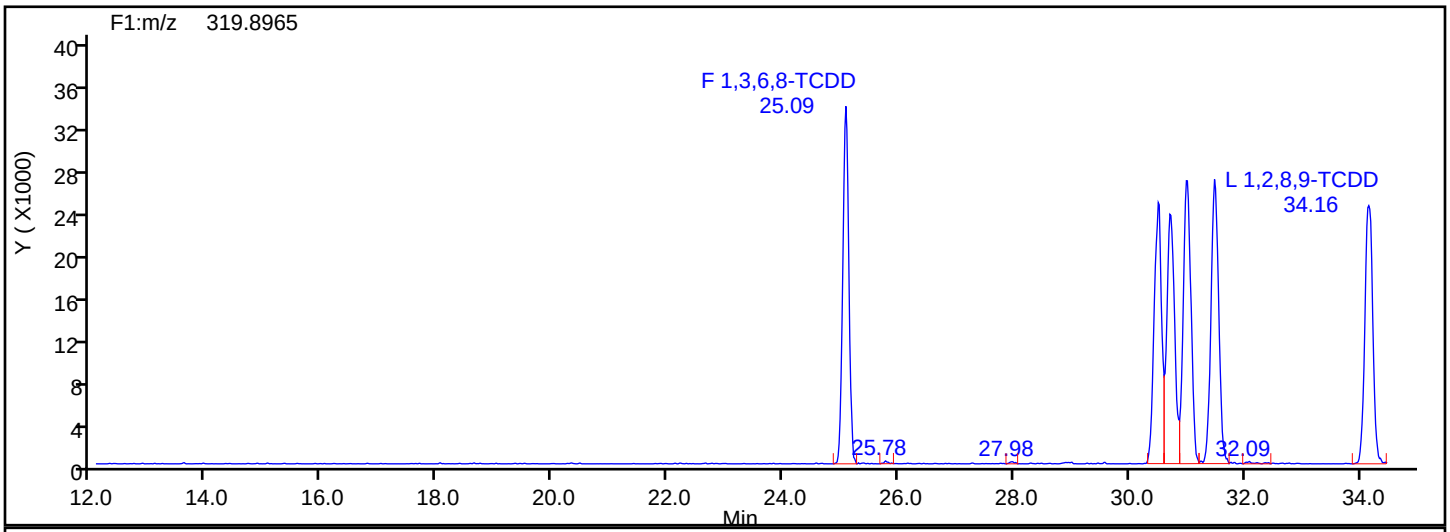
Report Date: 28-Jan-2019 02:09:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

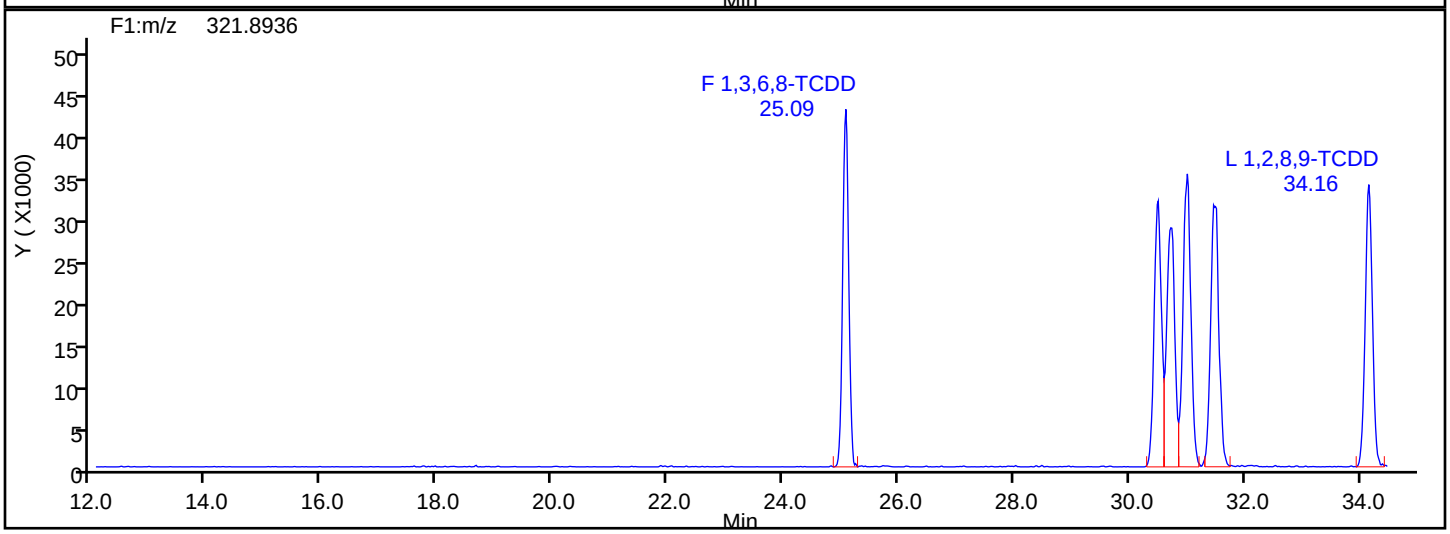
TestAmerica Knoxville

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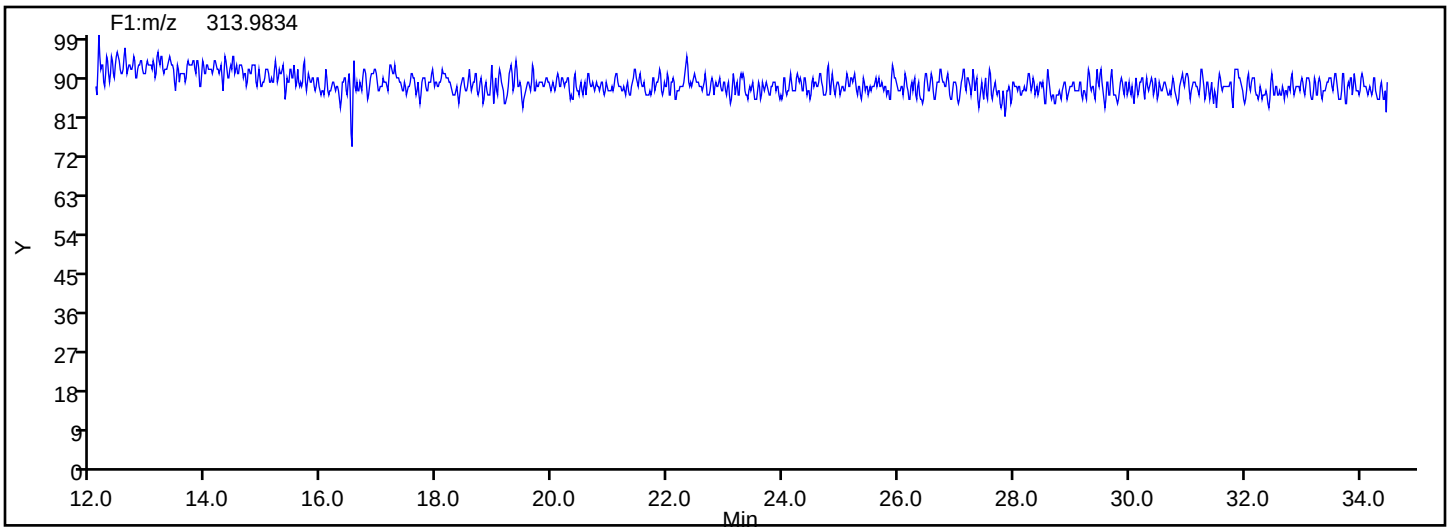
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| Injection Date: | 28-Jan-2019 01:01:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



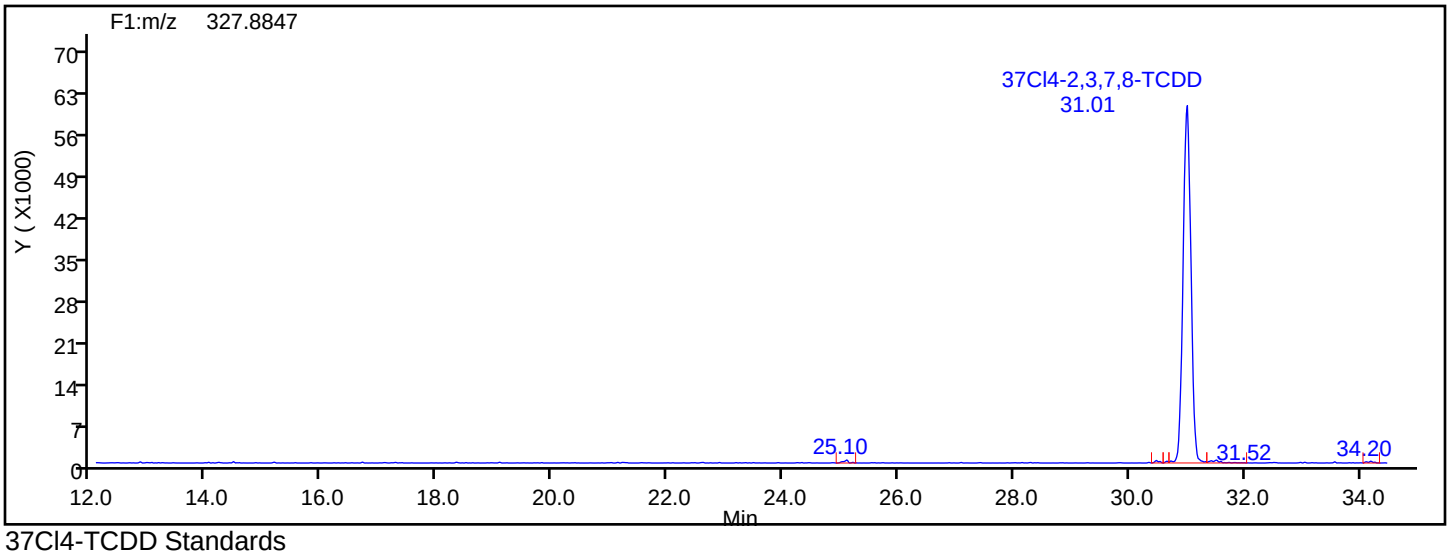
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TestAmerica Knoxville

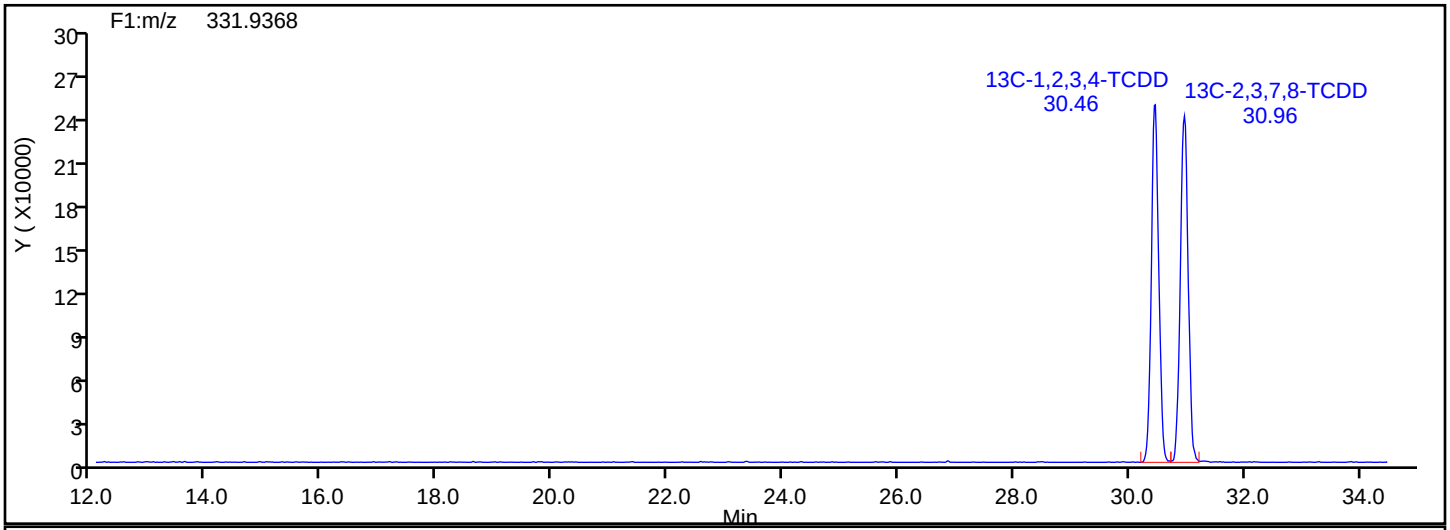
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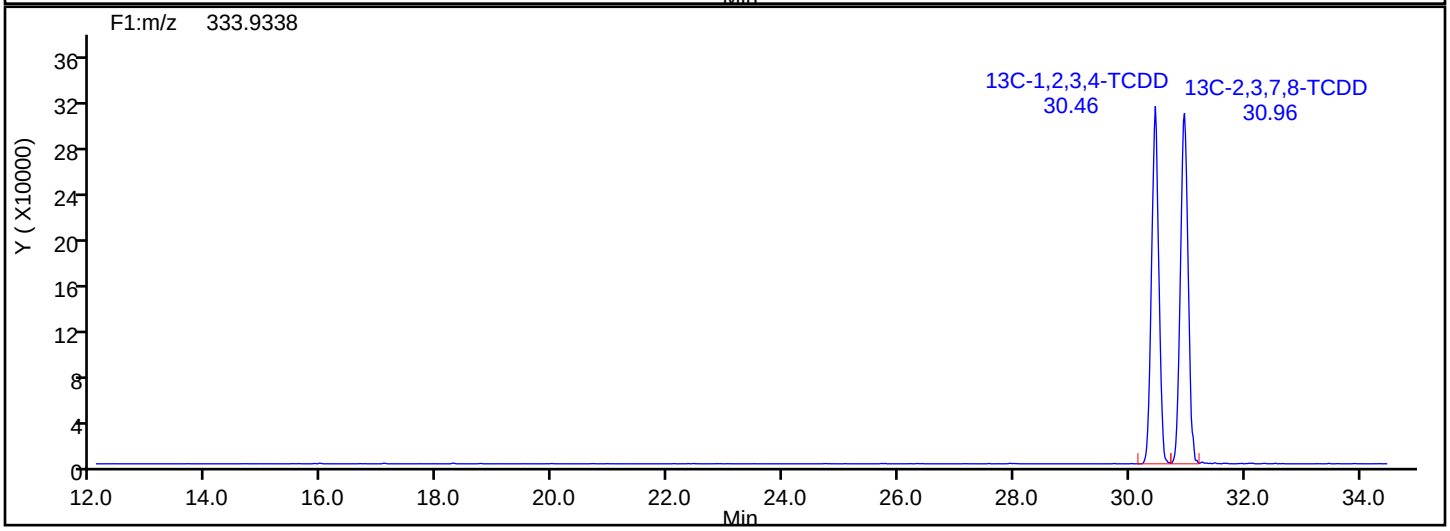
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|---|---|---|---|
| Injection Date: | 28-Jan-2019 01:01:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



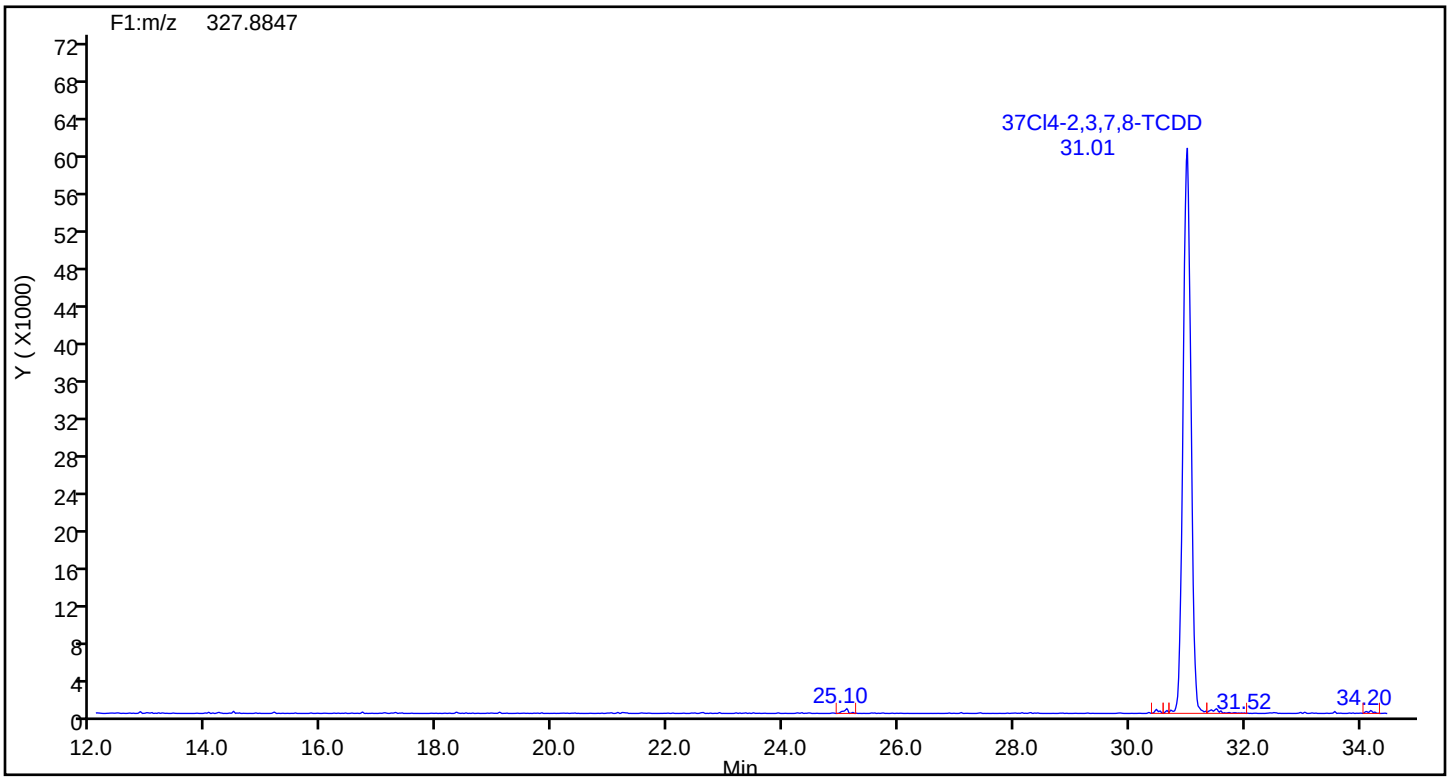
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TestAmerica Knoxville

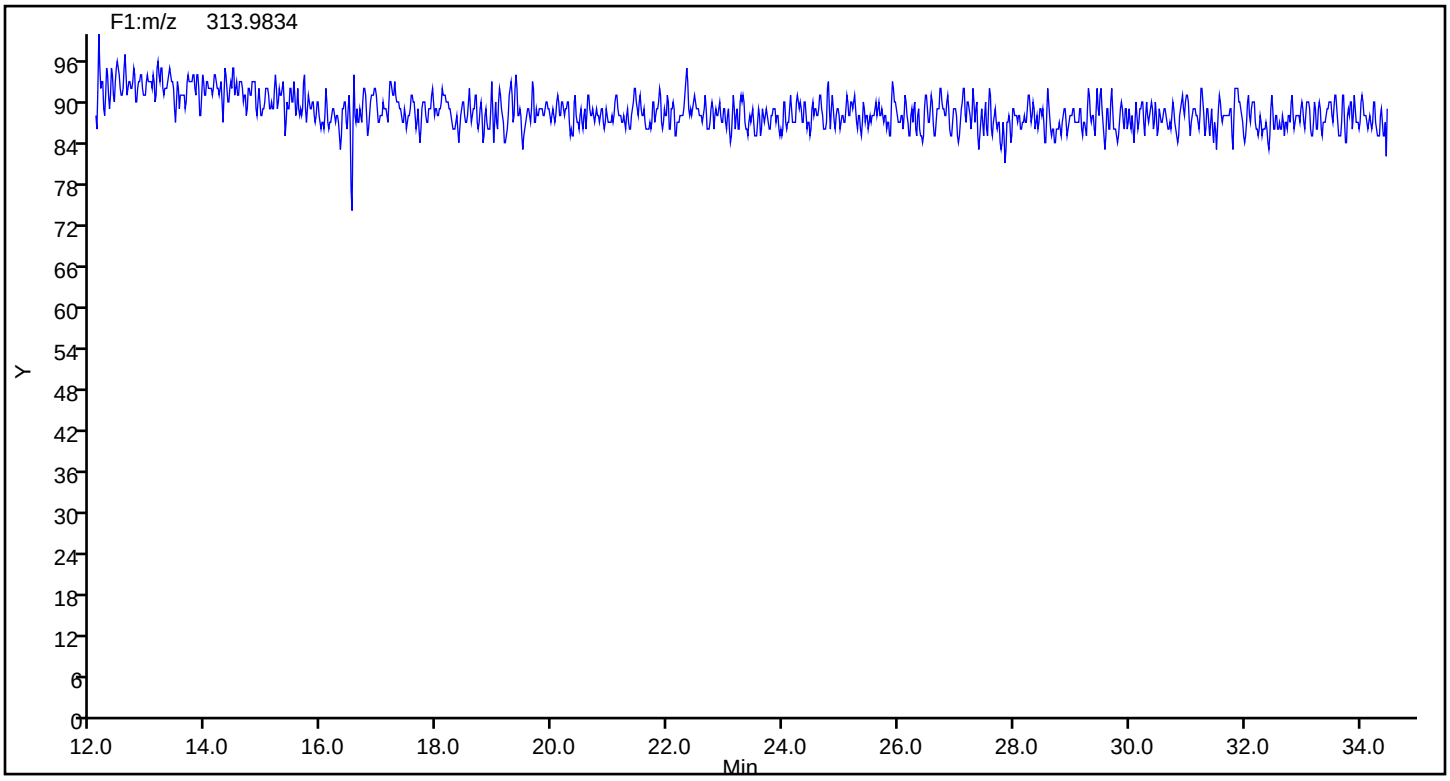
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| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Lock Mass

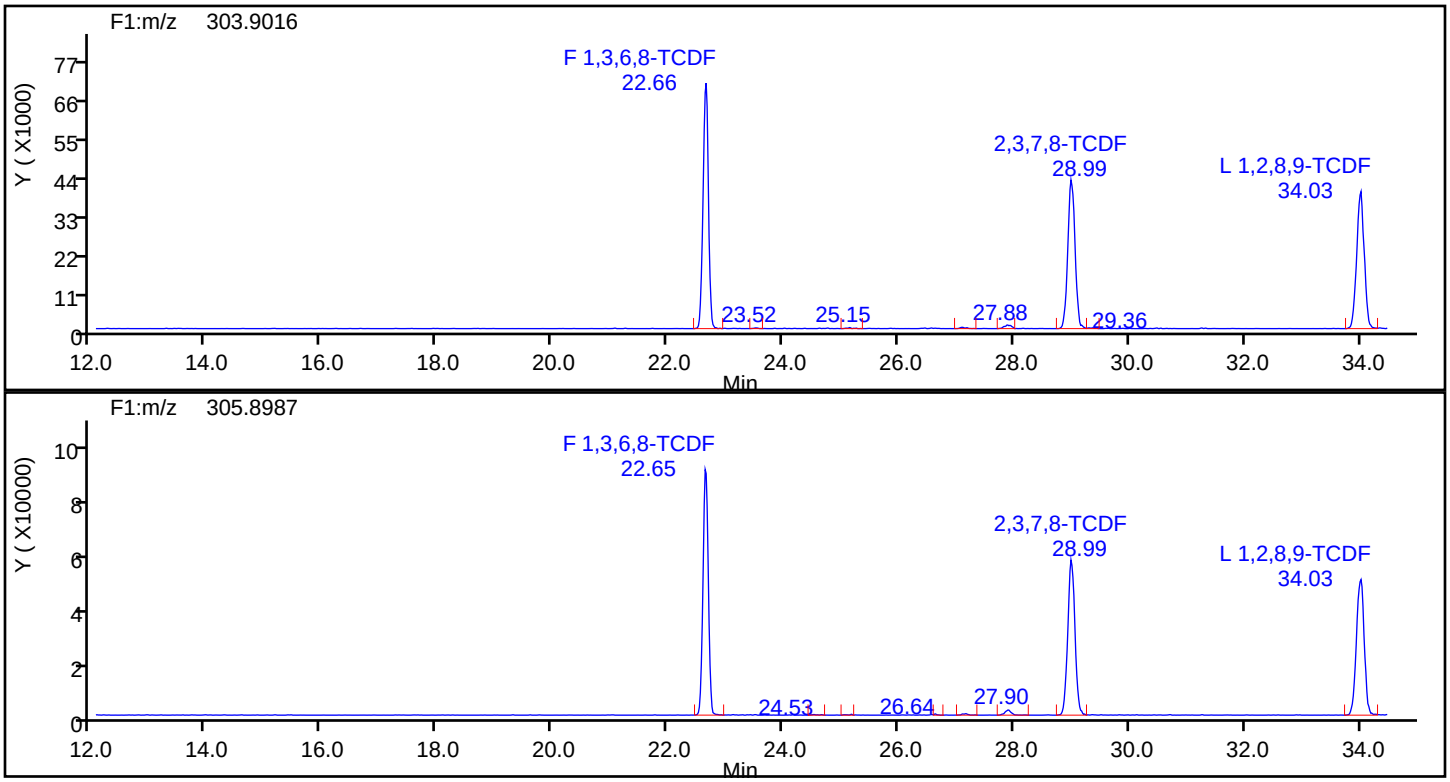


Report Date: 28-Jan-2019 02:09:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Knoxville

| | | | |
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| Data File: | \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d | | |
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| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

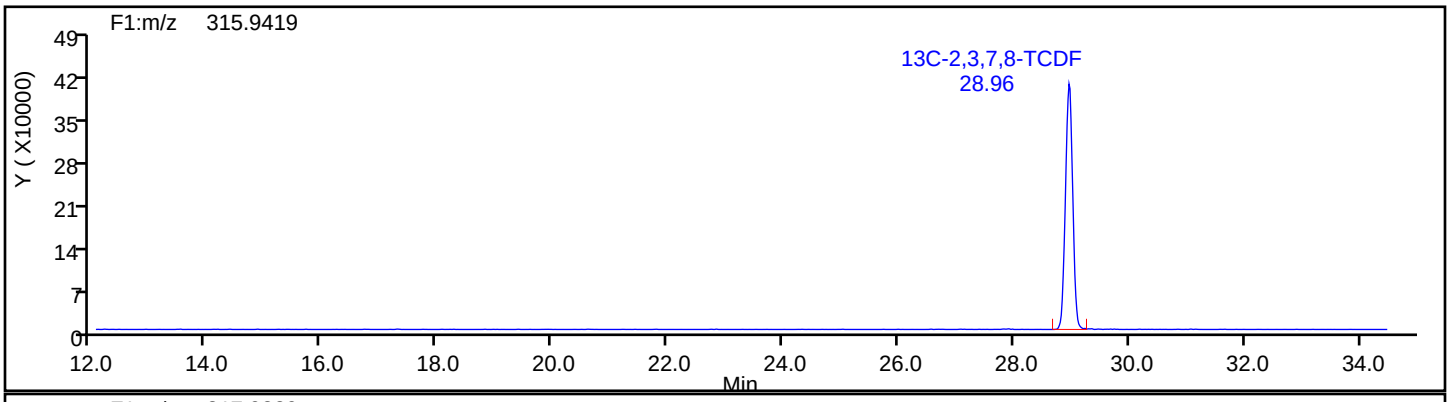
TCDF

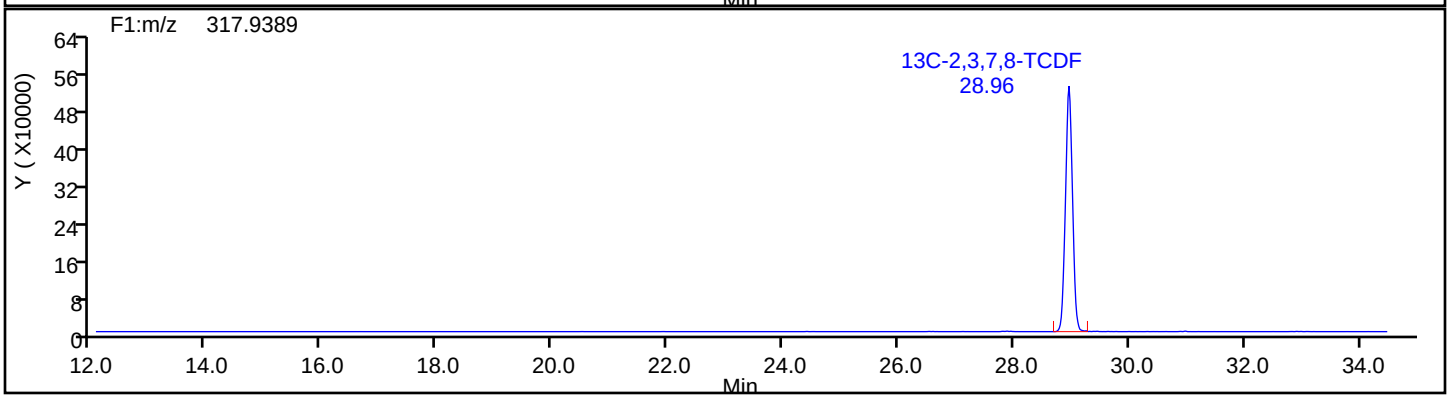






TCDF Standards



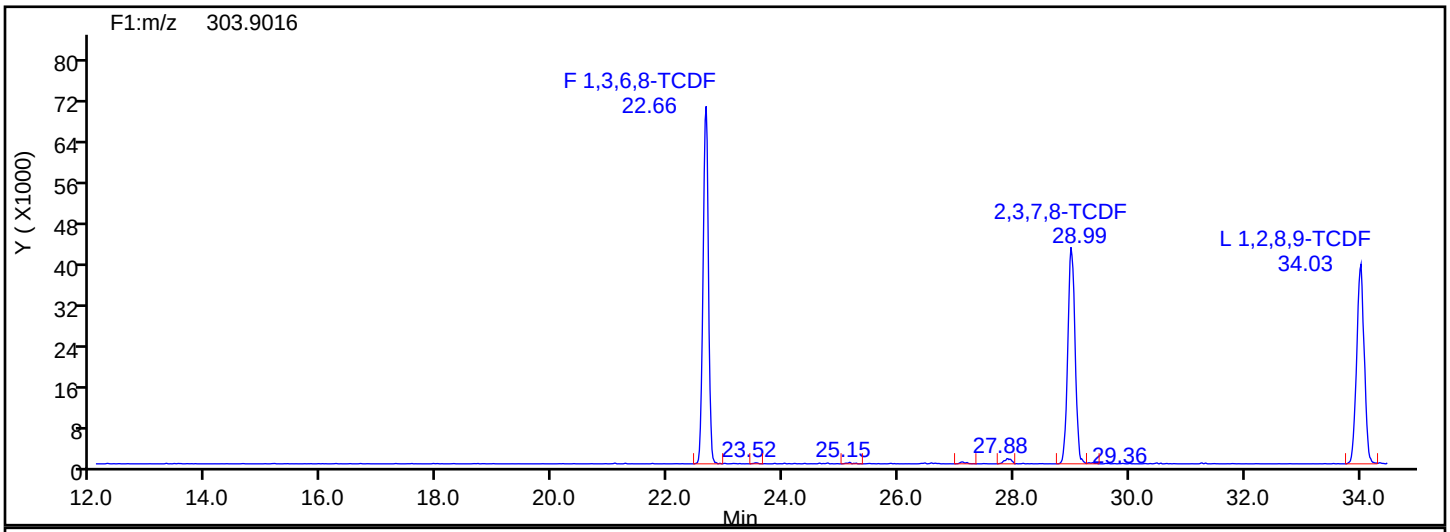



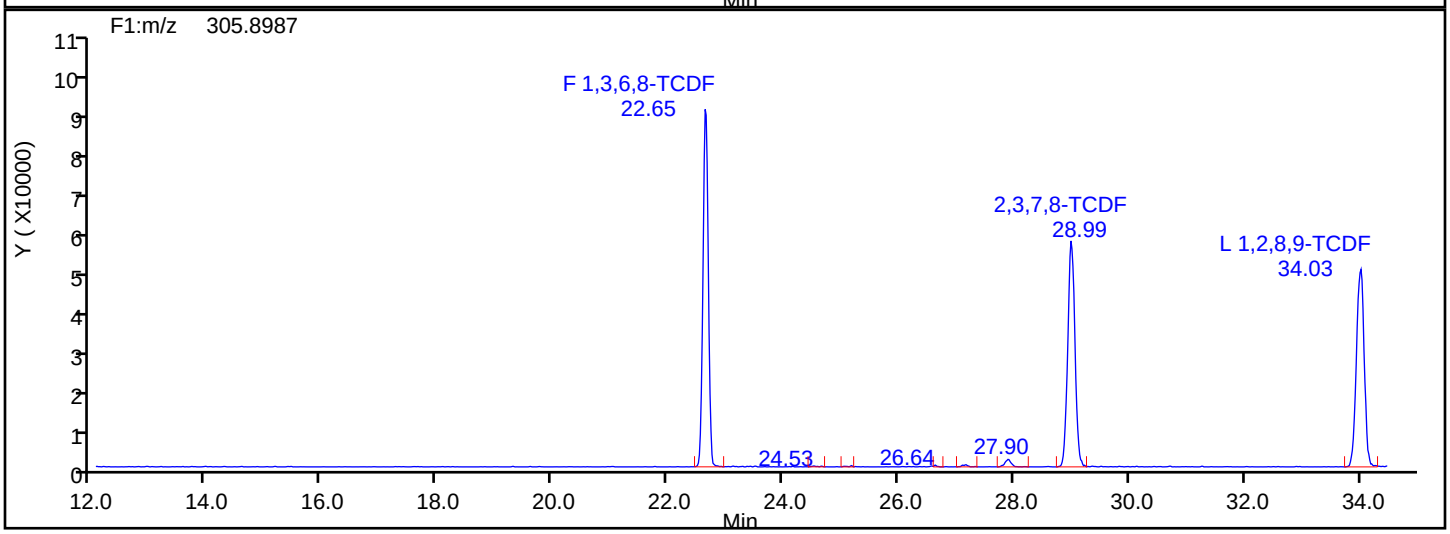
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TestAmerica Knoxville

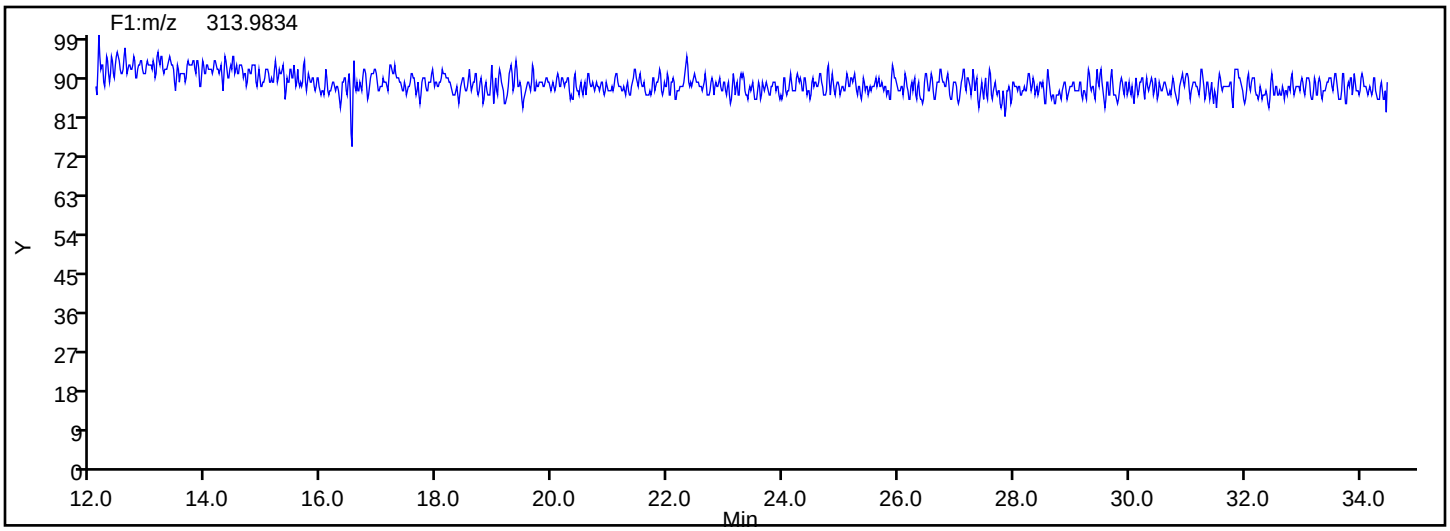
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| Injection Date: | 28-Jan-2019 01:01:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

TCDF




TCDF Lock Mass



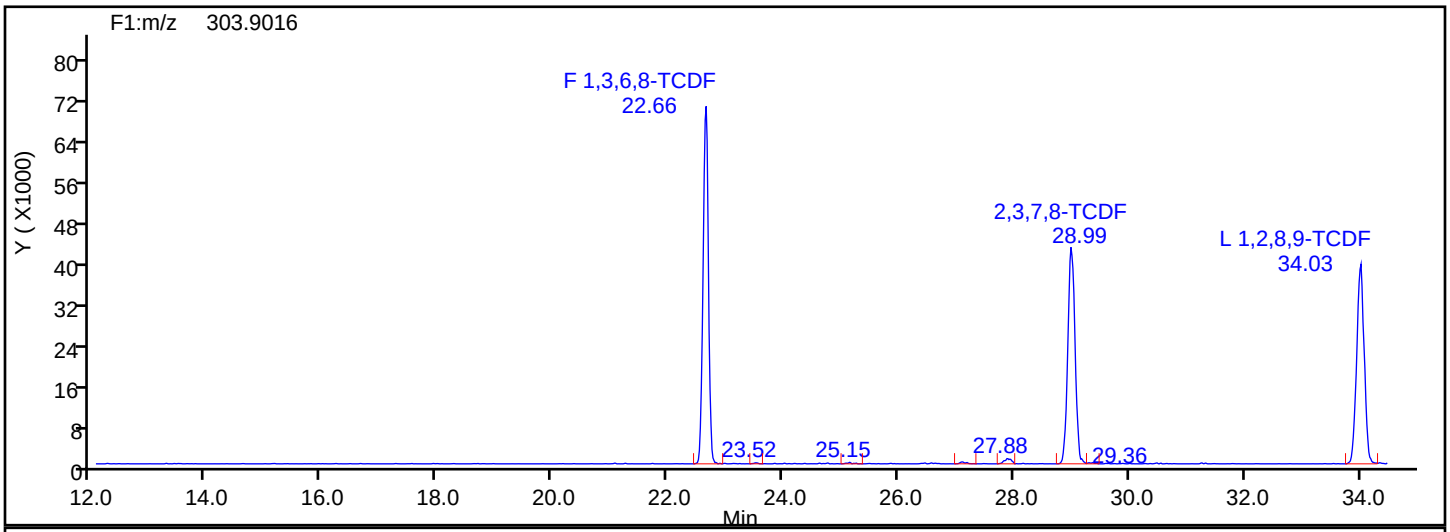
Report Date: 28-Jan-2019 02:09:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

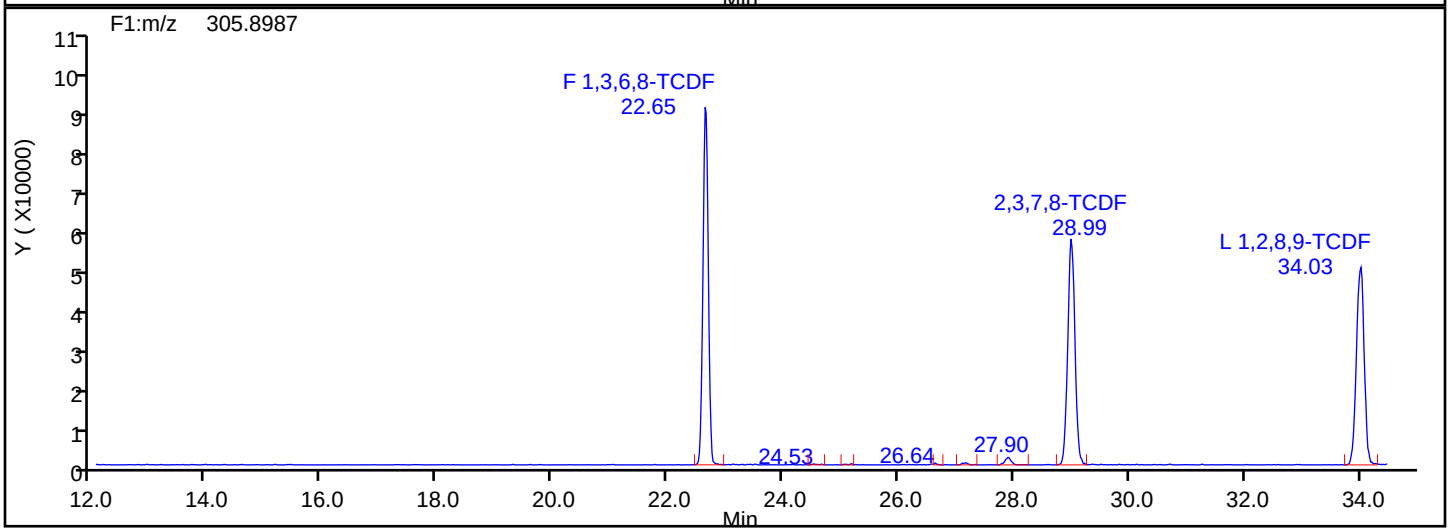
TestAmerica Knoxville

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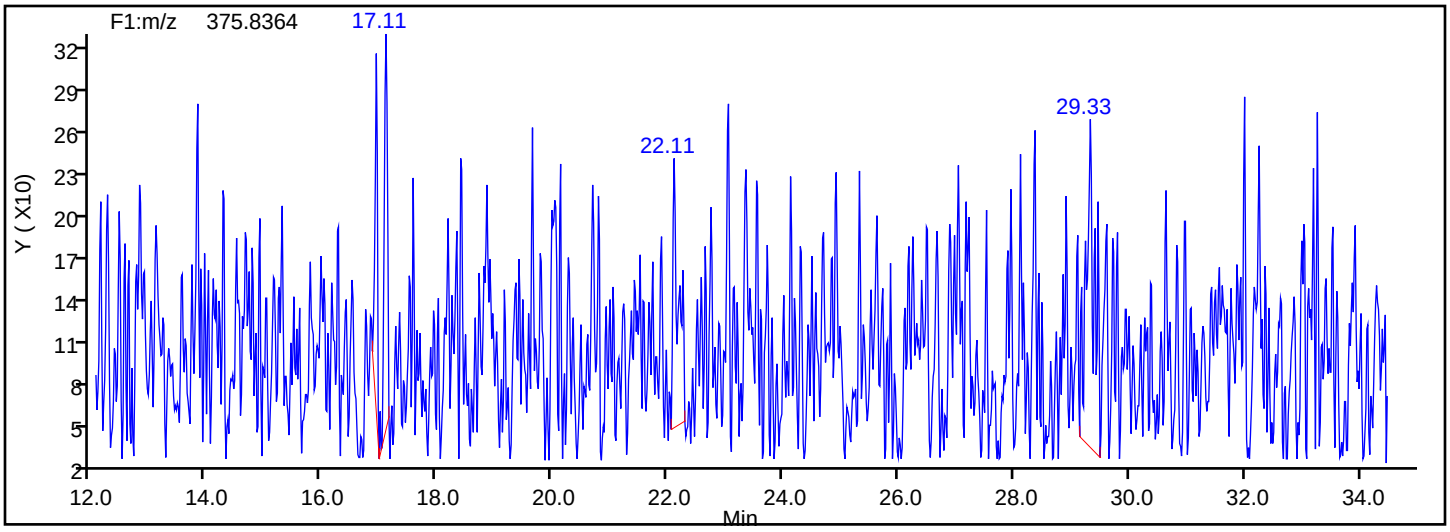
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| Injection Date: | 28-Jan-2019 01:01:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

TCDF




TCDF Interference Mass



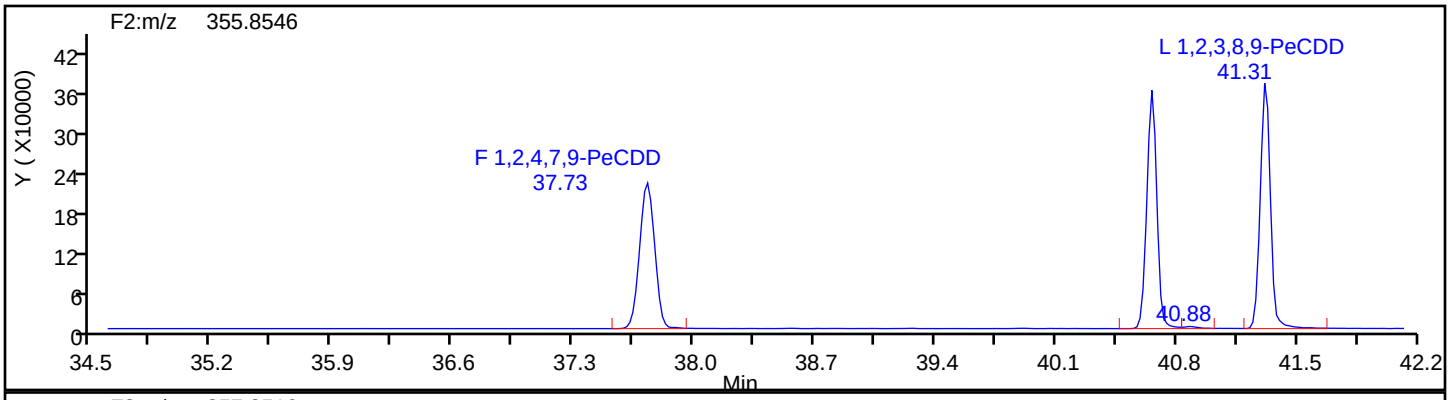
Report Date: 28-Jan-2019 02:09:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

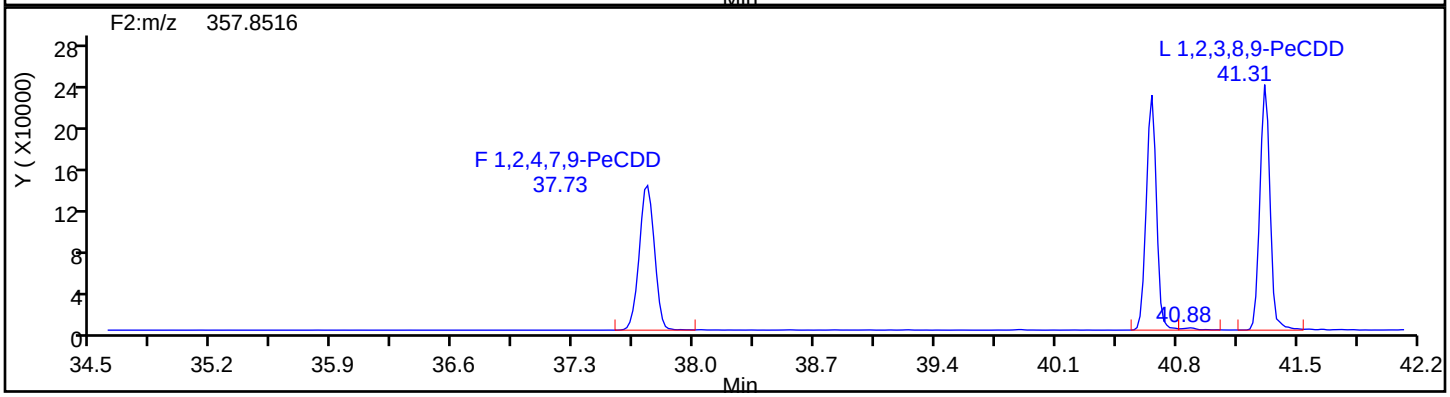
TestAmerica Knoxville

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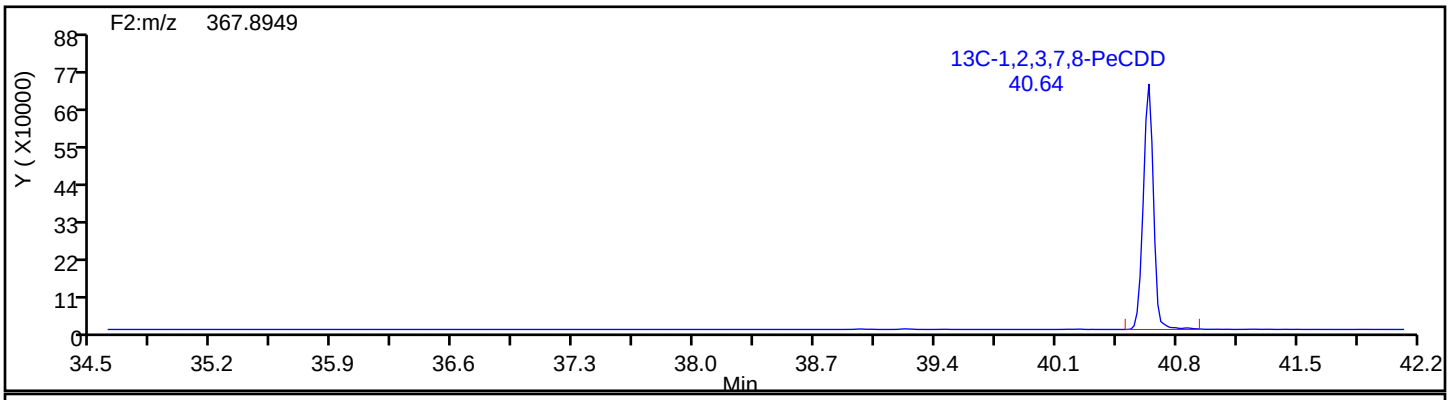
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|---|---|---|---|
| Injection Date: | 28-Jan-2019 01:01:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

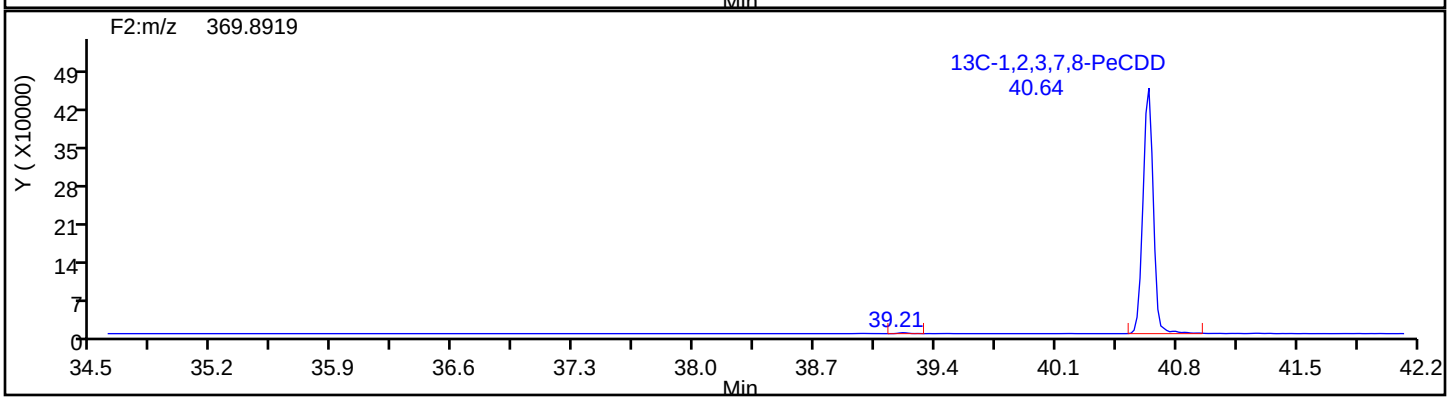
PeCDD




PeCDD Standards



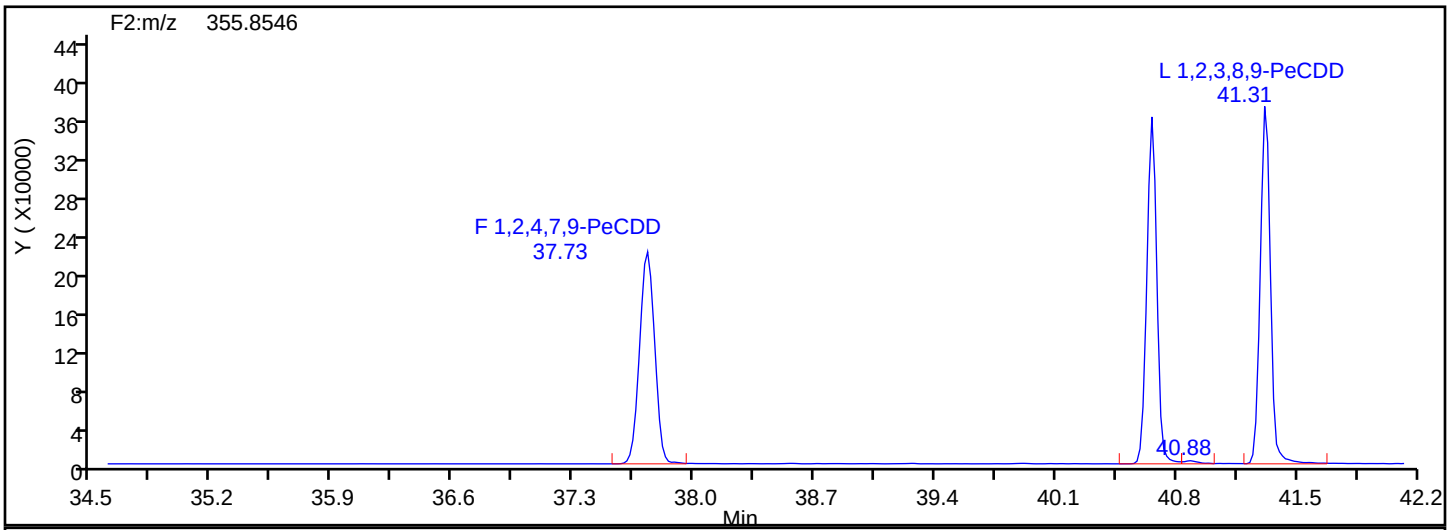



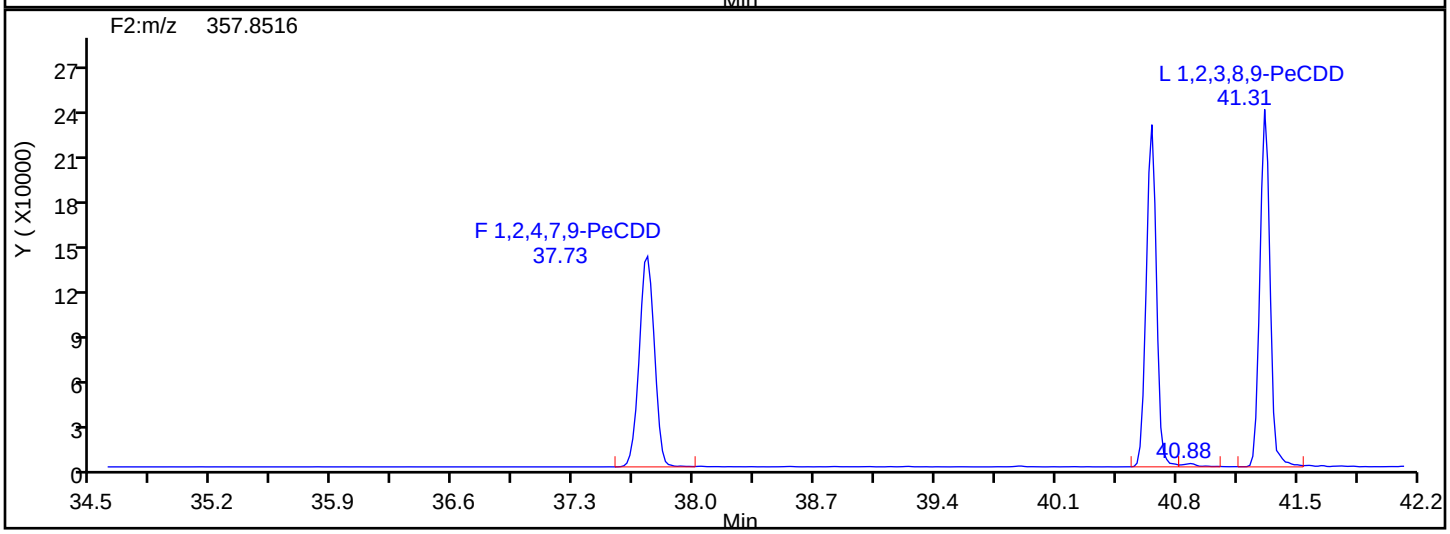
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TestAmerica Knoxville

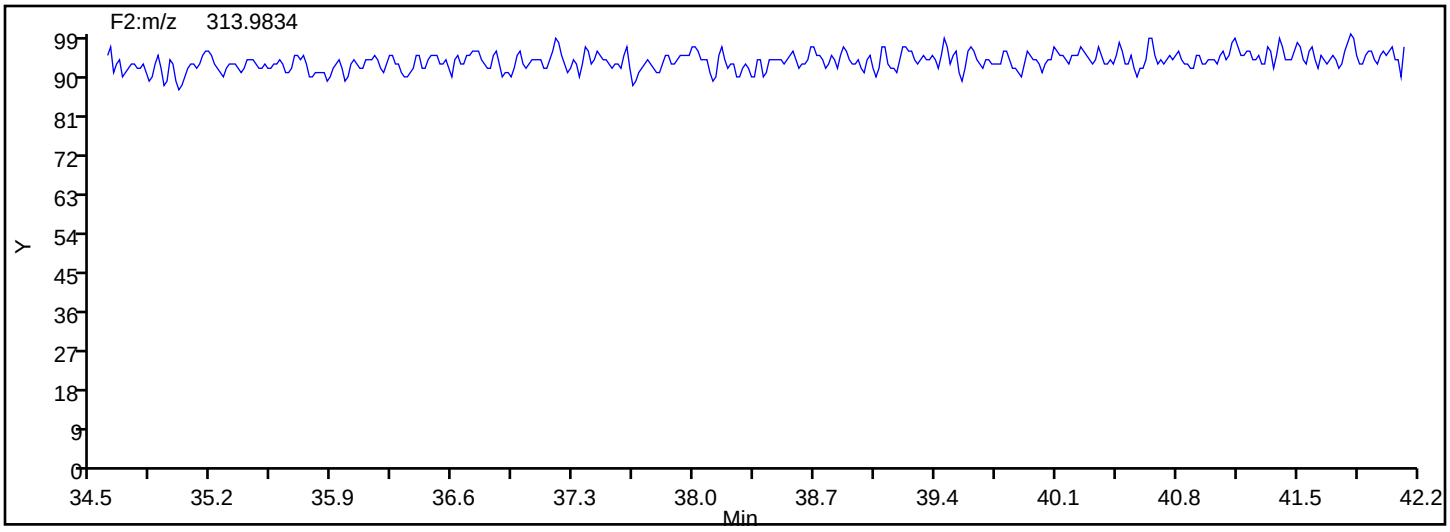
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| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

PeCDD




PeCDD Lock Mass



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

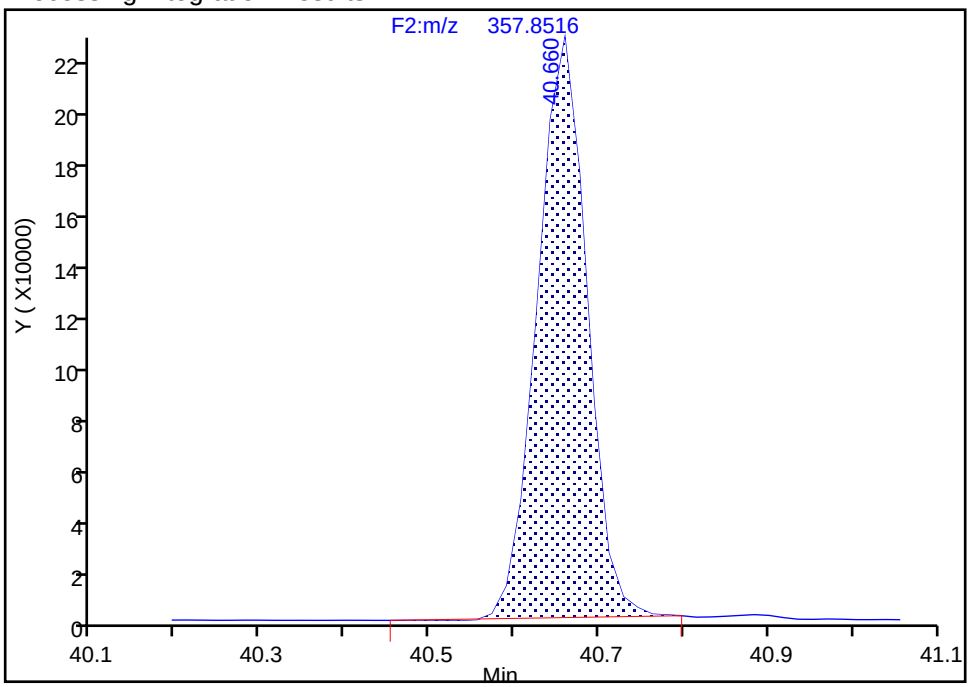
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| Injection Date: | 28-Jan-2019 01:01:00 | Instrument ID: | D2A | | |
| Lims ID: | WDMCCV | | | | |
| Client ID: | | | | | |
| Operator ID: | Xcalibur_System | ALS Bottle#: | 0 | Worklist Smp#: | 1 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL | | |
| Column: | | Detector | F2(34.39 :42.21 ) | | |

## 1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 2

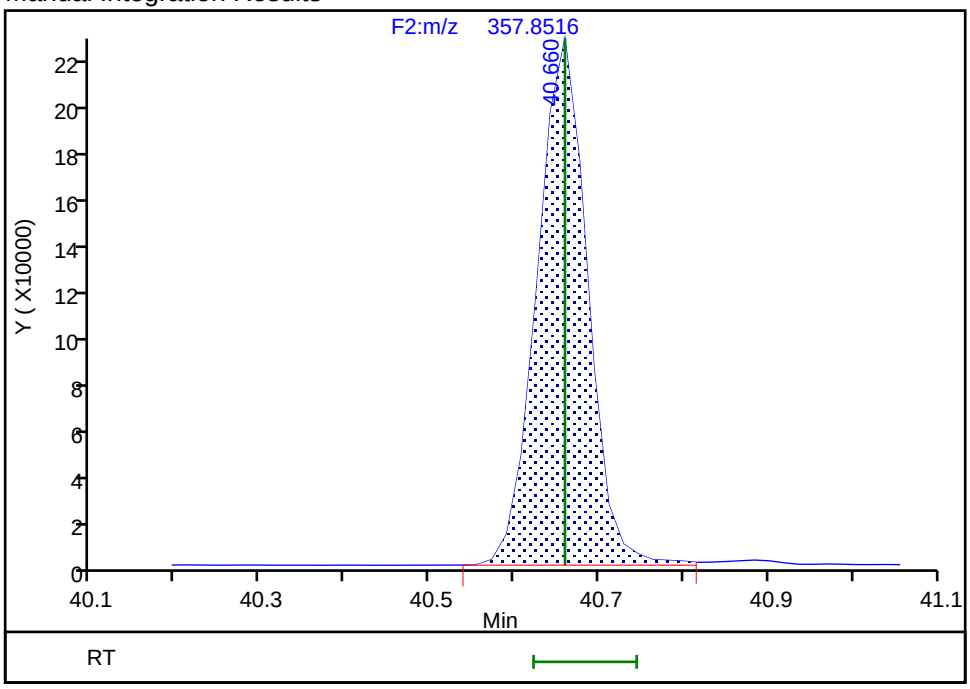
Processing Integration Results

RT: 40.66
Area: 920103
Amount: 46.457415
Amount Units: pg/ul




Manual Integration Results

RT: 40.66
Area: 939786
Amount: 46.840615
Amount Units: pg/ul




Reviewer: mcwhirterl, 28-Jan-2019 02:04:12

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Knoxville

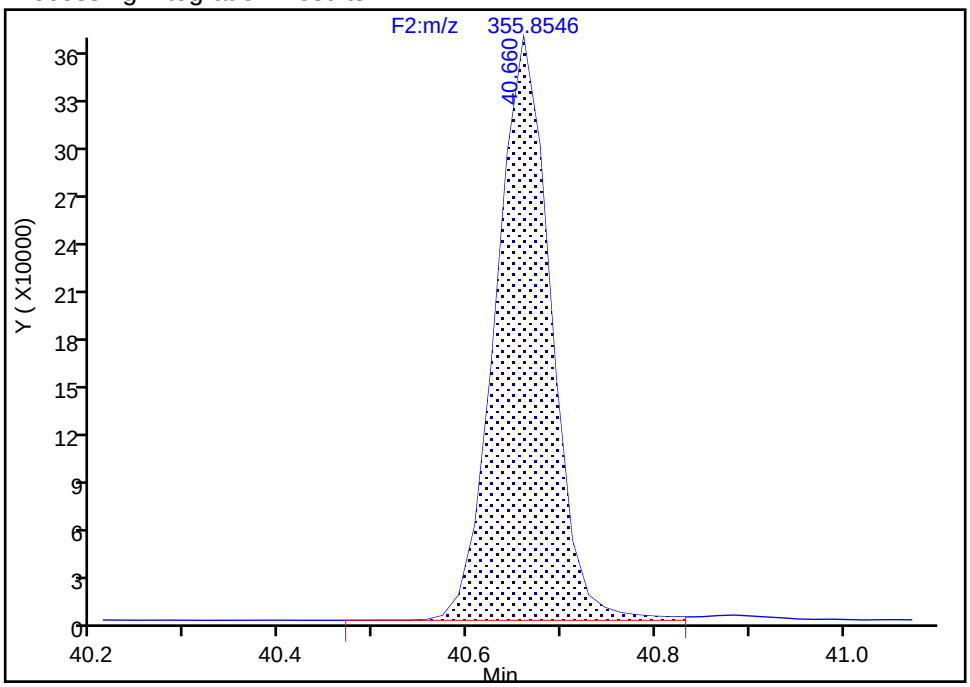
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| Injection Date: | 28-Jan-2019 01:01:00 | Instrument ID: | D2A | | |
| Lims ID: | WDMCCV | | | | |
| Client ID: | | | | | |
| Operator ID: | Xcalibur_System | ALS Bottle#: | 0 | Worklist Smp#: | 1 |
| Injection Vol: | 1.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL | | |
| Column: | | Detector | F2(34.39 :42.21 ) | | |

## 1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

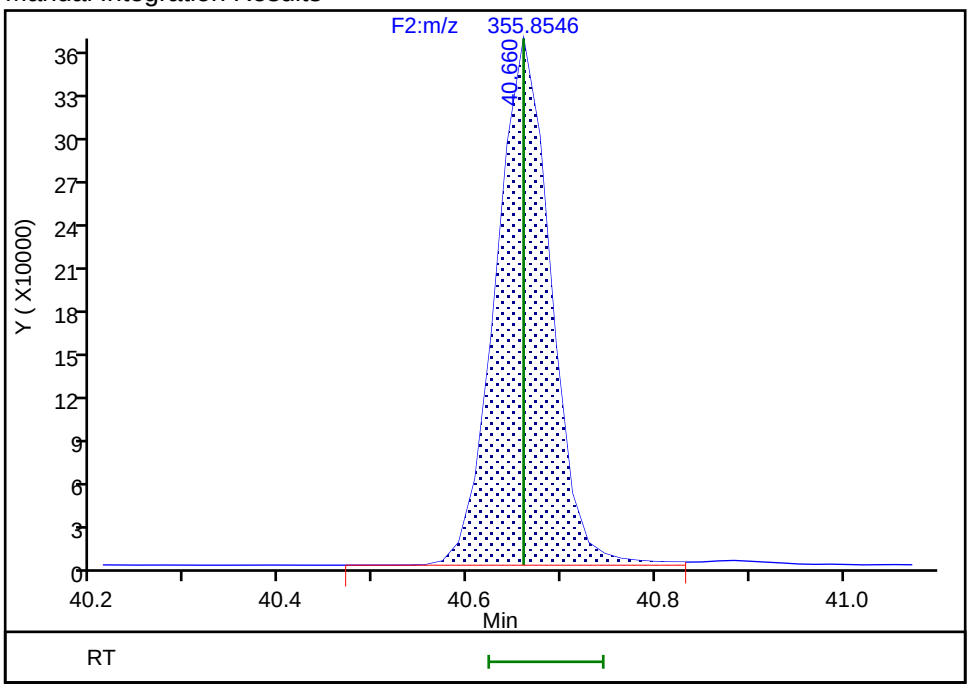
Processing Integration Results

RT: 40.66
Area: 1466172
Amount: 46.457415
Amount Units: pg/ul




Manual Integration Results

RT: 40.66
Area: 1466172
Amount: 46.840615
Amount Units: pg/ul




Reviewer: mcwhirterl, 28-Jan-2019 02:04:15
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

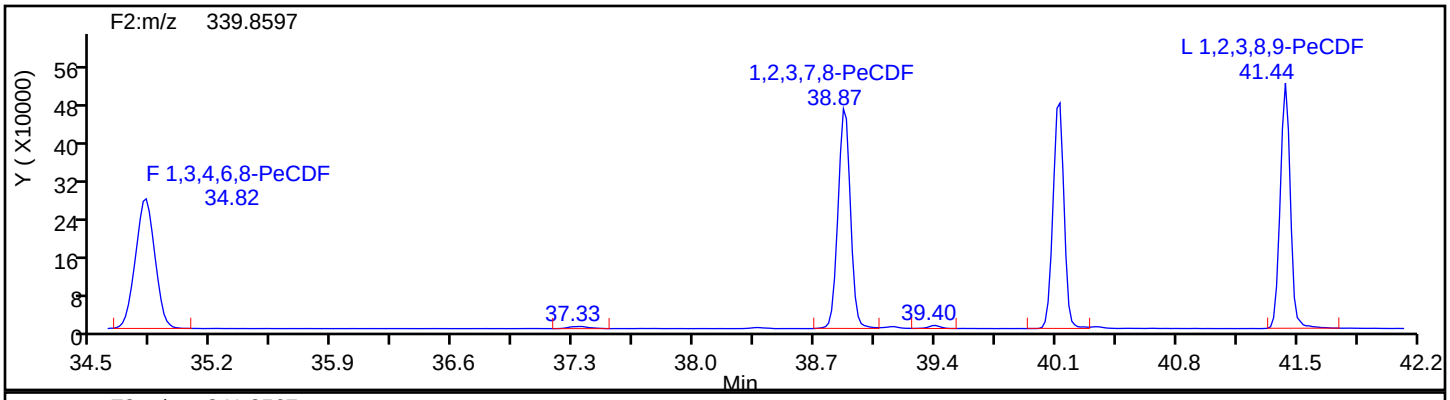
Report Date: 28-Jan-2019 02:09:08 Chrom Revision: 2.3 15-Jan-2019 08:51:34

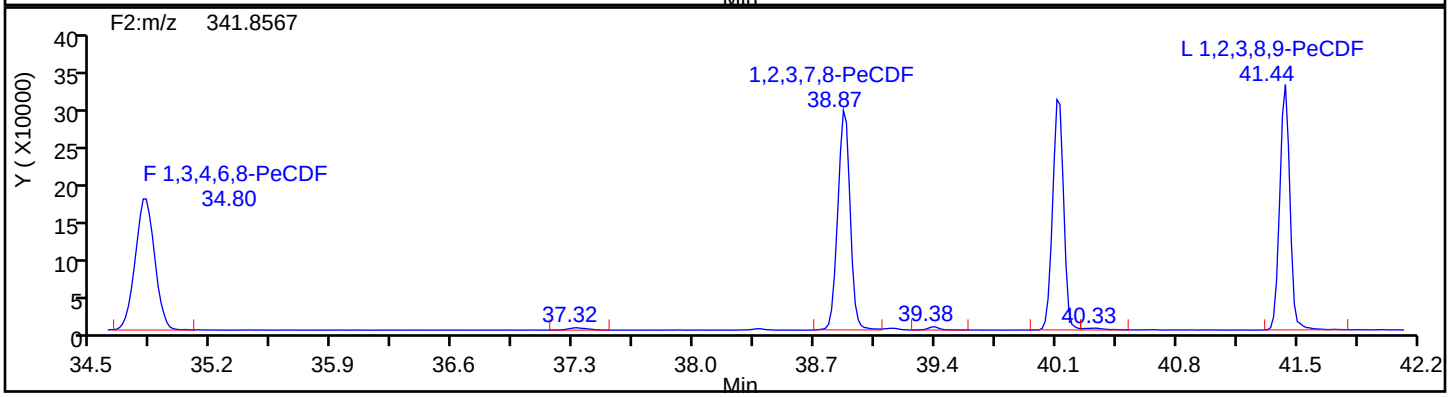
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d

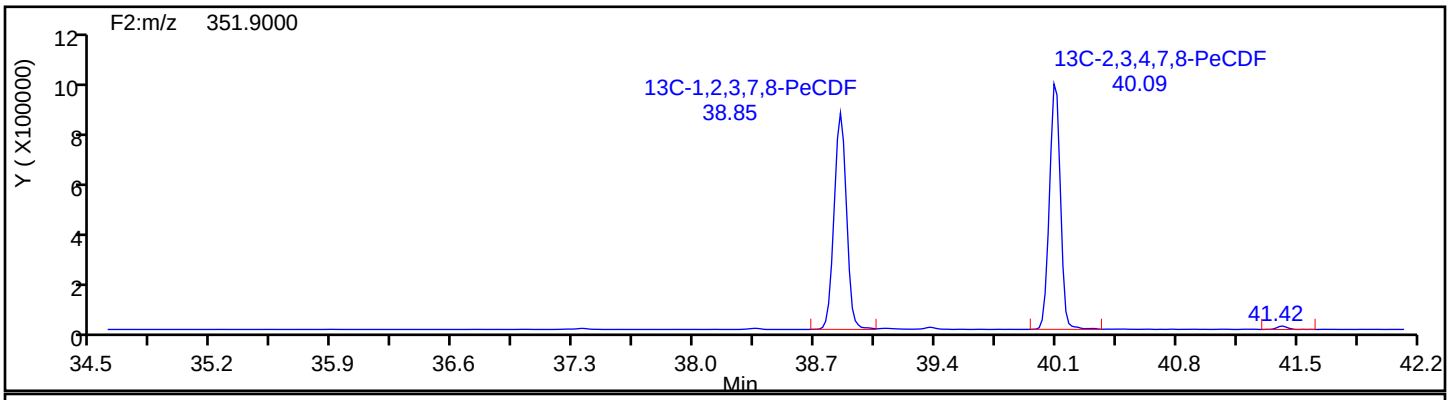
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| Injection Date: | 28-Jan-2019 01:01:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

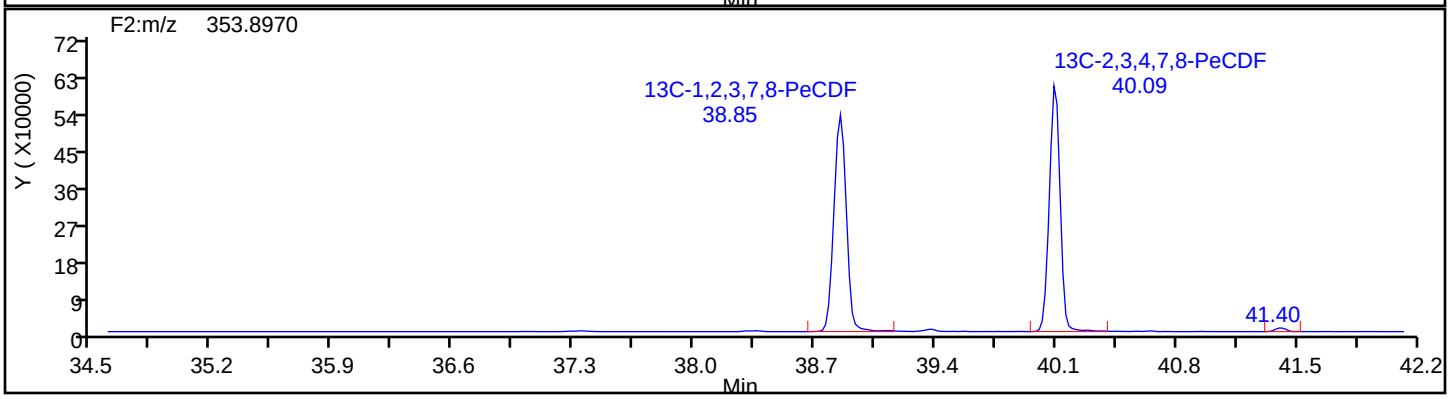
PeCDF




PeCDF Standards



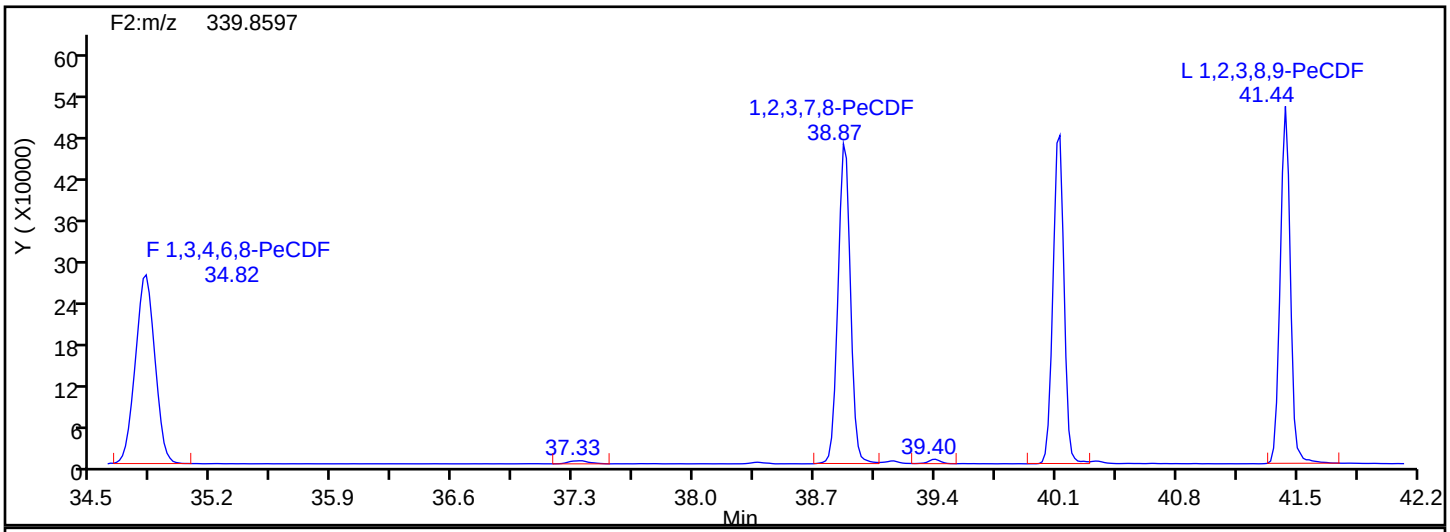
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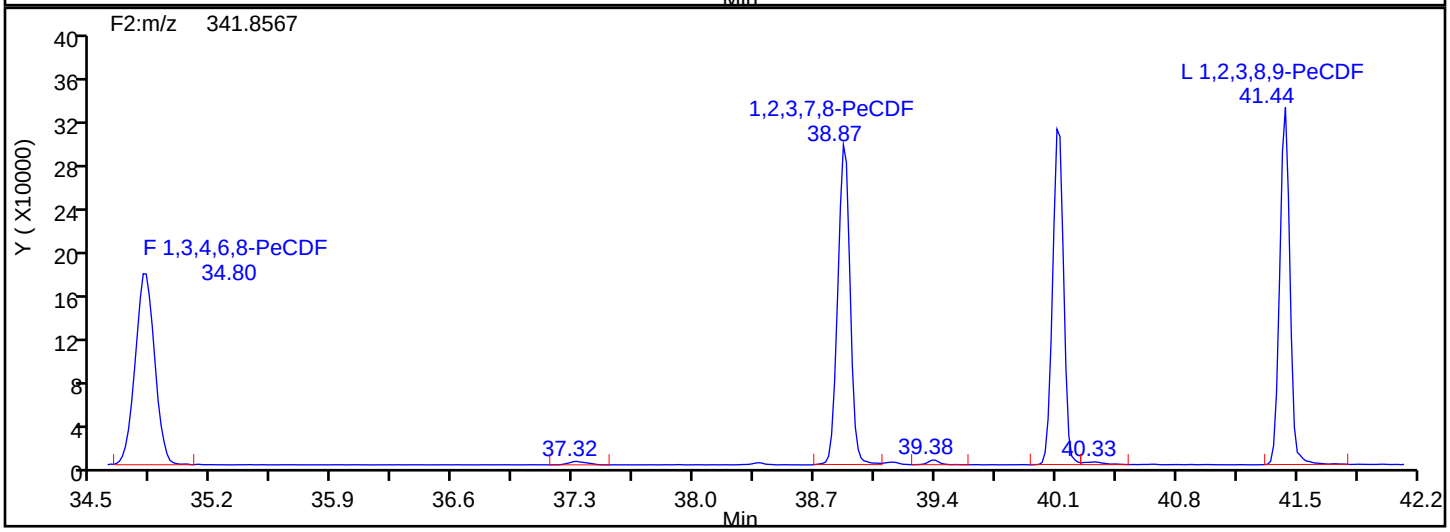
TestAmerica Knoxville

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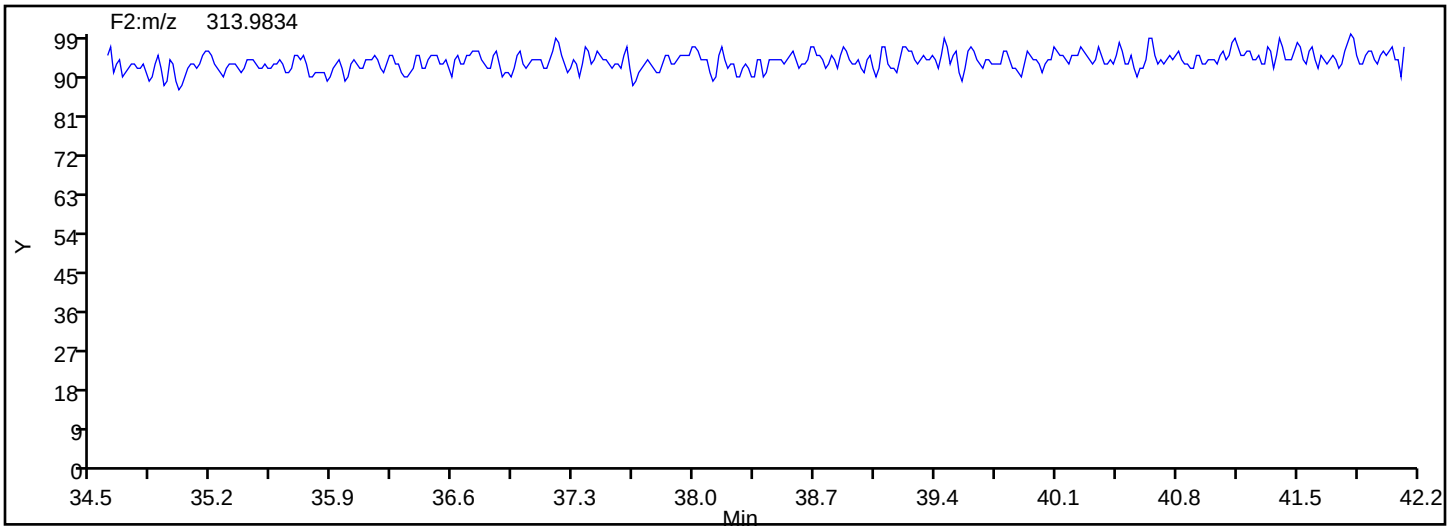
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

PeCDF




PeCDF Lock Mass



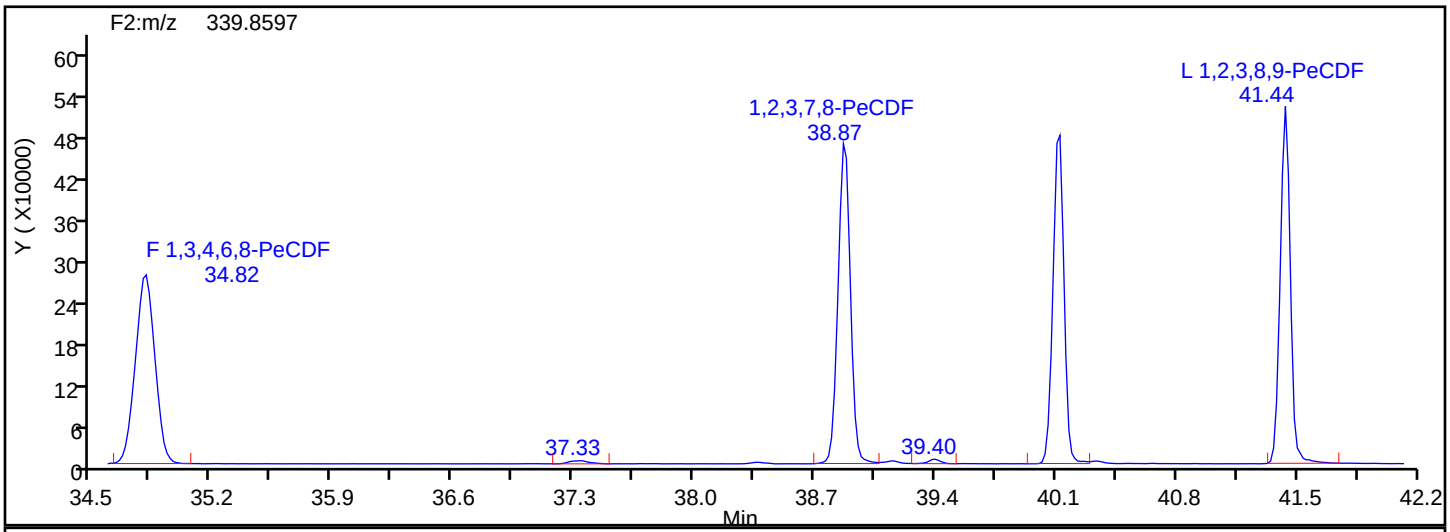
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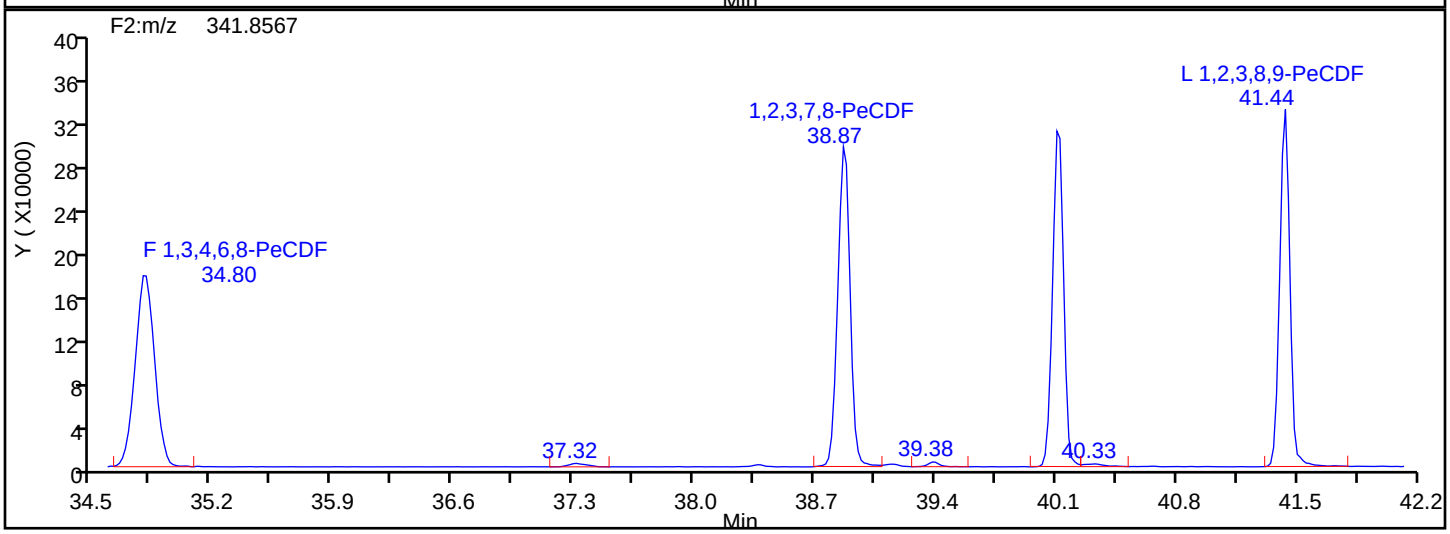
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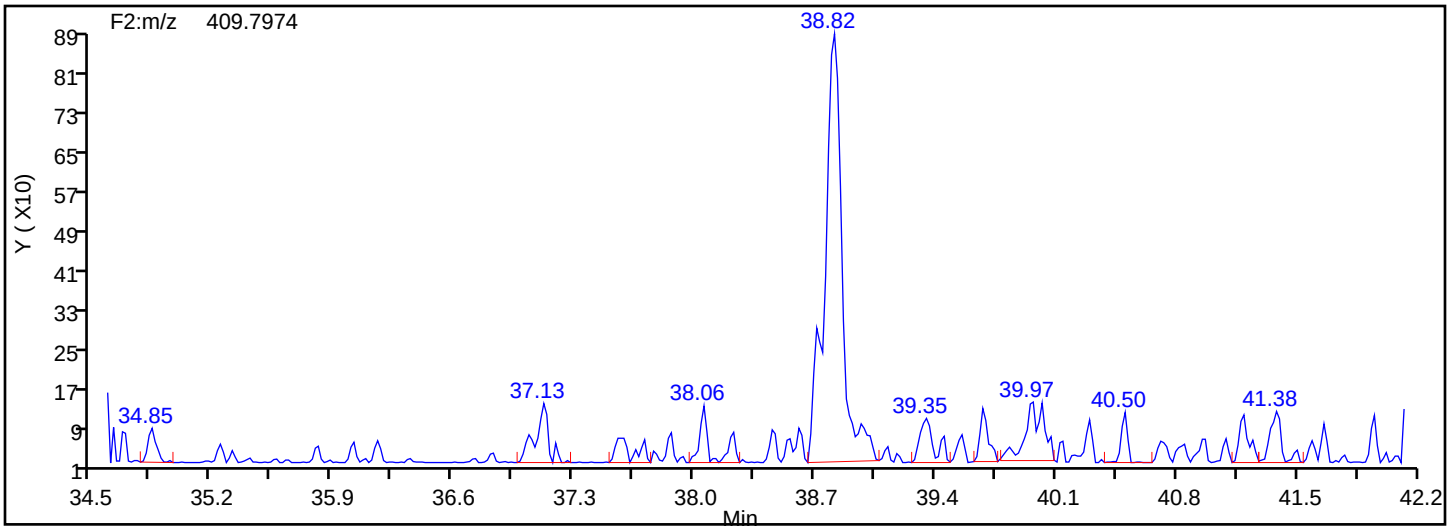
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

PeCDF




PeCDF Interference Mass



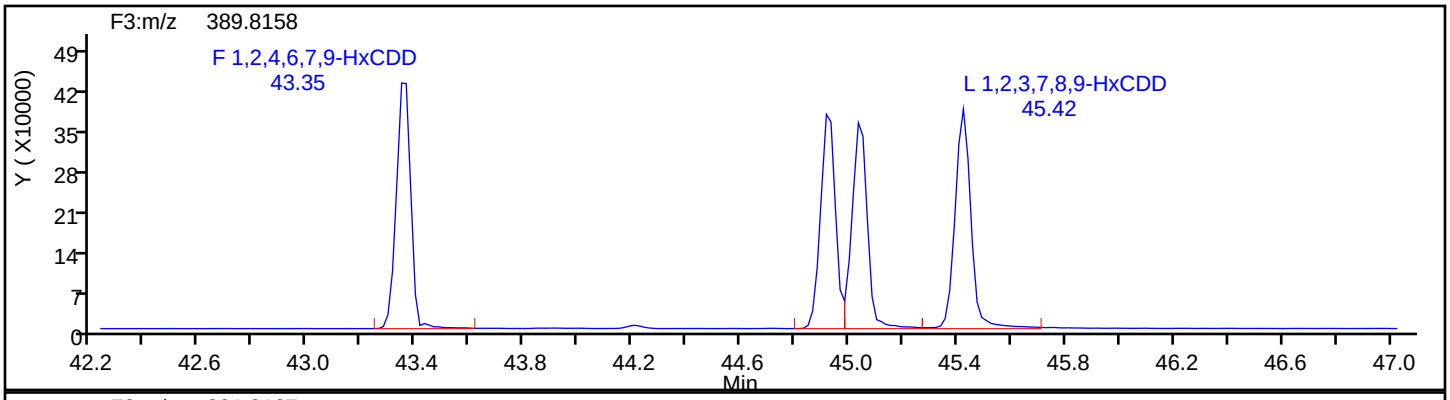
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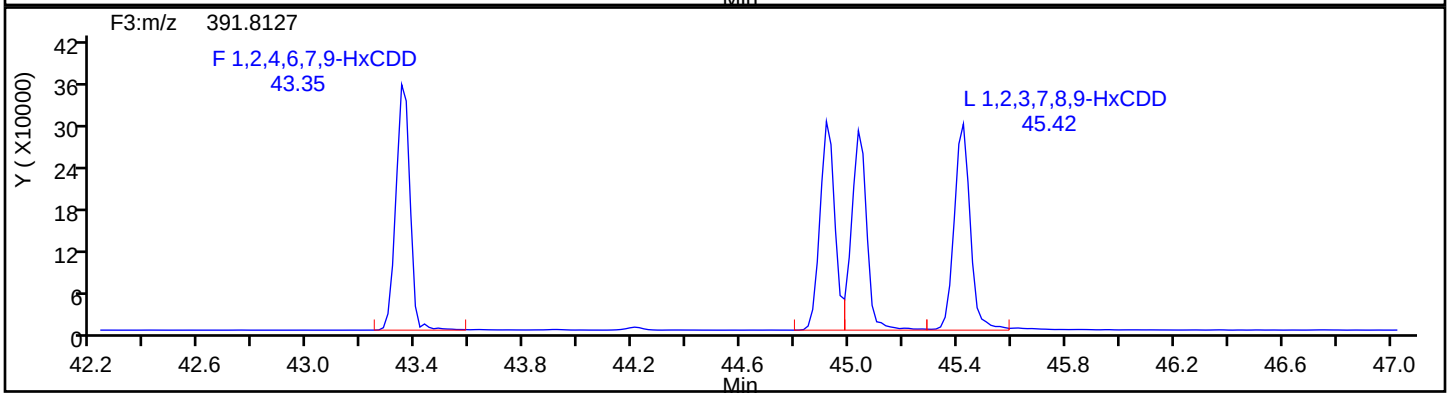
TestAmerica Knoxville

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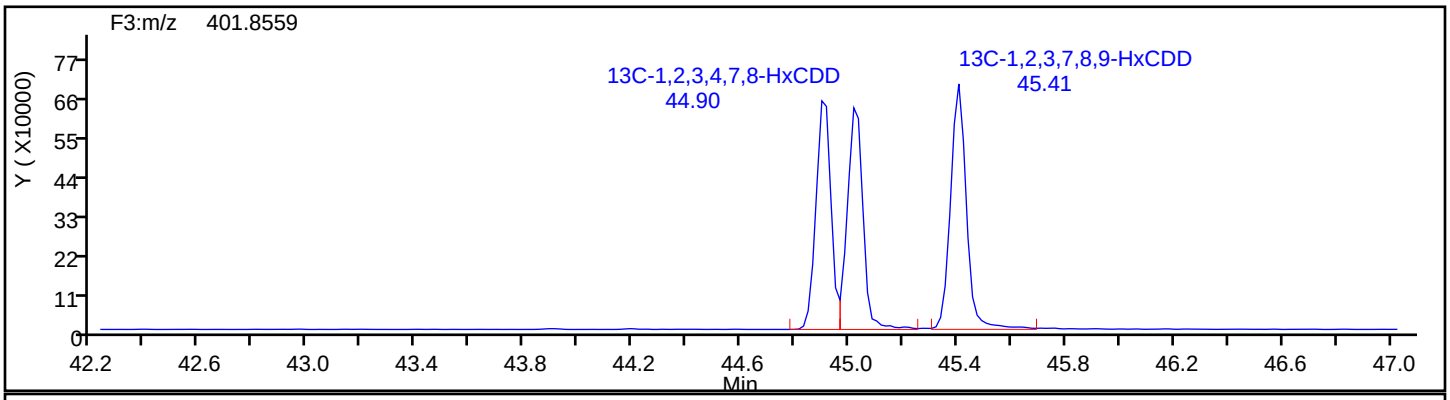
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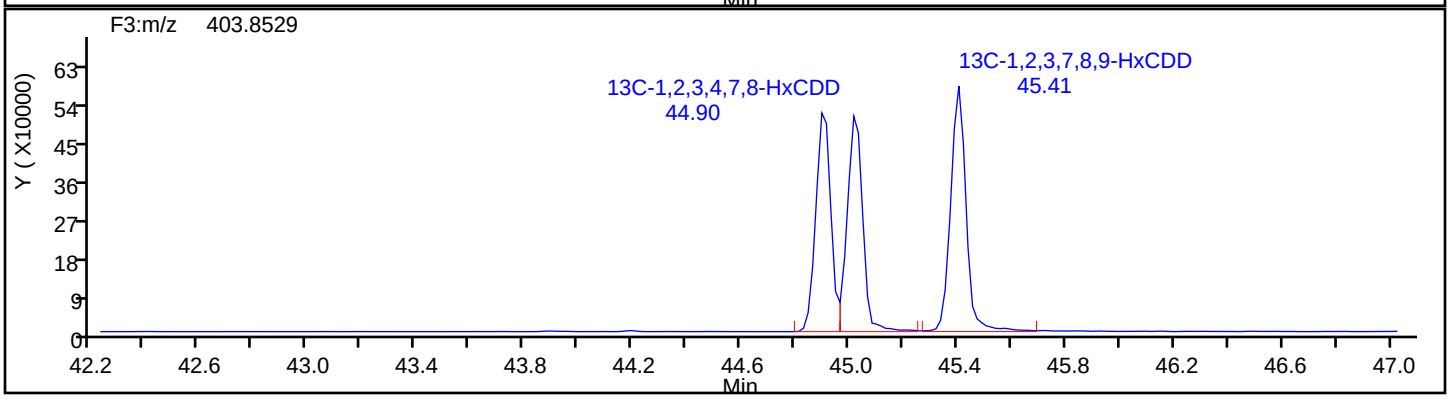
HxCDD




HxCDD Standards



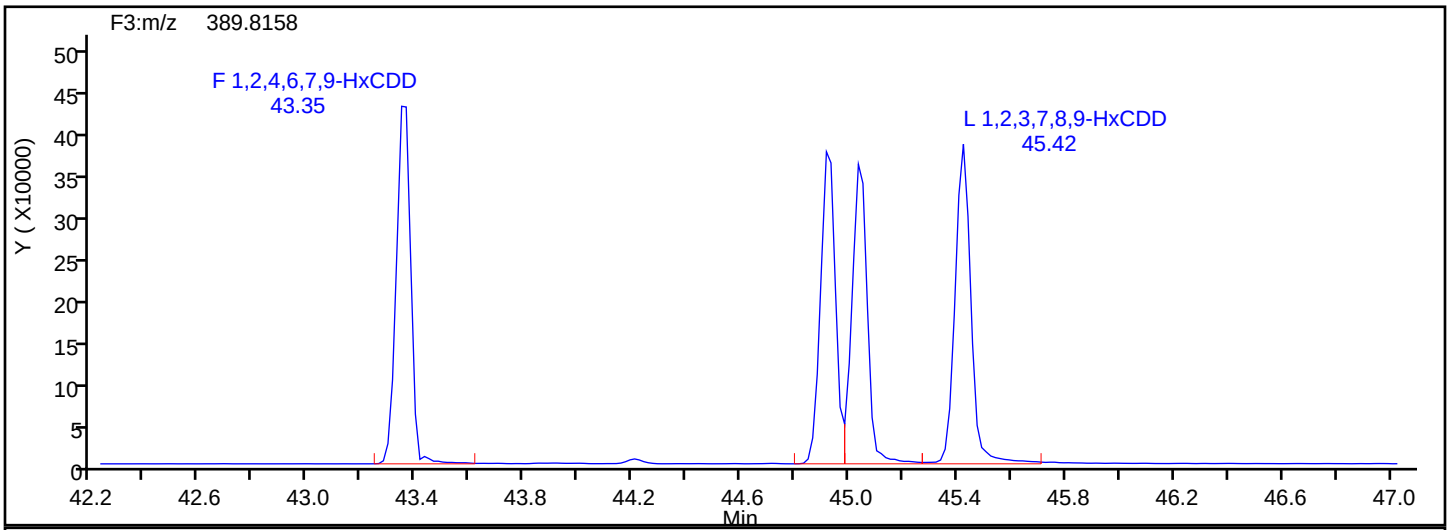



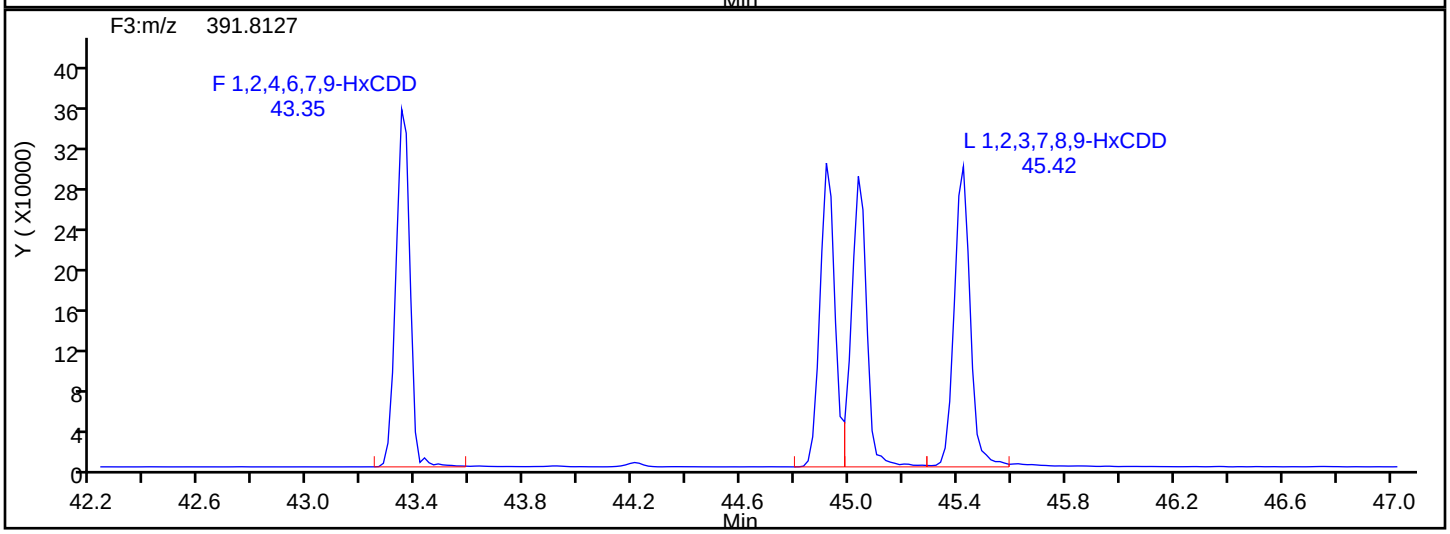
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TestAmerica Knoxville

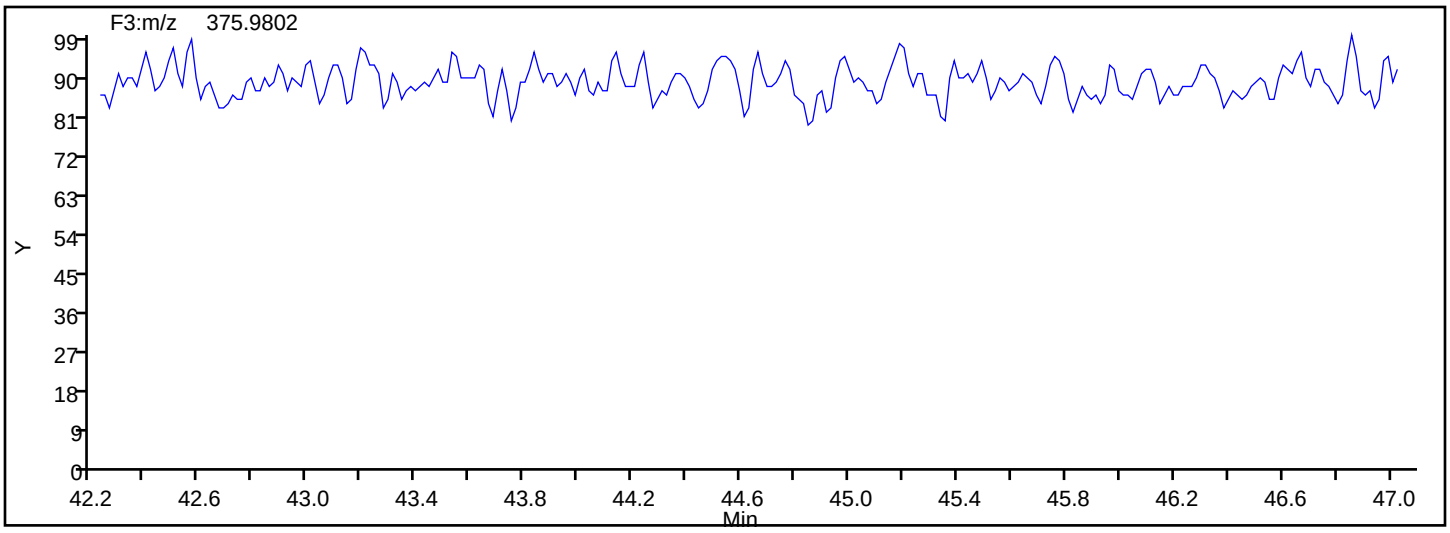
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HxCDD




HxCDD Lock Mass



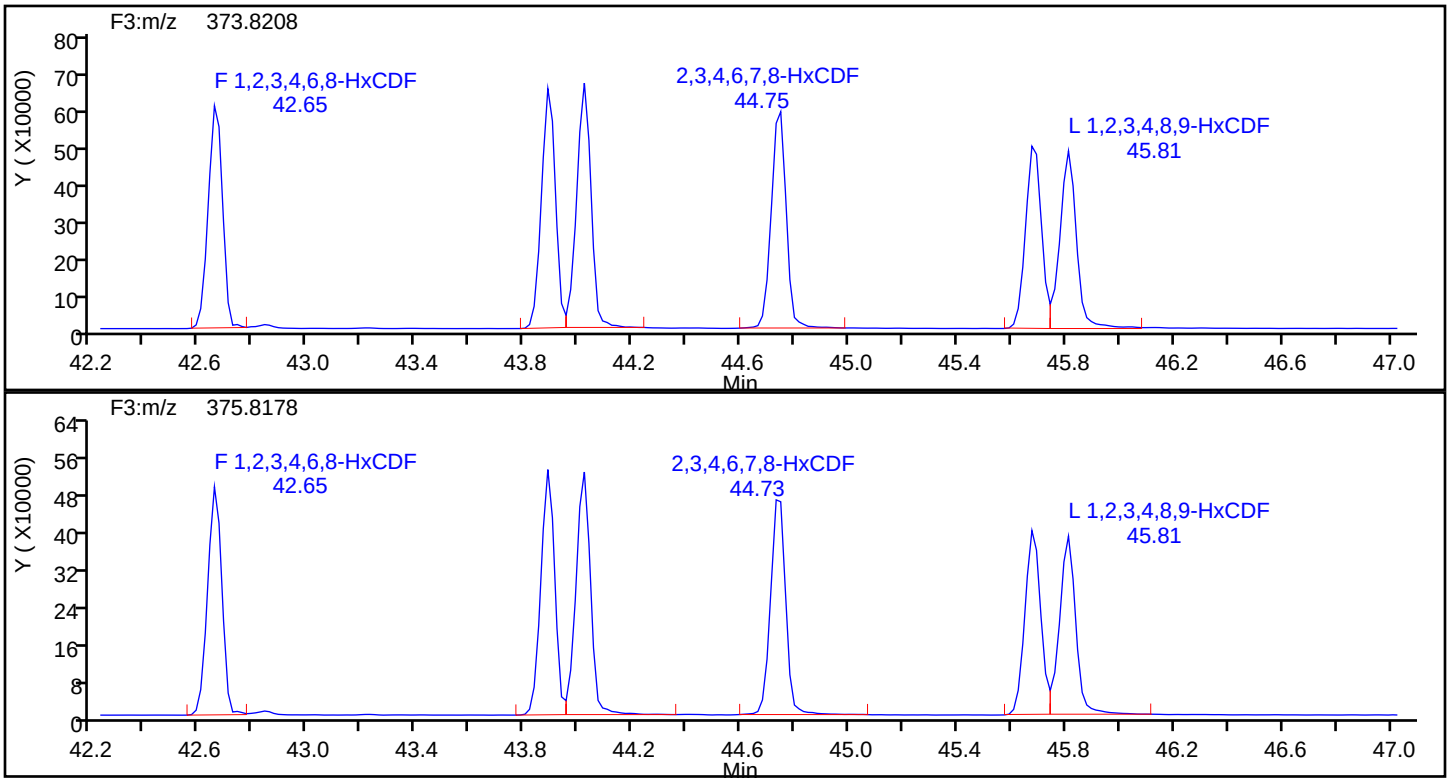
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TestAmerica Knoxville

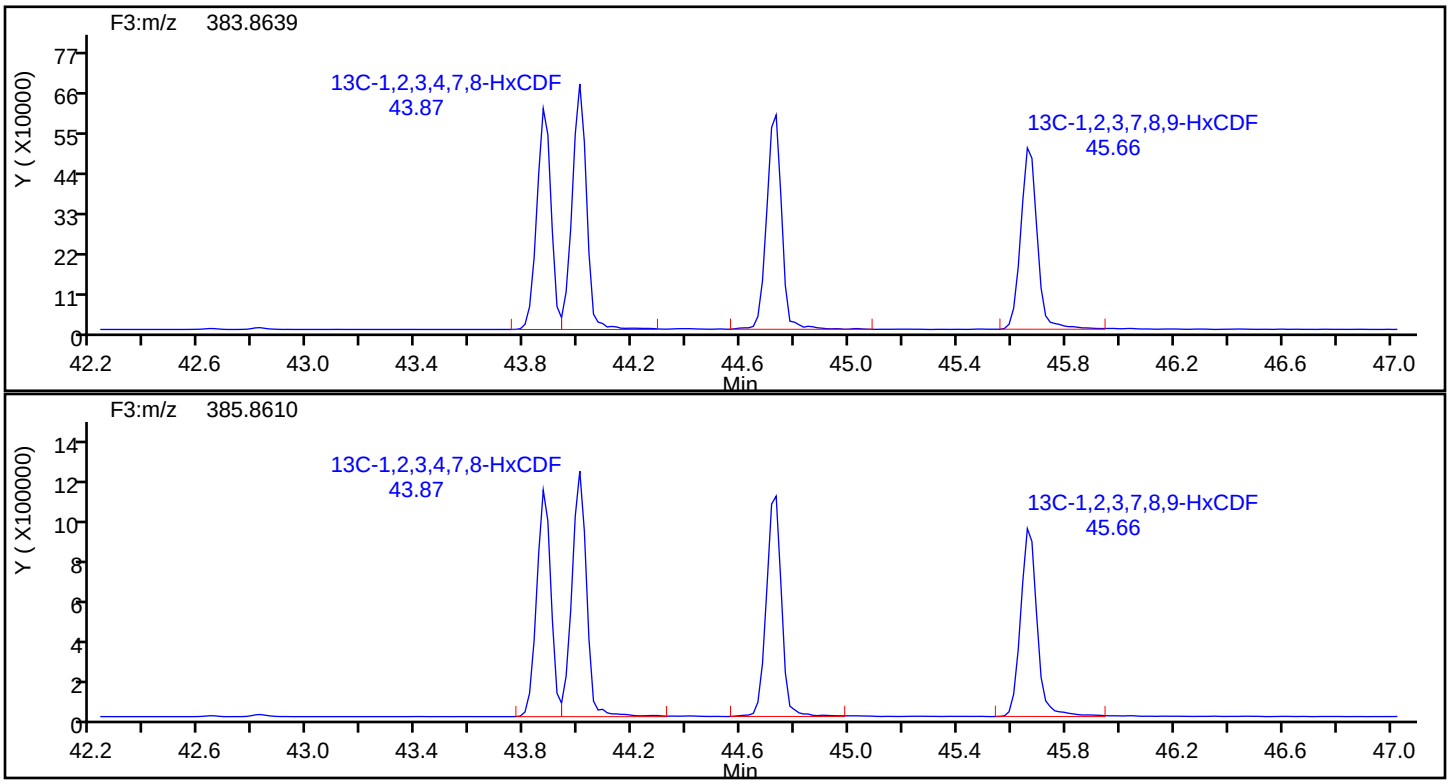
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HxCDF




HxCDF Standards



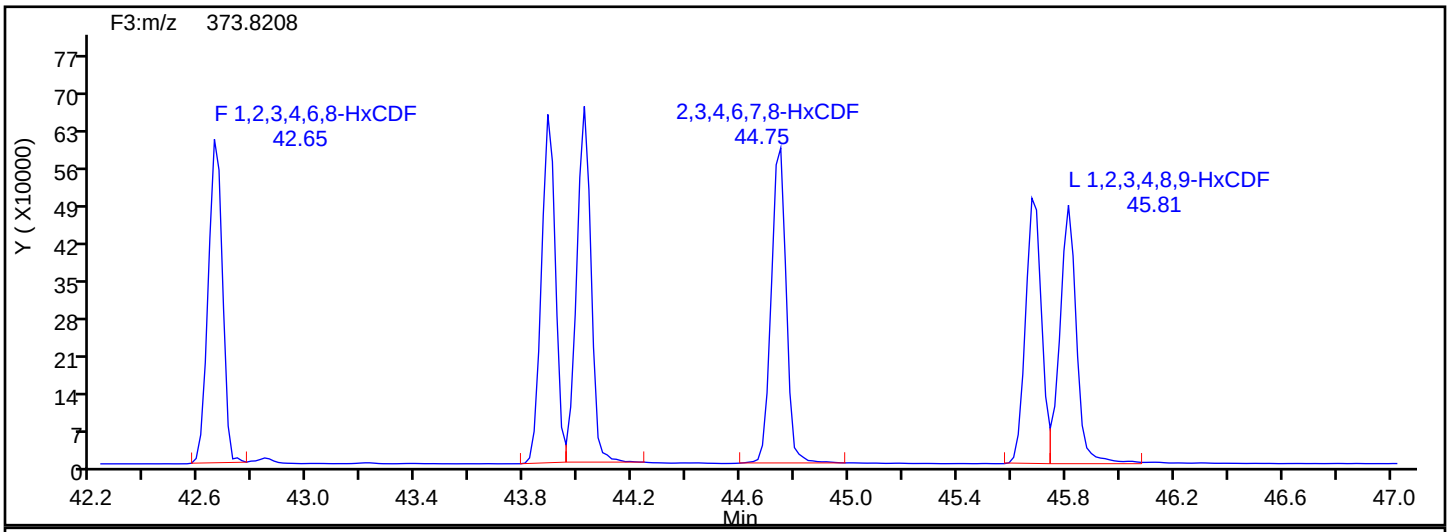
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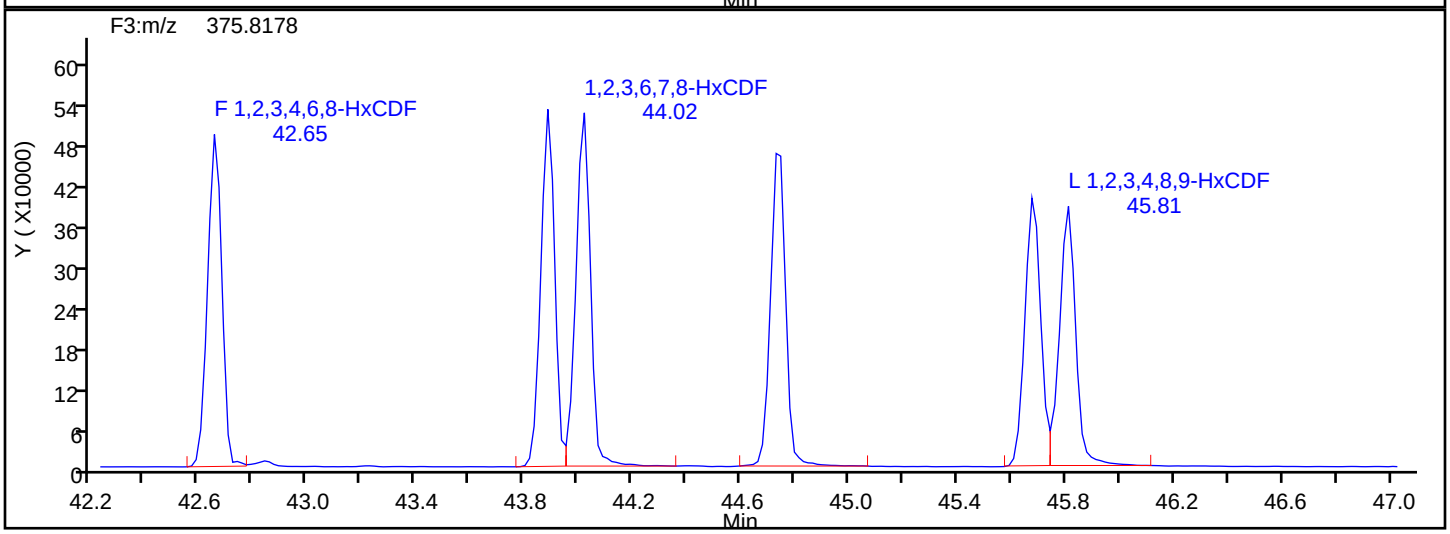
TestAmerica Knoxville

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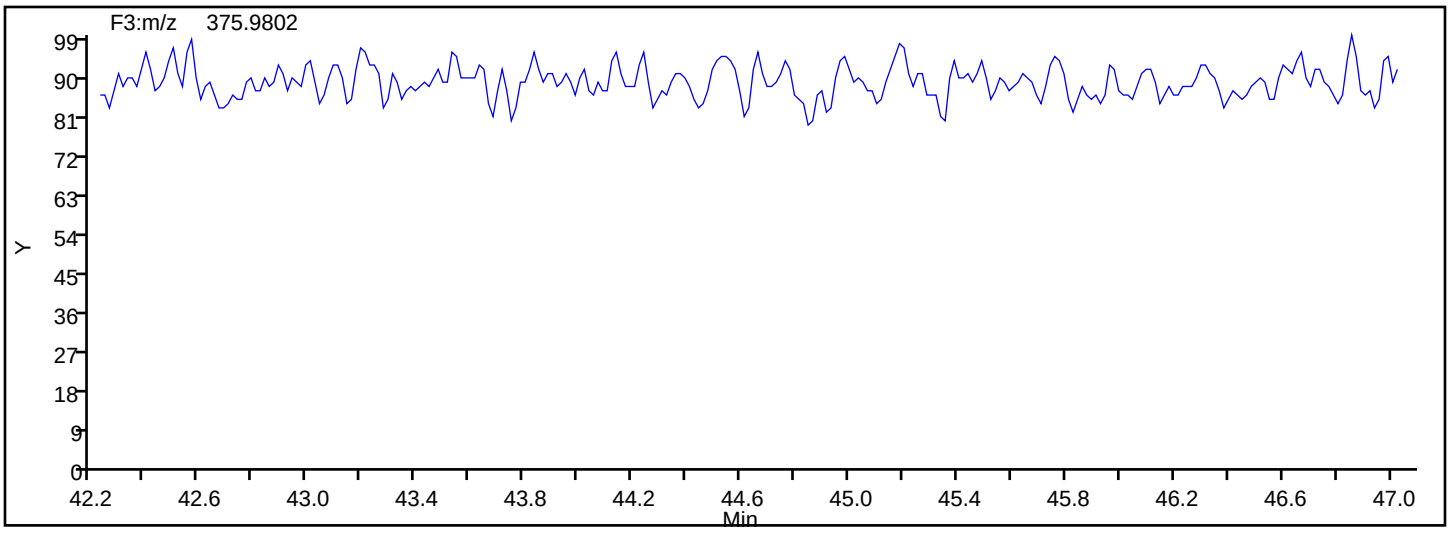
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HxCDF




HxCDF Lock Mass



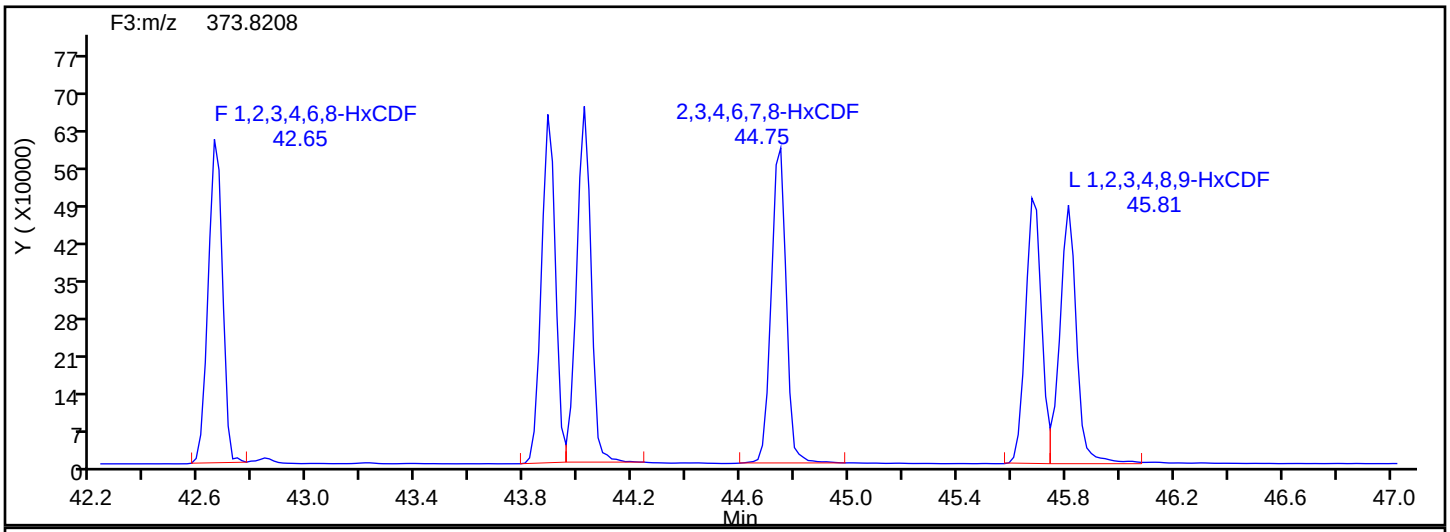
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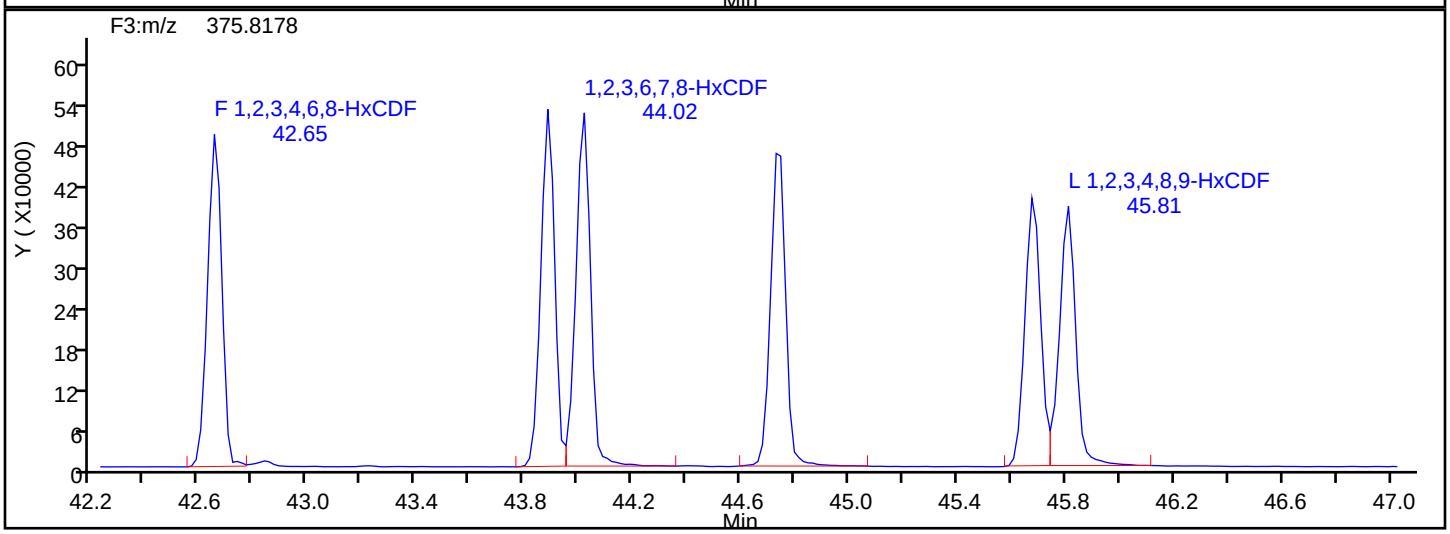
TestAmerica Knoxville

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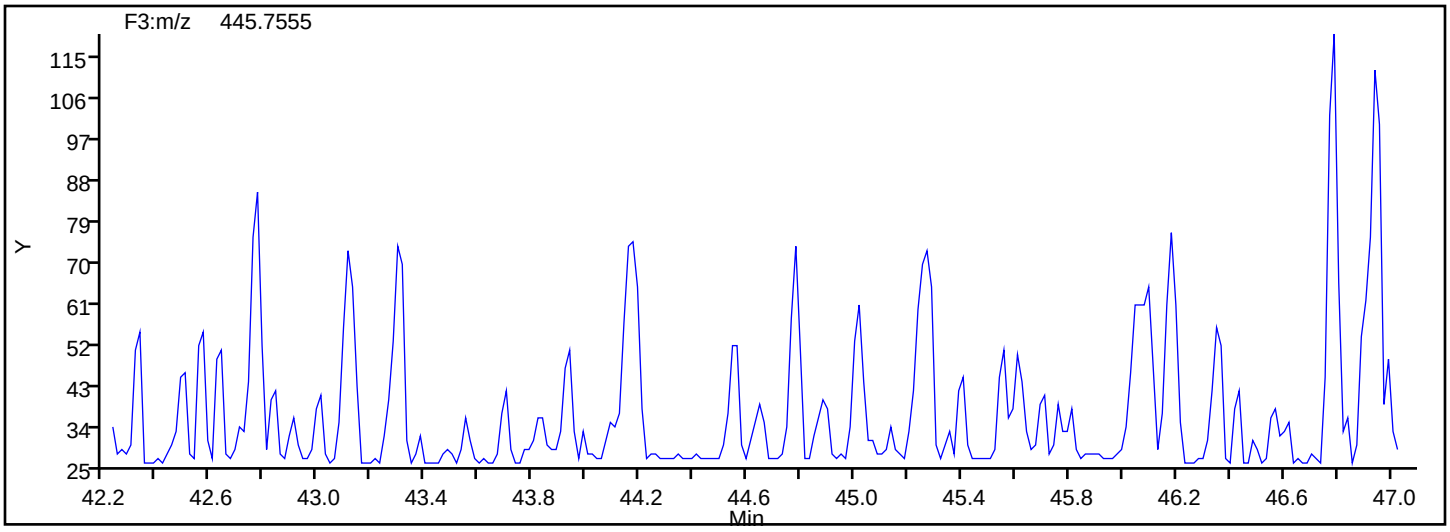
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HxCDF




HxCDF Interference Mass



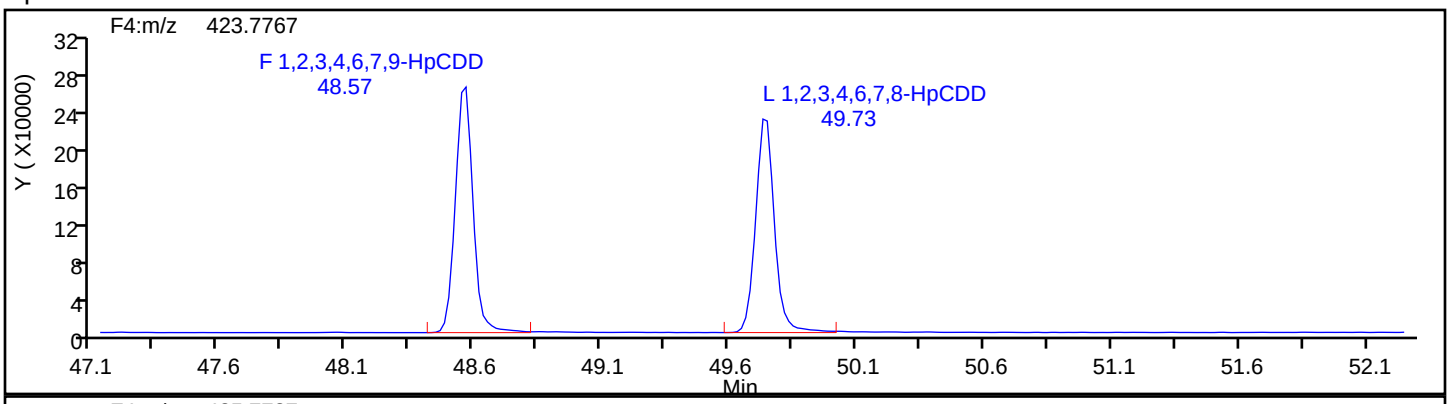
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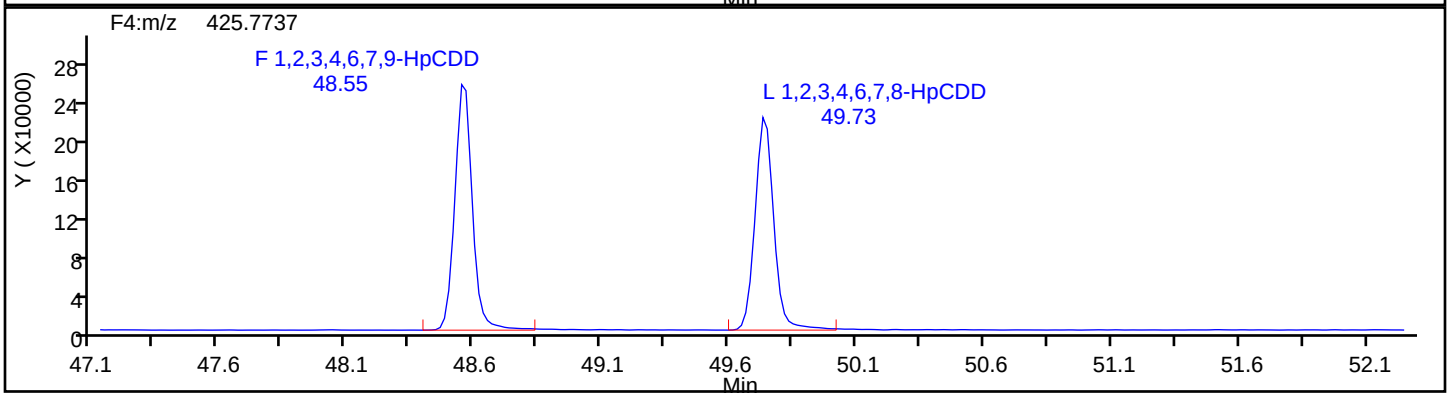
TestAmerica Knoxville

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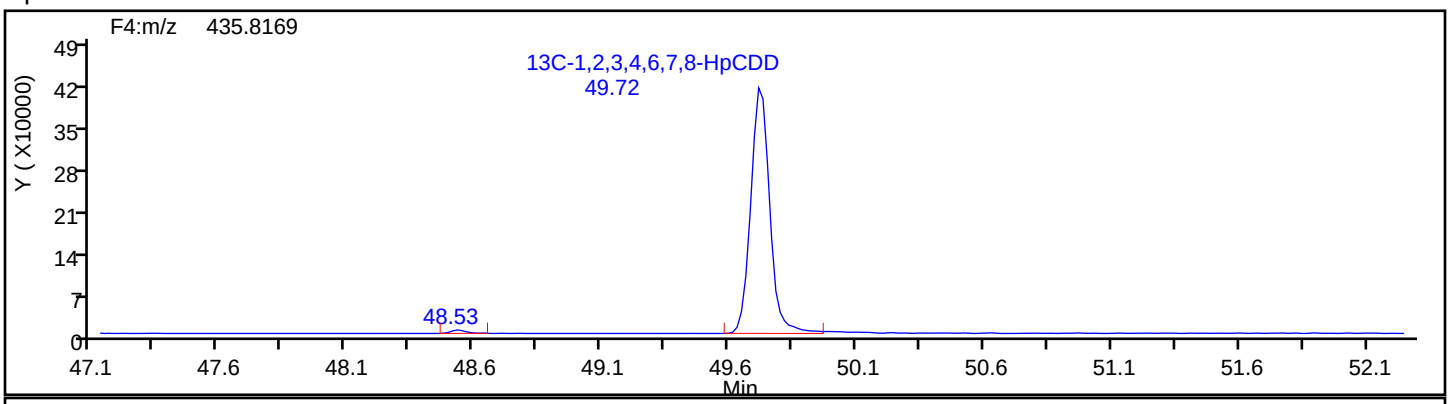
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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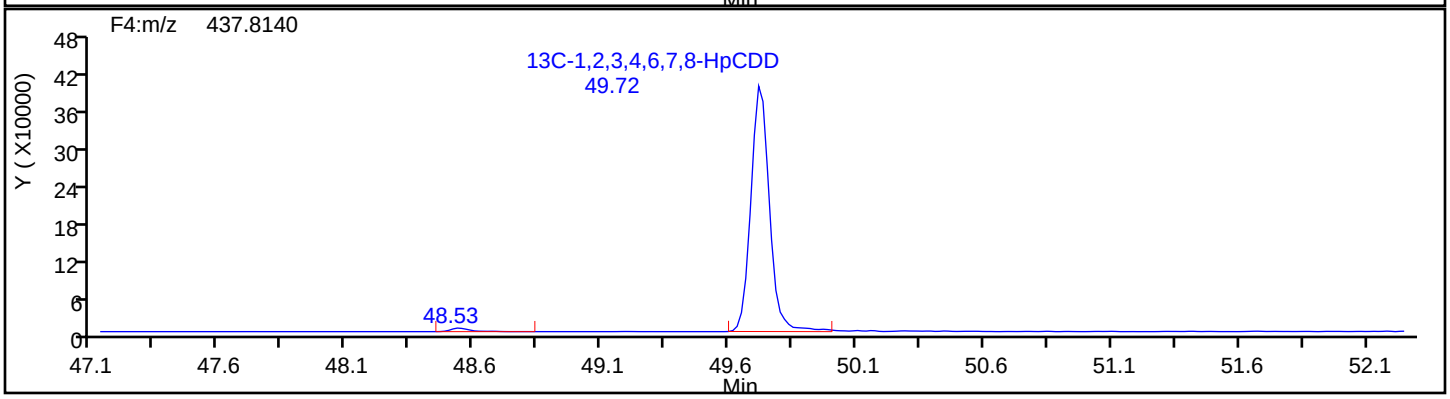
HpCDD




HpCDD Standards



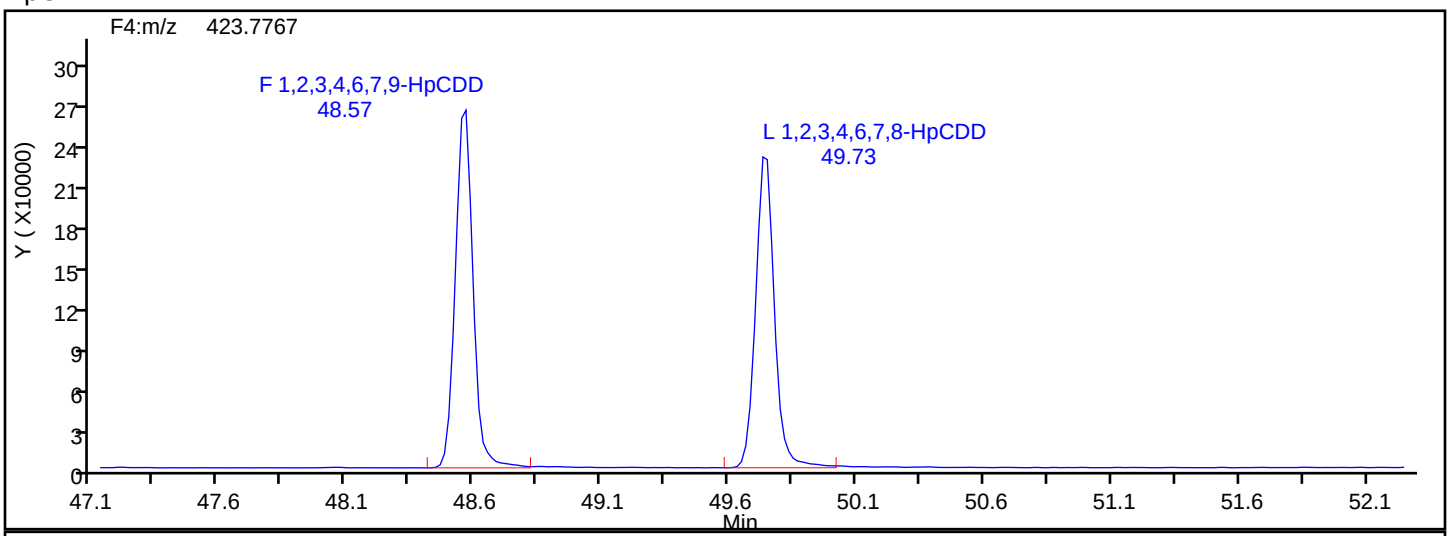
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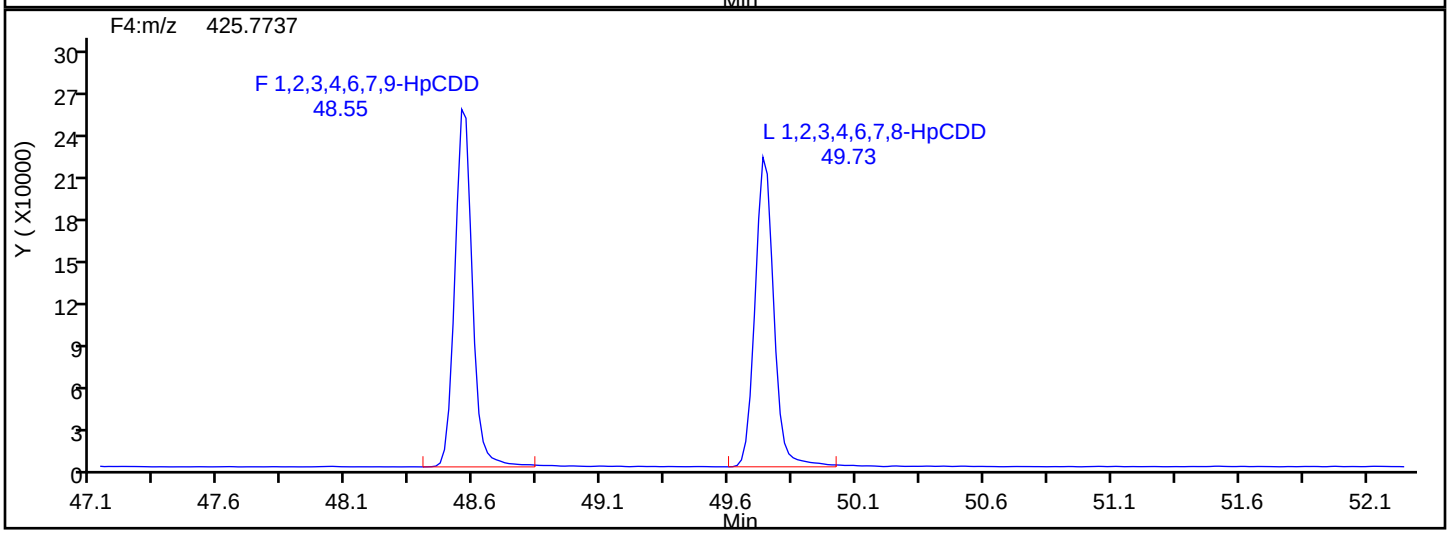
TestAmerica Knoxville

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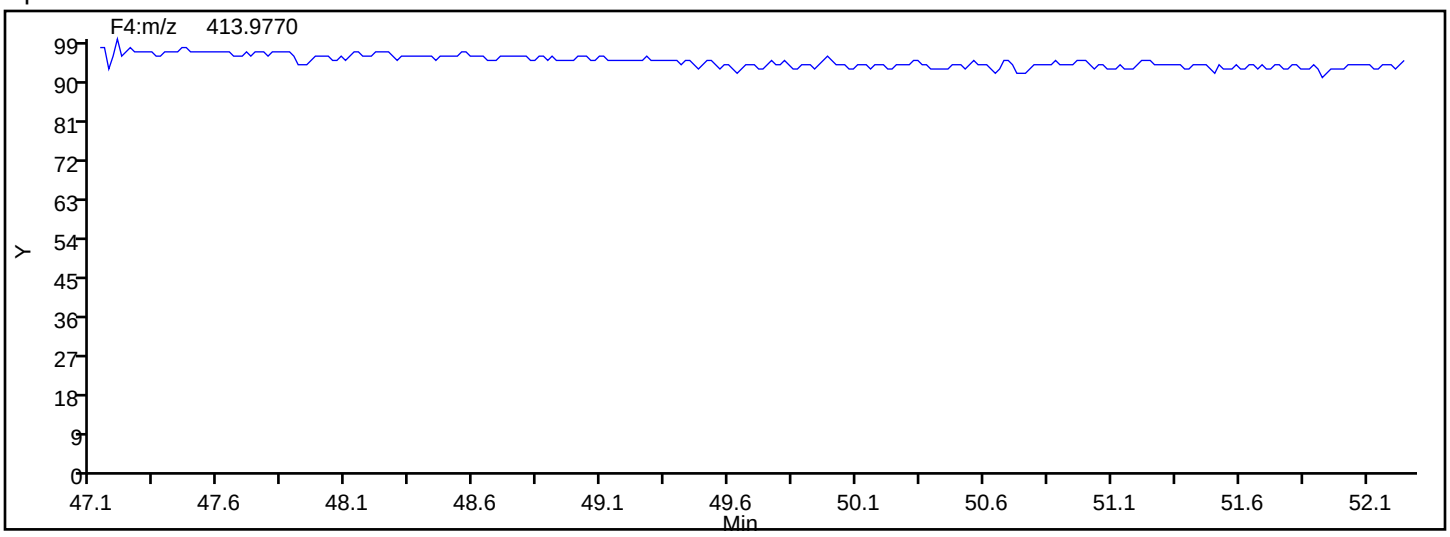
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HpCDD




HpCDD Lock Mass



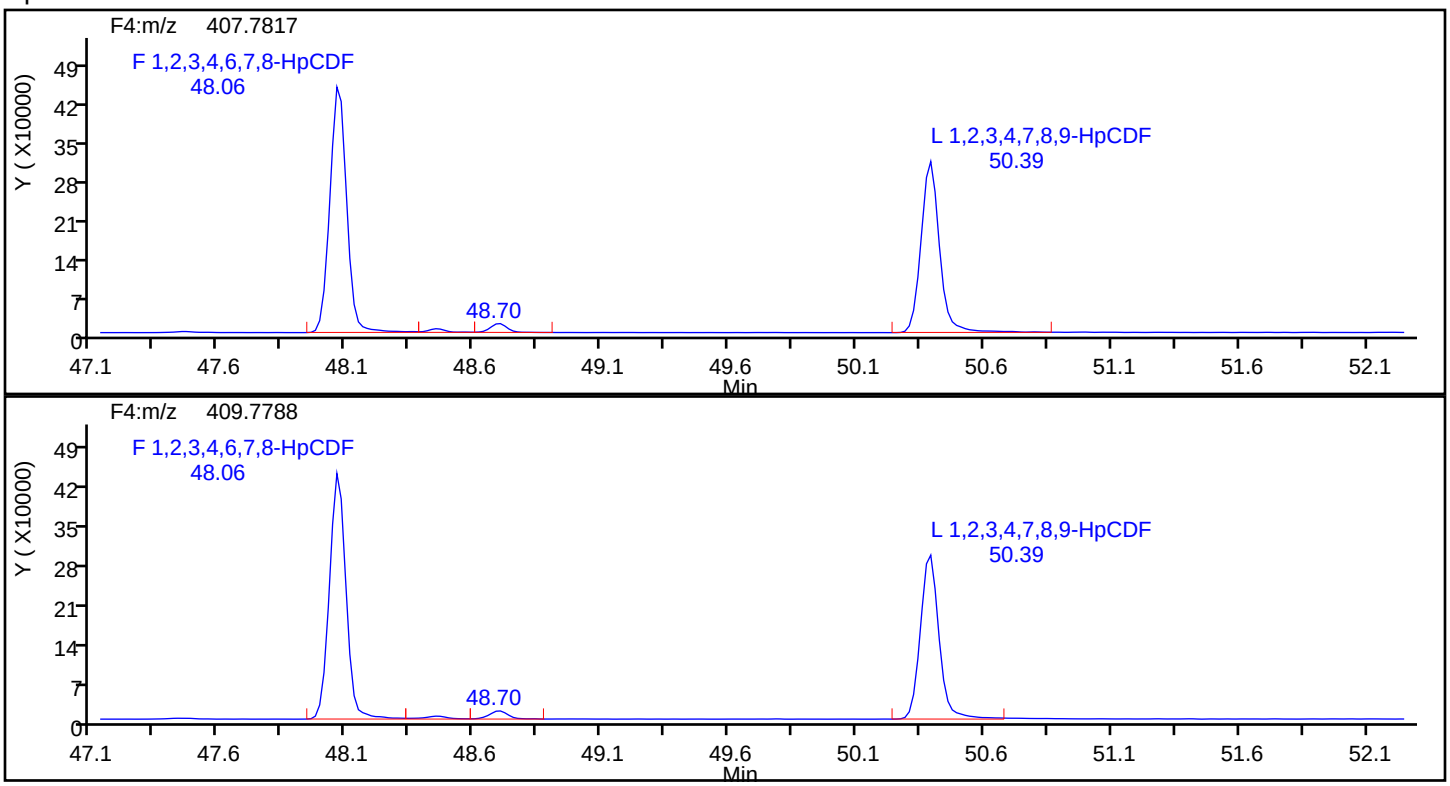
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TestAmerica Knoxville

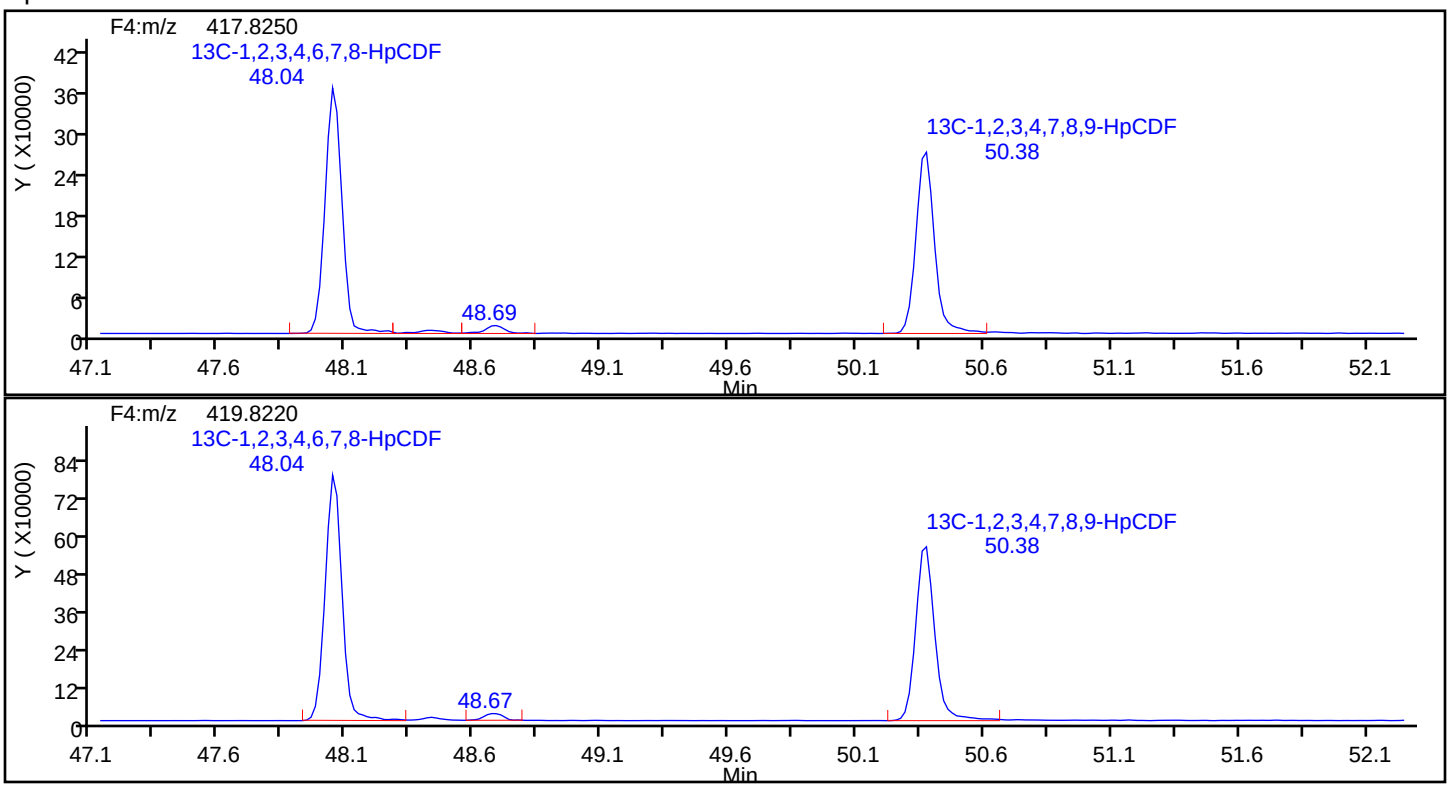
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HpCDF




HpCDF Standards



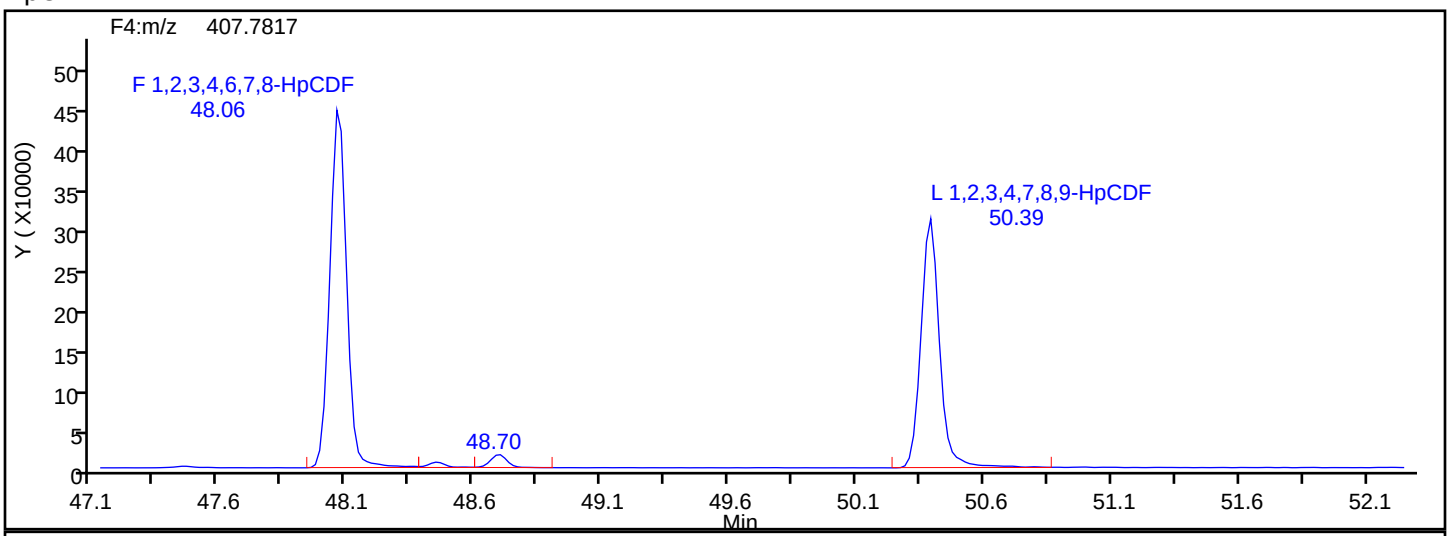
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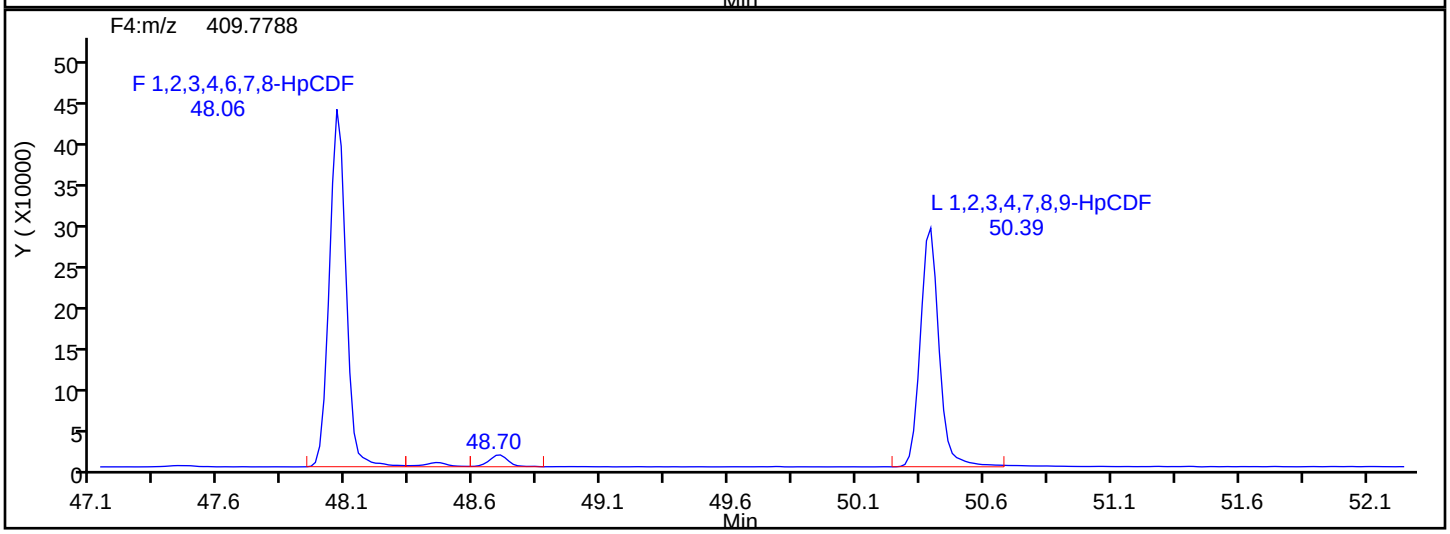
TestAmerica Knoxville

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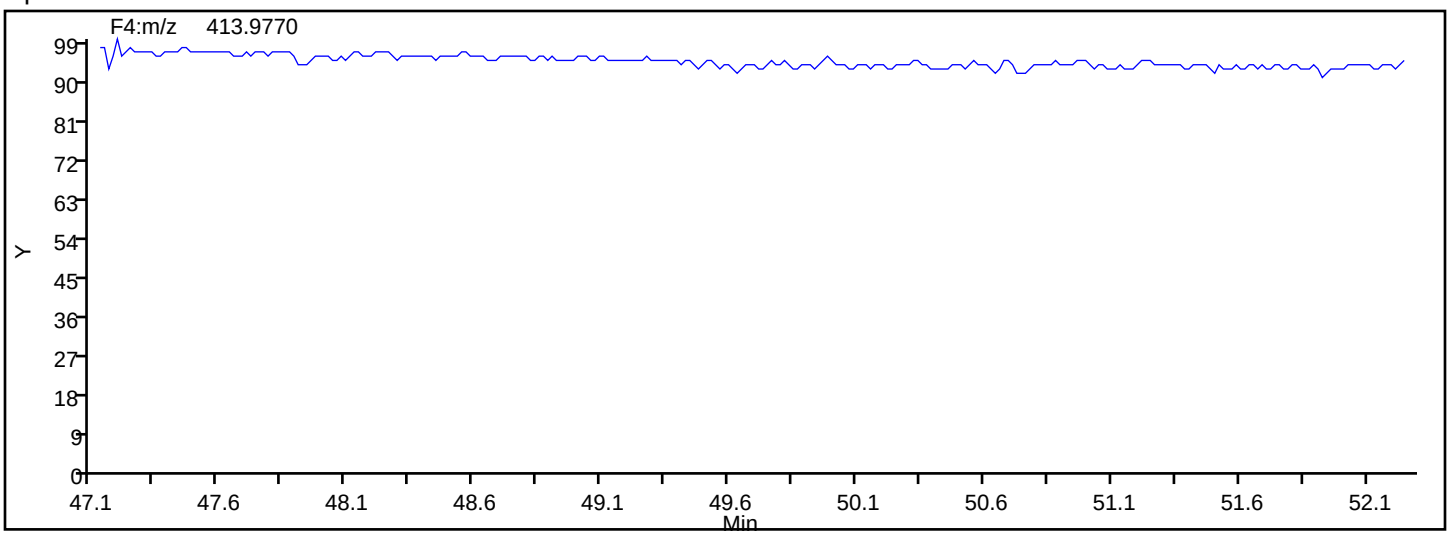
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HpCDF




HpCDF Lock Mass



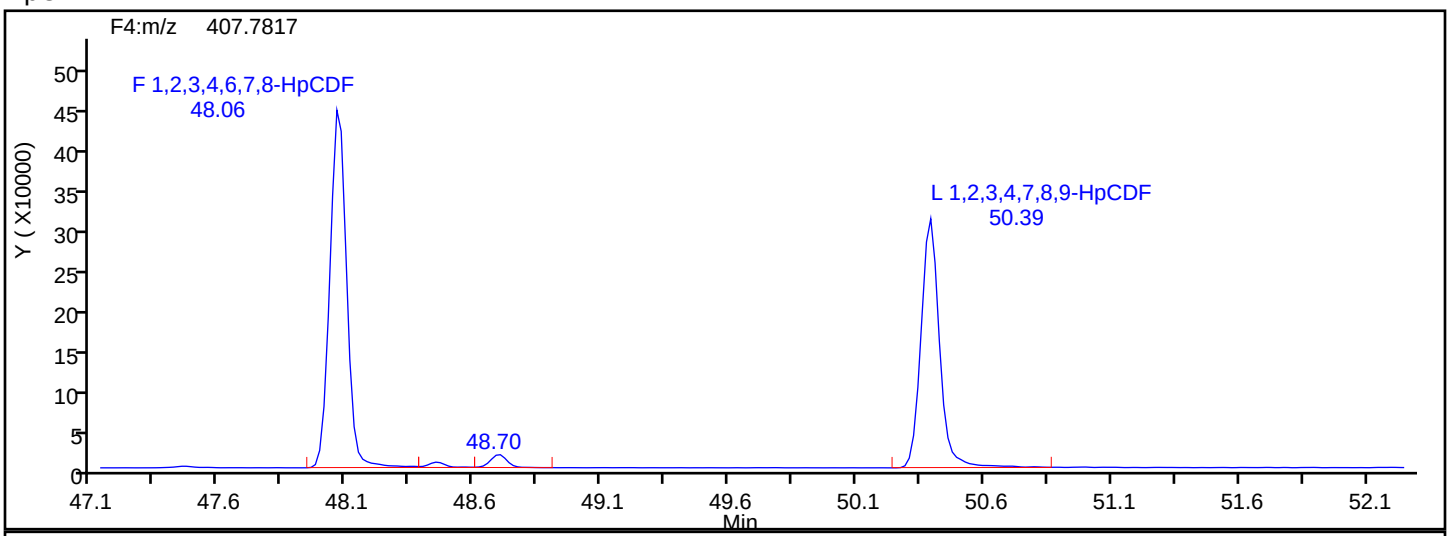
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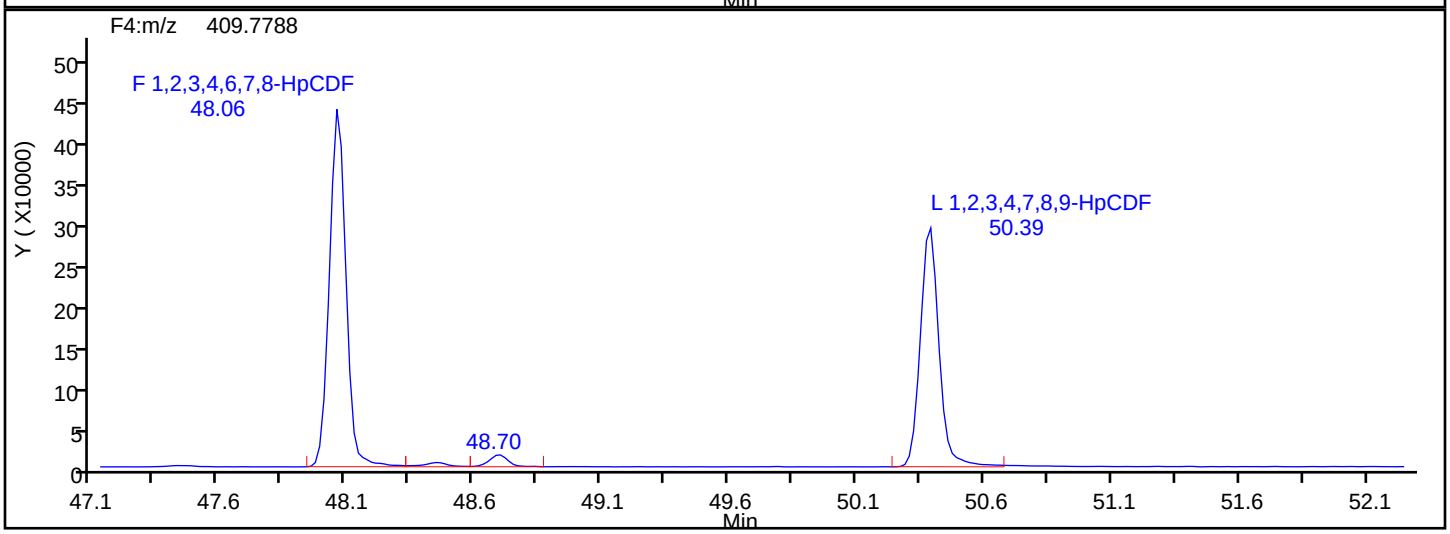
TestAmerica Knoxville

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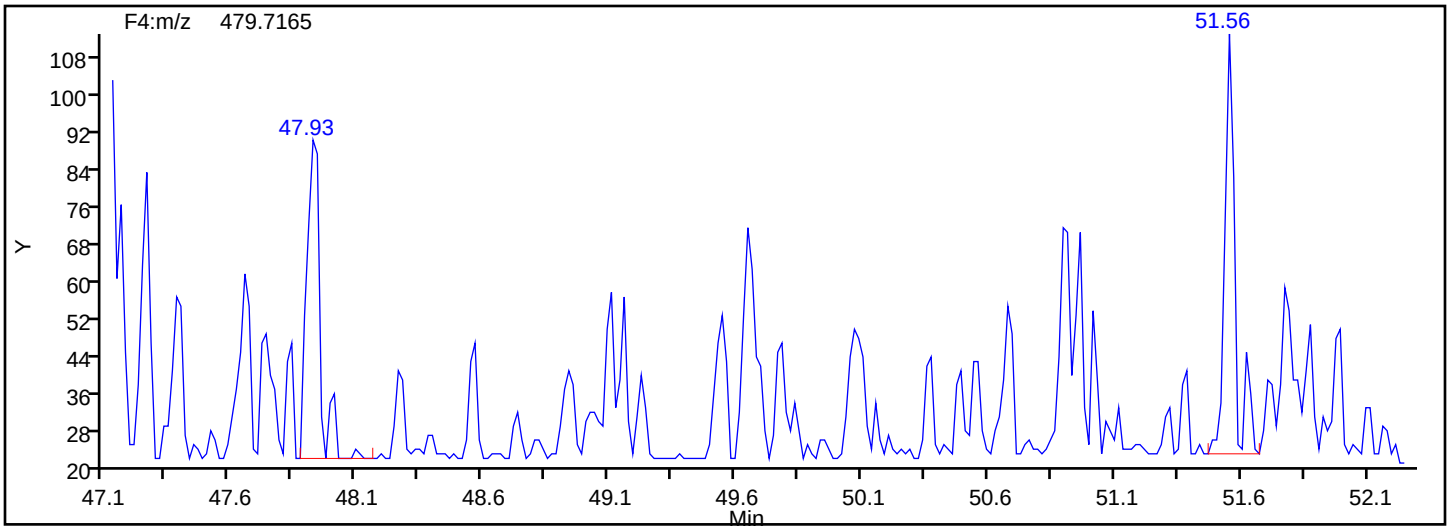
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HpCDF




HpCDF Interference Mass



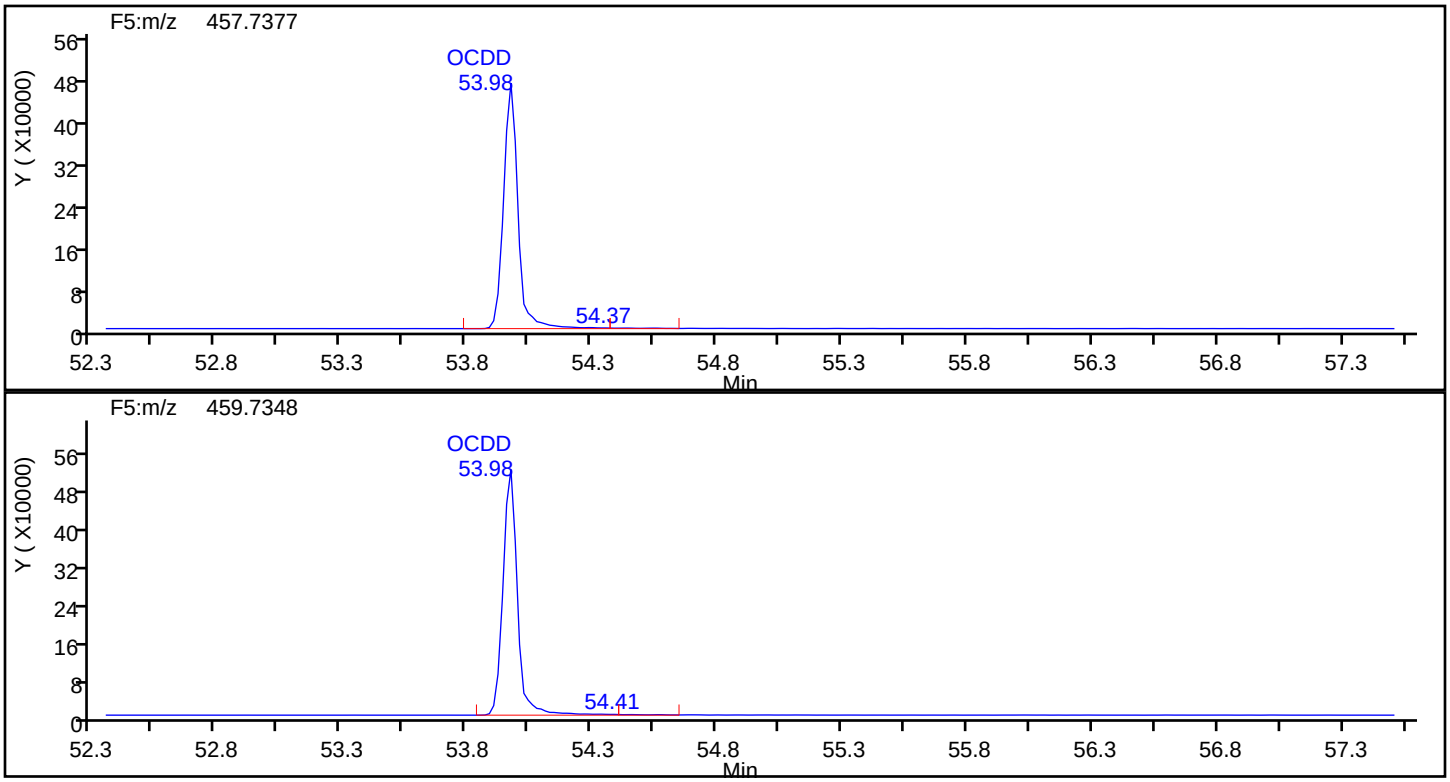
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TestAmerica Knoxville

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| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

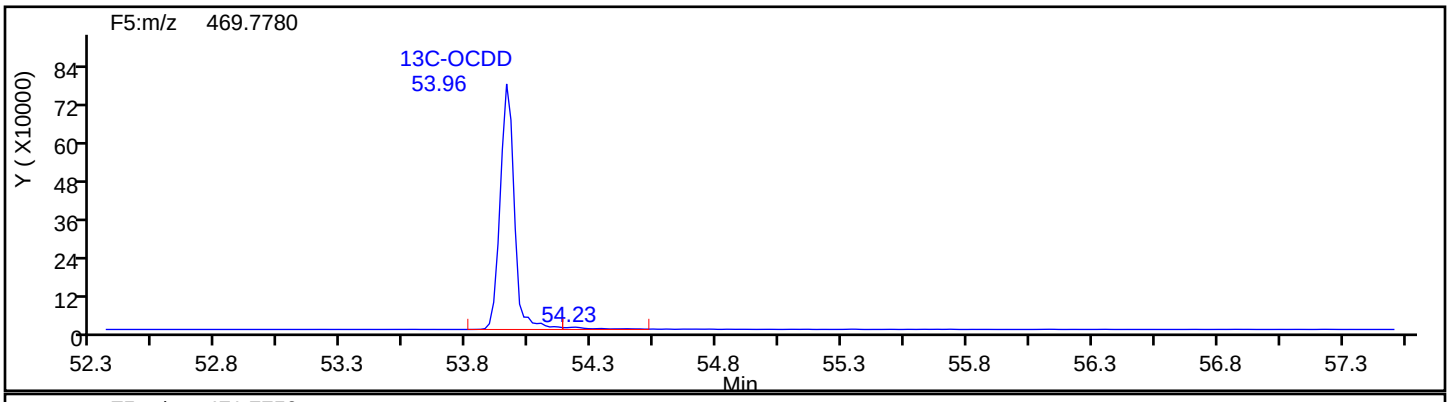
OCDD

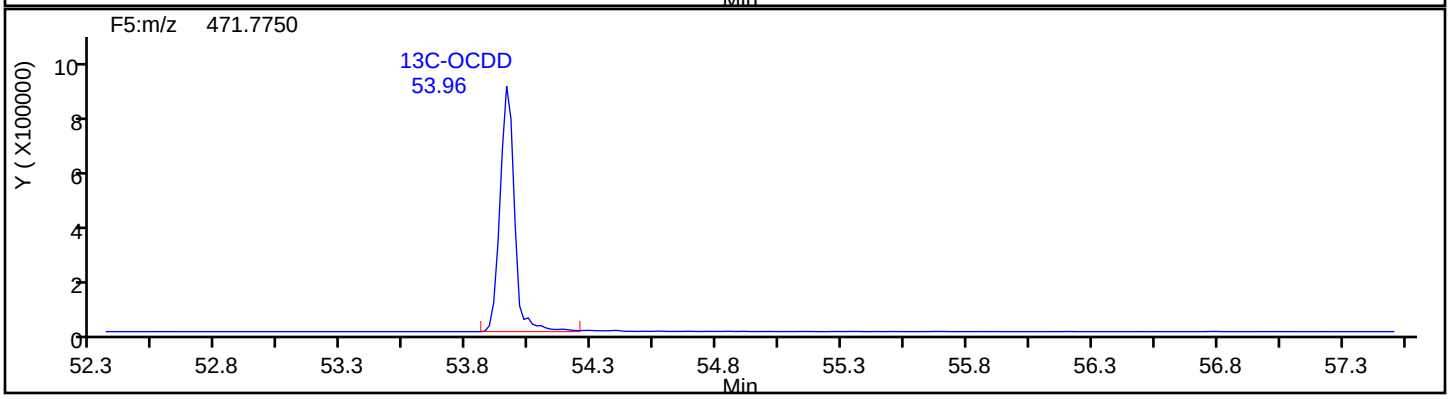






OCDD Standards



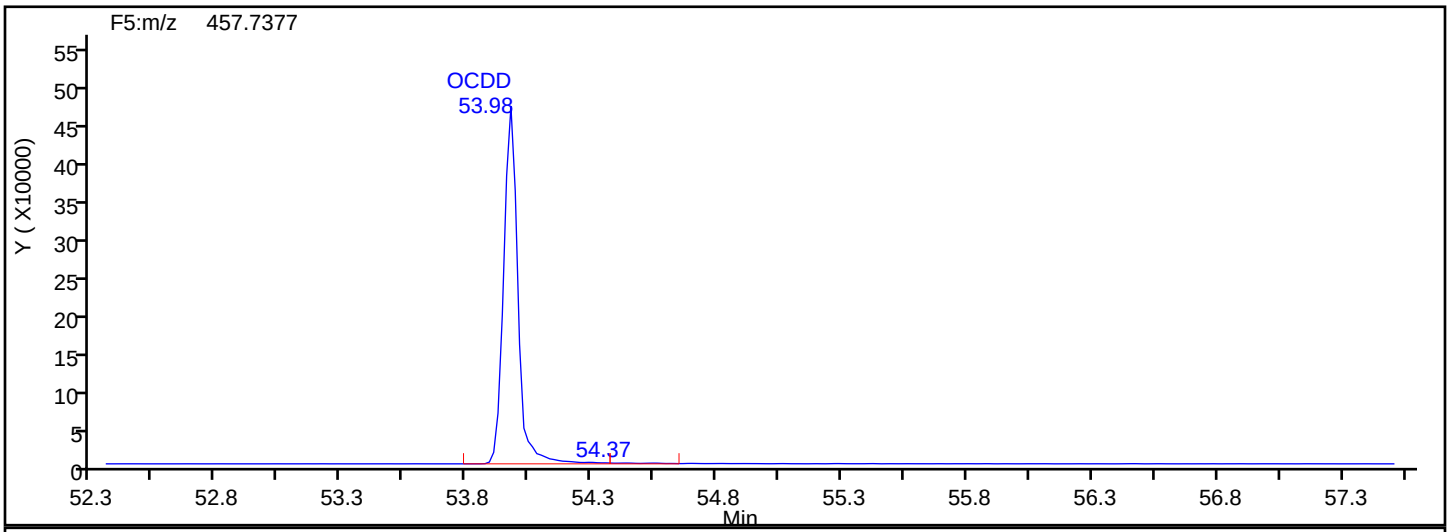



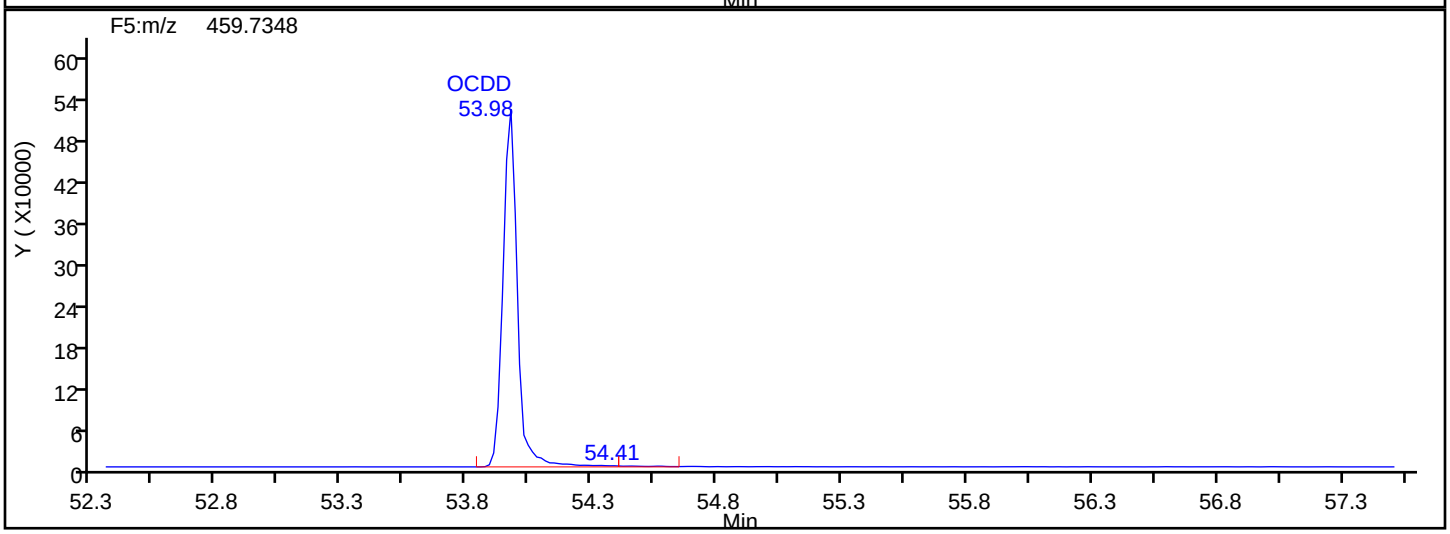
Report Date: 28-Jan-2019 02:09:08 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Knoxville

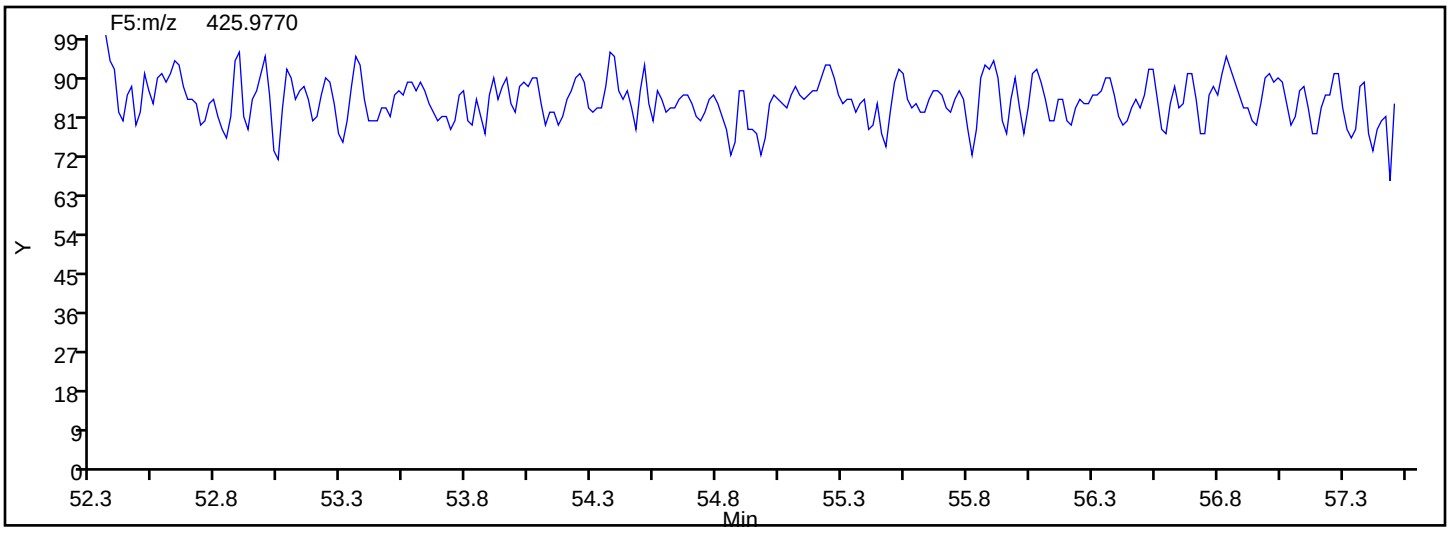
| | | | |
|---|---|---|---|
| Data File: | \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d | | |
| Injection Date: | 28-Jan-2019 01:01:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

OCDD




OCDD Lock Mass



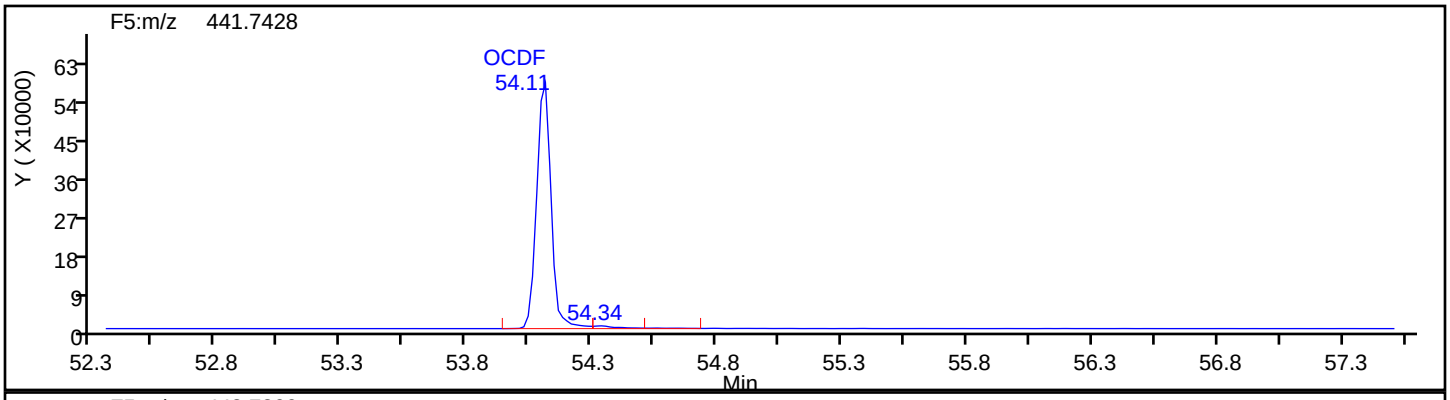
Report Date: 28-Jan-2019 02:09:08 Chrom Revision: 2.3 15-Jan-2019 08:51:34

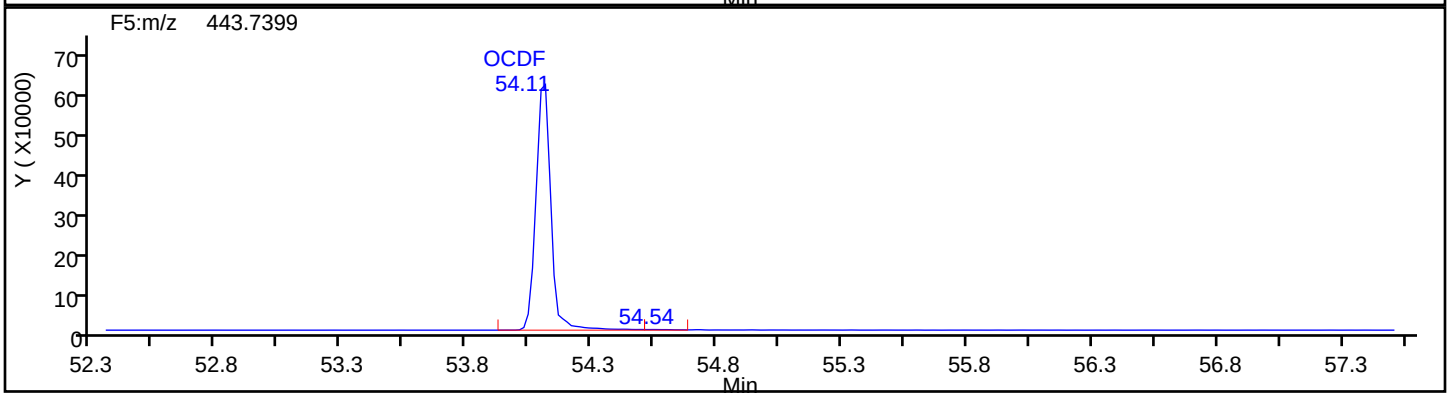
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d

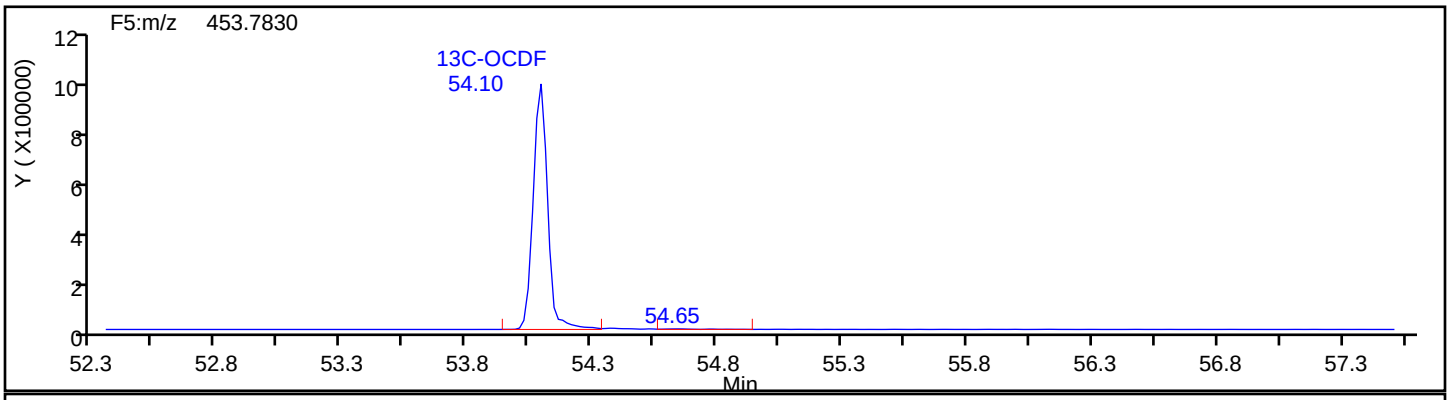
| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 01:01:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

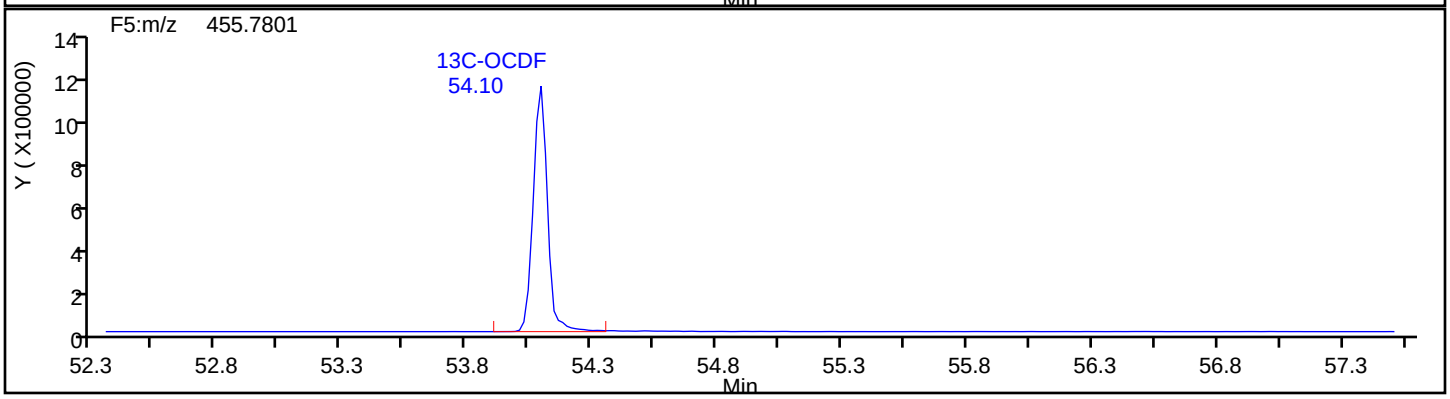
OCDF




OCDF Standards



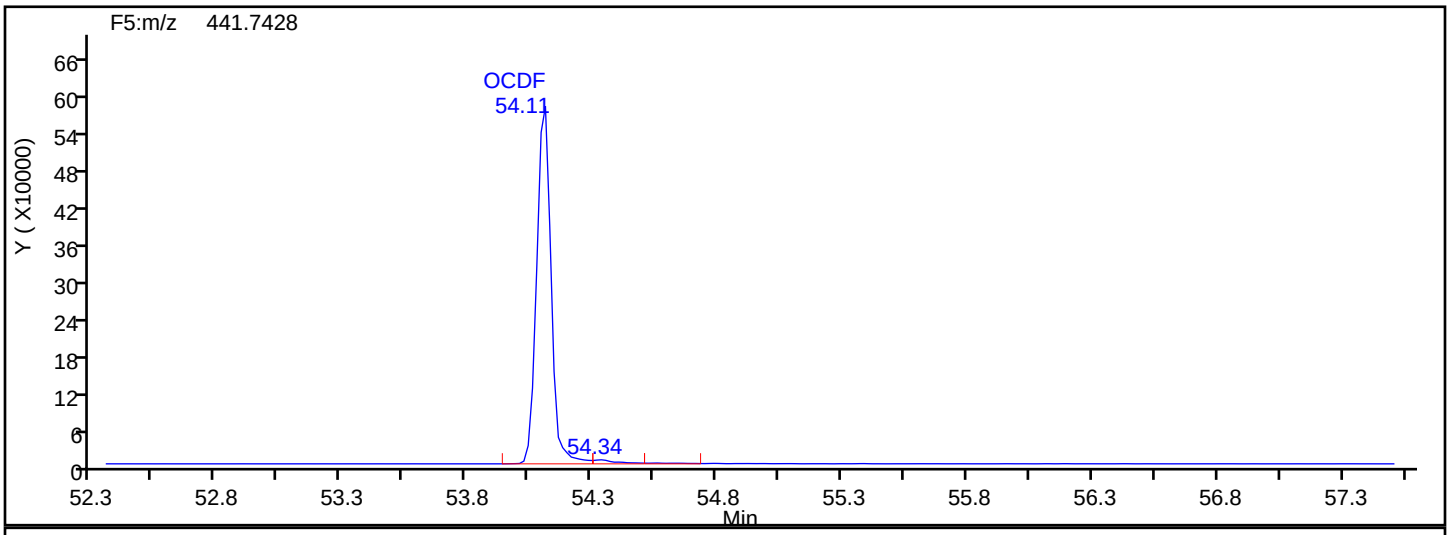
Report Date: 28-Jan-2019 02:09:08 Chrom Revision: 2.3 15-Jan-2019 08:51:34

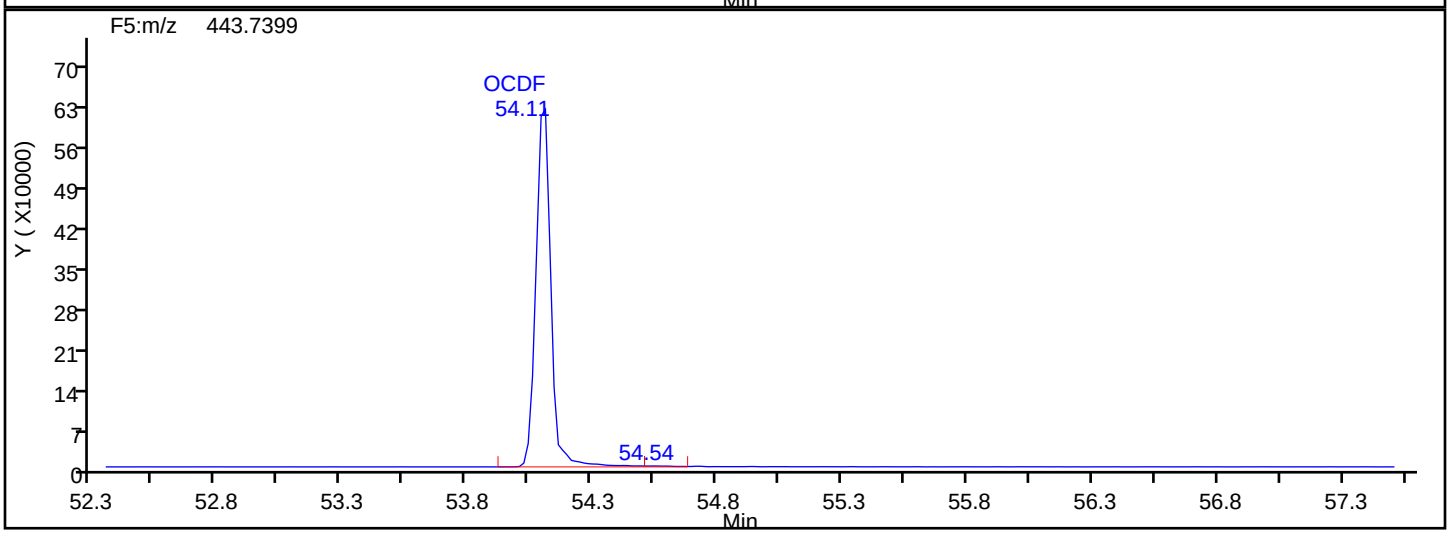
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d

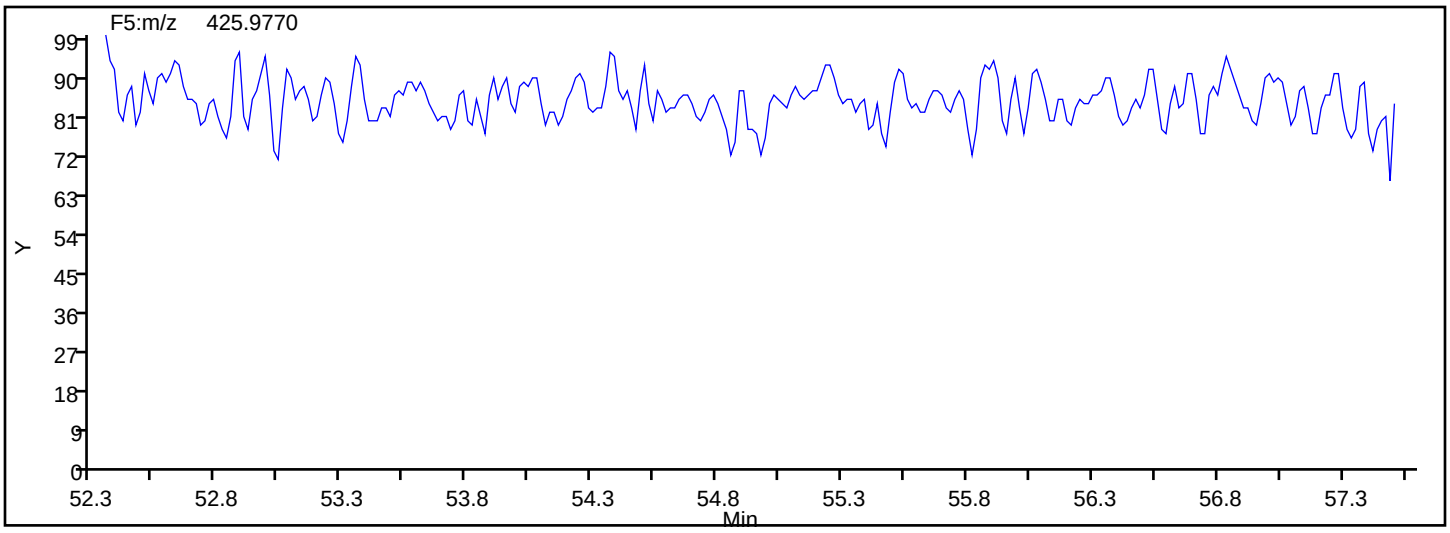
| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 01:01:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Lock Mass



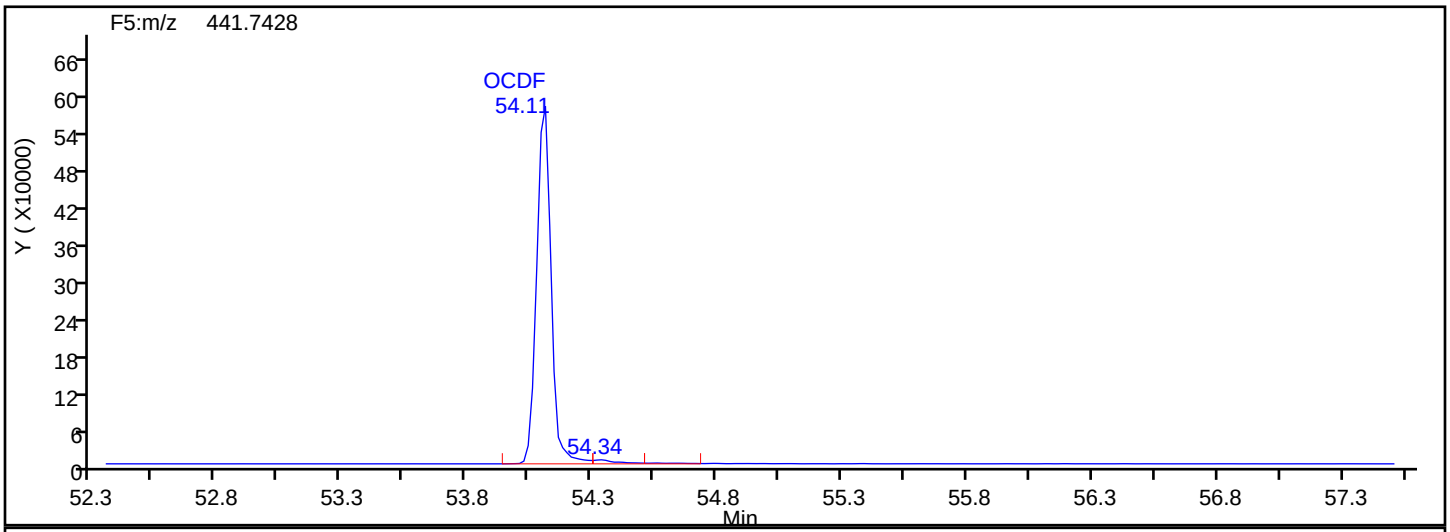
Report Date: 28-Jan-2019 02:09:08 Chrom Revision: 2.3 15-Jan-2019 08:51:34

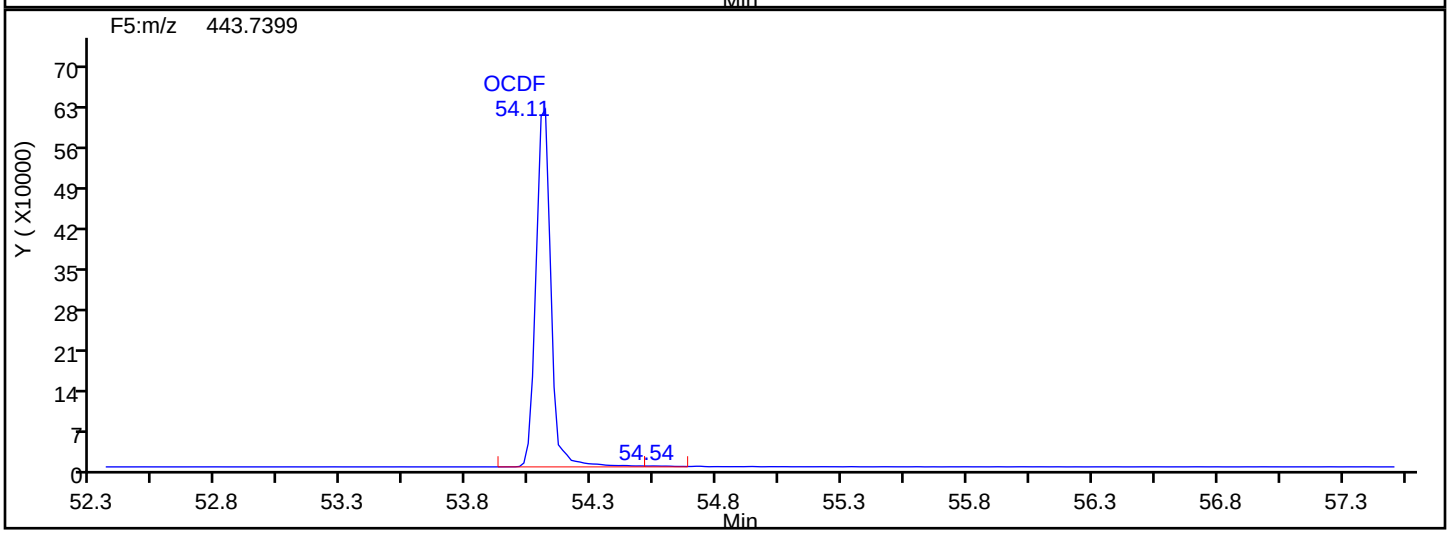
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\d3190128s1.d

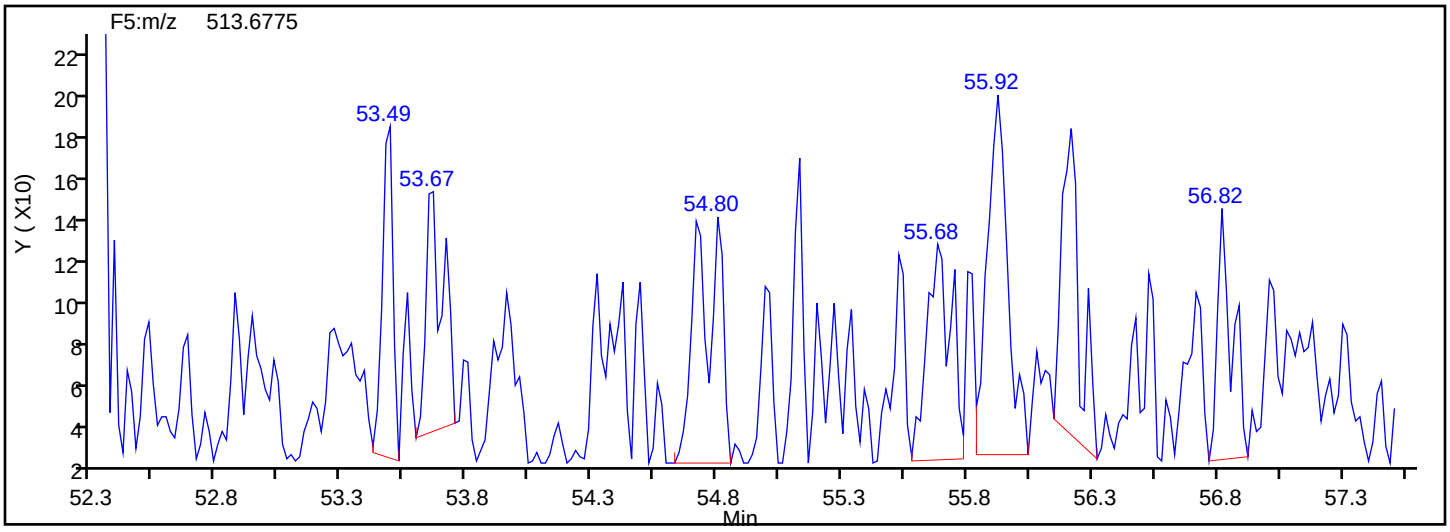
| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 01:01:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Interference Mass



FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville  Job No.: 160-32649-1

SDG No.:

Lab Sample ID: WDMCCV 140-27242/1  Calibration Date: 01/29/2019 09:51

Instrument ID: D2A  Calib Start Date: 05/16/2014 14:26

GC Column: RTX-5  ID: 0.32(mm)  Calib End Date: 05/16/2014 18:31

Lab File ID: d3190129s2.d  Conc. Units: pg/uL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %REC | %REC LIMITS |
|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDF | AveID | 1.088 | 1.081 | | 9.93 | 10.0 | 99 | 84-120 |
| 2,3,7,8-TCDD | AveID | 1.173 | 1.159 | | 9.88 | 10.0 | 99 | 78-129 |
| 1,2,3,7,8-PeCDF | AveID | 1.190 | 1.121 | | 47.1 | 50.0 | 94 | 82-120 |
| 2,3,4,7,8-PeCDF | AveID | 1.109 | 1.078 | | 48.6 | 50.0 | 97 | 82-122 |
| 1,2,3,7,8-PeCDD | AveID | 1.043 | 1.008 | | 48.3 | 50.0 | 97 | 78-130 |
| 1,2,3,4,7,8-HxCDF | AveID | 1.363 | 1.389 | | 51.0 | 50.0 | 102 | 90-112 |
| 1,2,3,6,7,8-HxCDF | AveID | 1.276 | 1.217 | | 47.7 | 50.0 | 95 | 88-114 |
| 2,3,4,6,7,8-HxCDF | AveID | 1.265 | 1.261 | | 49.8 | 50.0 | 100 | 88-114 |
| 1,2,3,4,7,8-HxCDD | AveID | 1.141 | 1.103 | | 48.4 | 50.0 | 97 | 78-128 |
| 1,2,3,6,7,8-HxCDD | AveID | 1.148 | 1.117 | | 48.7 | 50.0 | 97 | 78-128 |
| 1,2,3,7,8,9-HxCDD | AveID | 1.221 | 1.167 | | 47.8 | 50.0 | 96 | 82-122 |
| 1,2,3,7,8,9-HxCDF | AveID | 1.257 | 1.166 | | 46.4 | 50.0 | 93 | 90-112 |
| 1,2,3,4,6,7,8-HpCDF | AveID | 1.498 | 1.478 | | 49.3 | 50.0 | 99 | 90-110 |
| 1,2,3,4,6,7,8-HpCDD | AveID | 1.120 | 1.143 | | 51.0 | 50.0 | 102 | 86-116 |
| 1,2,3,4,7,8,9-HpCDF | AveID | 1.381 | 1.412 | | 51.1 | 50.0 | 102 | 86-116 |
| OCDD | AveID | 1.207 | 1.207 | | 100 | 100 | 100 | 79-126 |
| OCDF | AveID | 1.116 | 1.140 | | 102 | 100 | 102 | 63-159 |
| 13C-2,3,7,8-TCDF | Ave | 1.755 | 1.728 | | 98.5 | 100 | 99 | 71-140 |
| 13C-2,3,7,8-TCDD | Ave | 1.071 | 1.056 | | 98.6 | 100 | 99 | 82-121 |
| 13C-1,2,3,7,8-PeCDF | Ave | 1.370 | 1.322 | | 96.5 | 100 | 96 | 76-130 |
| 13C-2,3,4,7,8-PeCDF | Ave | 1.384 | 1.296 | | 93.7 | 100 | 94 | 77-130 |
| 13C-1,2,3,7,8-PeCDD | Ave | 0.8743 | 0.8649 | | 98.9 | 100 | 99 | 62-160 |
| 13C-1,2,3,4,7,8-HxCDF | Ave | 1.189 | 1.206 | | 101 | 100 | 101 | 76-131 |
| 13C-1,2,3,6,7,8-HxCDF | Ave | 1.462 | 1.523 | | 104 | 100 | 104 | 70-143 |
| 13C-2,3,4,6,7,8-HxCDF | Ave | 1.320 | 1.326 | | 100 | 100 | 100 | 73-137 |
| 13C-1,2,3,4,7,8-HxCDD | Ave | 0.8772 | 0.8640 | | 98.5 | 100 | 98 | 85-117 |
| 13C-1,2,3,6,7,8-HxCDD | Ave | 0.9171 | 0.9760 | | 106 | 100 | 106 | 85-118 |
| 13C-1,2,3,7,8,9-HxCDF | Ave | 1.200 | 1.182 | | 98.5 | 100 | 99 | 74-135 |
| 13C-1,2,3,4,6,7,8-HpCDF | Ave | 1.050 | 1.076 | | 103 | 100 | 103 | 78-129 |
| 13C-1,2,3,4,6,7,8-HpCDD | Ave | 0.8155 | 0.8364 | | 103 | 100 | 103 | 72-138 |
| 13C-1,2,3,4,7,8,9-HpCDF | Ave | 0.8947 | 0.8912 | | 99.6 | 100 | 100 | 77-129 |
| 13C-OCDD | Ave | 0.7044 | 0.7023 | | 199 | 200 | 100 | 48-208 |
| 13C-OCDF | Ave | 1.061 | 0.9799 | | 185 | 200 | 92 | 48-208 |
| 37Cl4-2,3,7,8-TCDD | Ave | 1.227 | 1.146 | | 9.35 | 10.0 | 93 | 79-127 |

# Resolution Check Report ( DFS SN: 3190 )

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | |
|---|---|
| Date: | 29 Jan 2019 09:38 |
| MID Experiment: | 5w_db5_fc43_singleGC_OCDF_ResCheck |
| Target Resolution: | 10000 |
| Resolution Warning : | 9500 |
| Resolution Error : | 9000 |
| Reference: | FC43Knx.lua |
| Status: | RESOLUTION PASSED |

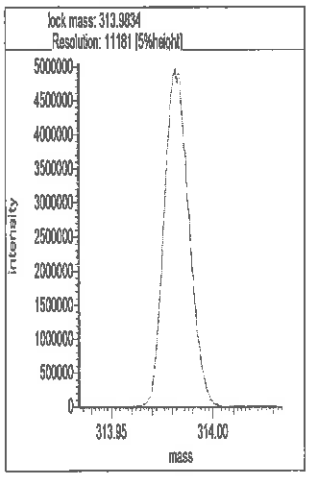
## Segment 1

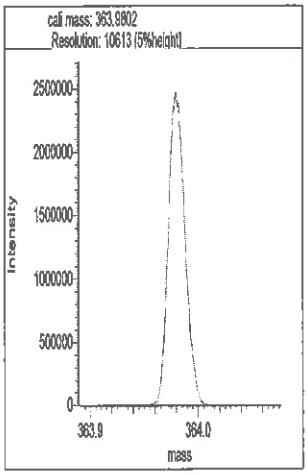
_ 190129S2a

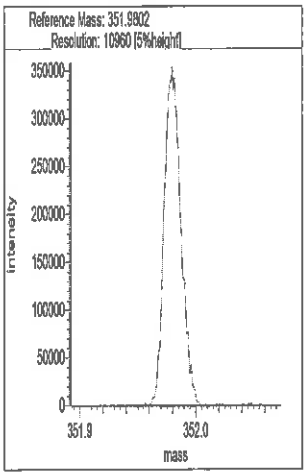
Lock mass 313.9834 [m/z] Resolution: 11181 [5%height]

Cali. mass 363.9802 [m/z] Resolution: 10613 [5%height]

Ref. mass 351.9802 [m/z] Resolution: 10960 [5%height]




## Segment 2

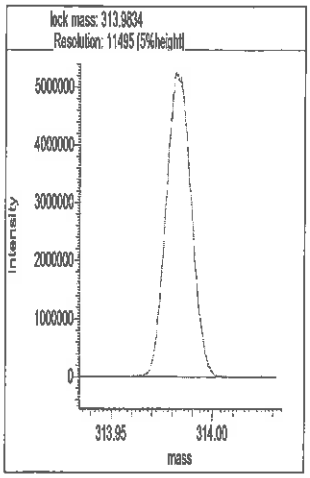
Lock mass 313.9834 [m/z] Resolution: 11495 [5%height]

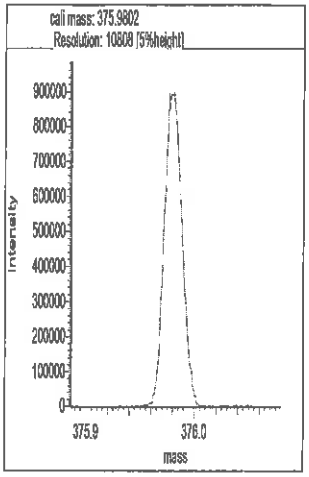
Cali. mass 375.9802 [m/z] Resolution: 10808 [5%height]

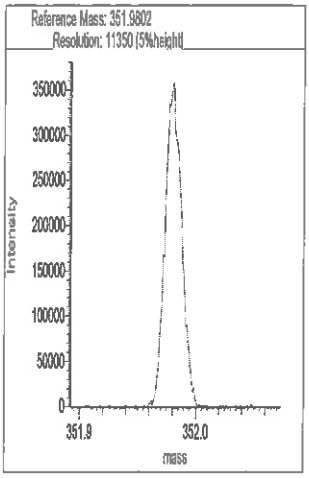
Ref. mass 351.9802 [m/z] Resolution: 11350 [5%height]

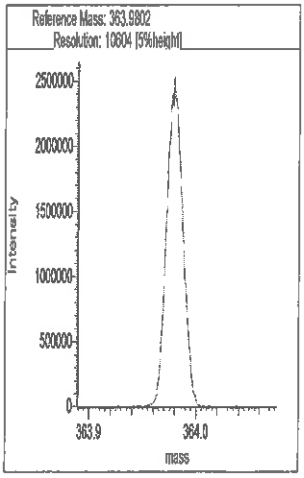
Ref. mass 363.9802 [m/z] Resolution: 10604 [5%height]

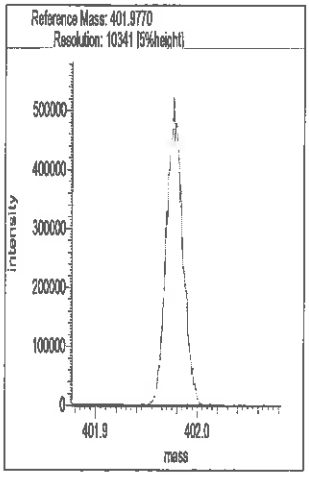
Ref. mass 401.9770 [m/z] Resolution: 10341 [5%height]



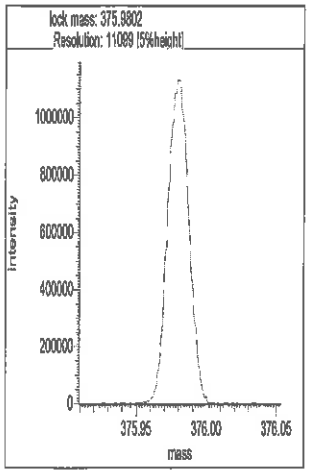

Segment 3

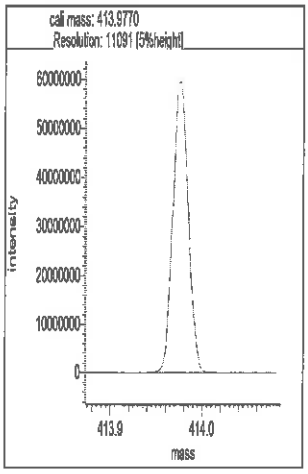
Lock mass 375.9802 [m/z] Resolution: 11099 [5%height]

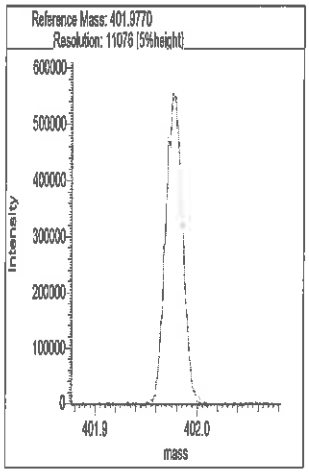
Cali. mass 413.9770 [m/z] Resolution: 11091 [5%height]

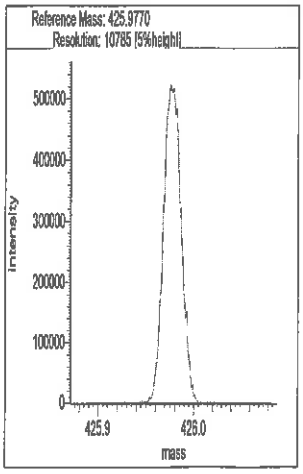
Ref. mass 401.9770 [m/z] Resolution: 11076 [5%height]

Ref. mass 425.9770 [m/z] Resolution: 10785 [5%height]



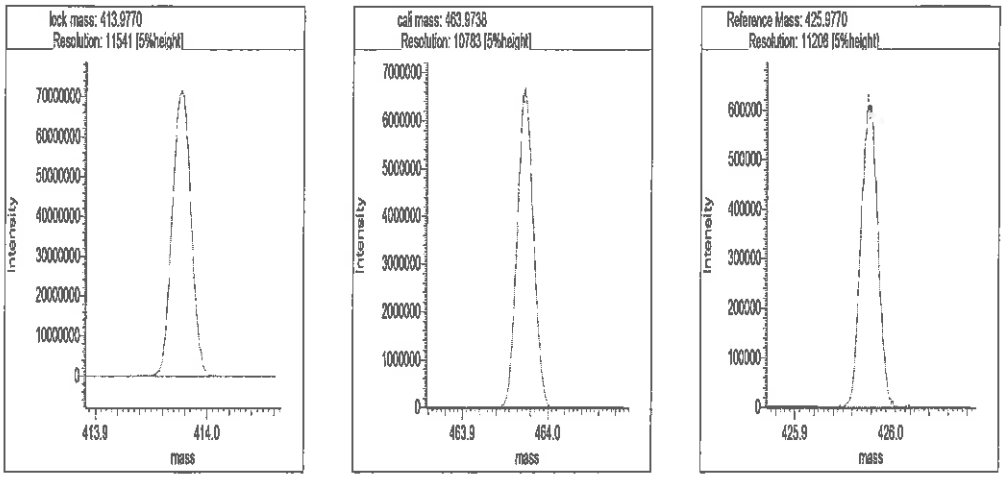




Segment 4

Lock mass 413.9770 [m/z] Resolution: 11541 [5%height]

Cali. mass 463.9738 [m/z] Resolution: 10783 [5%height]

Ref. mass 425.9770 [m/z] Resolution: 11208 [5%height]

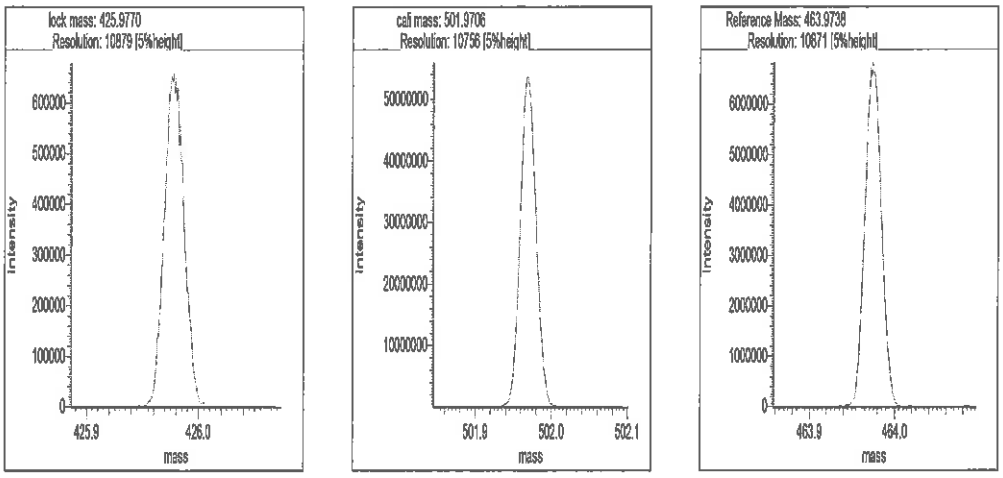



Segment 5

Lock mass 425.9770 [m/z] Resolution: 10879 [5%height]

Cali. mass 501.9706 [m/z] Resolution: 10756 [5%height]

Ref. mass 463.9738 [m/z] Resolution: 10871 [5%height]



```
Reports
09:50:09:  Peak matching procedure started
09:50:10:
09:50:10:  Reference mass: 313.98336
09:50:11:  Sample mass: 364.0
09:50:11:
09:50:12:  Finding reference mass
09:50:12:  Finding sample mass
09:50:13:
09:50:18:  [1]    363.9796 amu, mean: 363.9796
09:50:22:  [2]    363.9799 amu, mean: 363.9798      SD: 0.21 mmu or: 0.58 ppm
09:50:25:  [3]    363.9805 amu, mean: 363.9800      SD: 0.44 mmu or: 1.20 ppm
09:50:28:  [4]    363.9796 amu, mean: 363.9799      SD: 0.42 mmu or: 1.17 ppm
09:50:31:  [5]    363.9797 amu, mean: 363.9799      SD: 0.38 mmu or: 1.04 ppm
09:50:34:  [6]    363.9797 amu, mean: 363.9798      SD: 0.35 mmu or: 0.96 ppm
09:50:38:  [7]    363.9791 amu, mean: 363.9797      SD: 0.43 mmu or: 1.17 ppm
09:50:41:  [8]    363.9801 amu, mean: 363.9798      SD: 0.42 mmu or: 1.15 ppm
09:50:44:  [9]    363.9798 amu, mean: 363.9798      SD: 0.39 mmu or: 1.08 ppm
09:50:47:  [10]    363.9803 amu, mean: 363.9798      SD: 0.41 mmu or: 1.13 ppm
09:50:48:
09:50:48:  Stop requested. Please wait for procedure to finish.
09:50:48:
09:50:50:
```

Signature 1.29.19

# Resolution Check Report ( DFS SN: 3190 )

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | |
|---|---|
| Date: | 29 Jan 2019 21:25 |
| MID Experiment: | 5w_db5_fc43_singleGC_OCDF_ResCheck |
| Target Resolution: | 10000 |
| Resolution Warning : | 9500 |
| Resolution Error : | 9000 |
| Reference: | FC43Knx.lua |
| Status: | RESOLUTION PASSED |

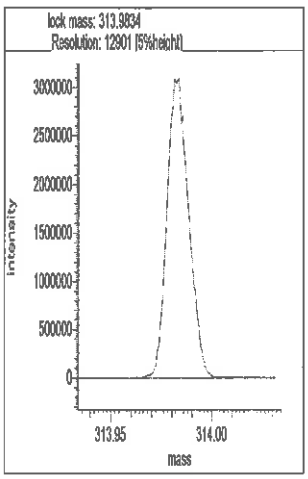
-190129s3a

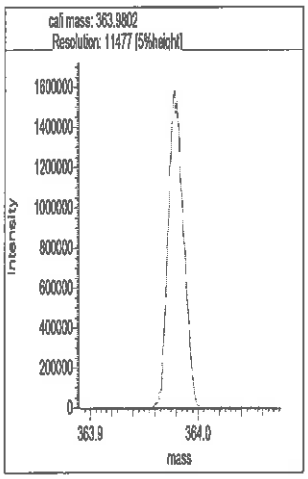
Segment 1

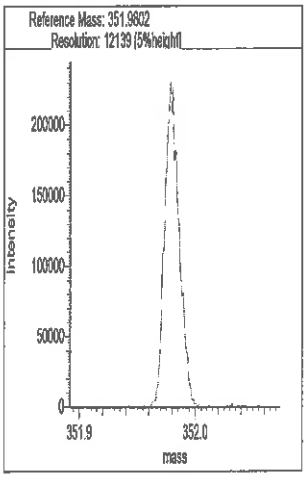
Lock mass 313.9834 [m/z] Resolution: 12901 [5%height]

Cali. mass 363.9802 [m/z] Resolution: 11477 [5%height]

Ref. mass 351.9802 [m/z] Resolution: 12139 [5%height]




Segment 2

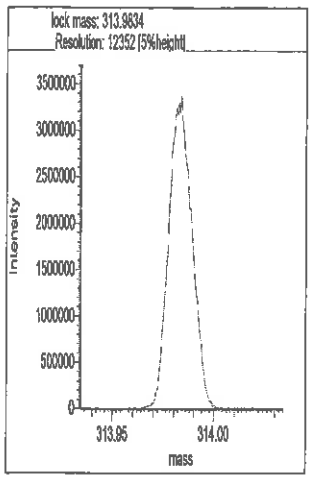
Lock mass 313.9834 [m/z] Resolution: 12352 [5%height]

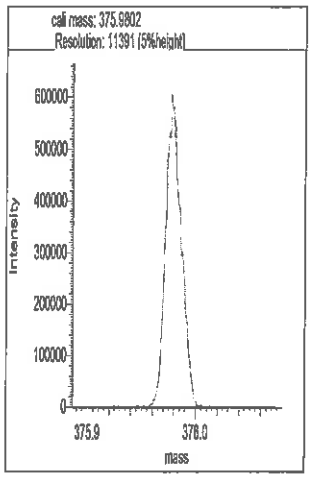
Cali. mass 375.9802 [m/z] Resolution: 11391 [5%height]

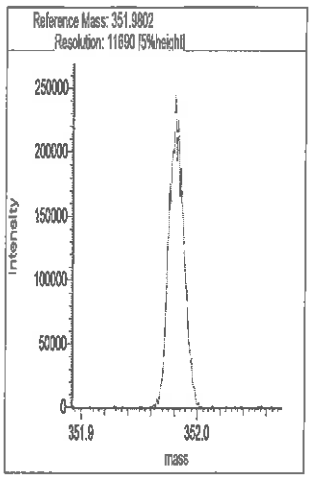
Ref. mass 351.9802 [m/z] Resolution: 11690 [5%height]

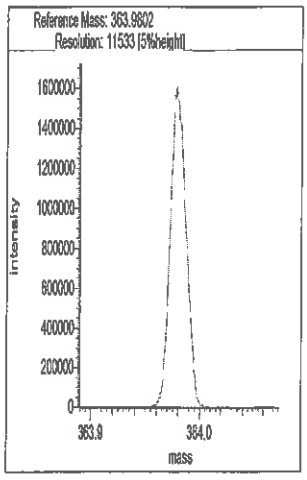
Ref. mass 363.9802 [m/z] Resolution: 11533 [5%height]

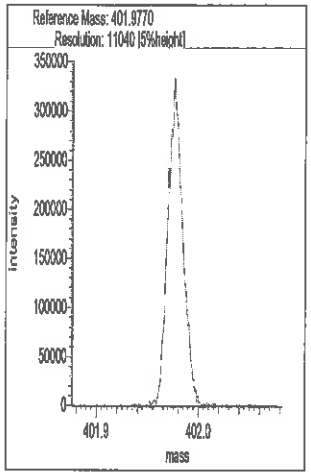
Ref. mass 401.9770 [m/z] Resolution: 11040 [5%height]



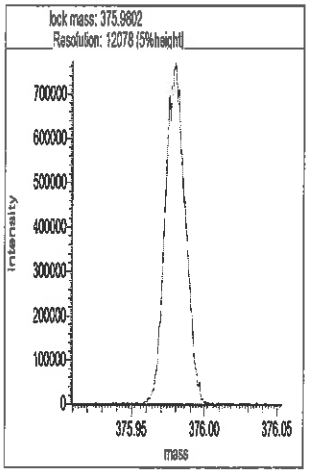

Segment 3

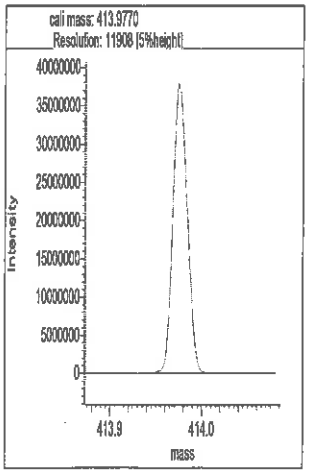
Lock mass 375.9802 [m/z] Resolution: 12078 [5%height]

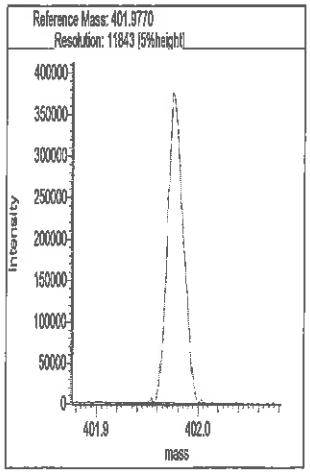
Cali. mass 413.9770 [m/z] Resolution: 11908 [5%height]

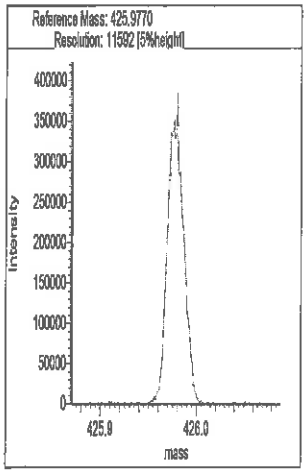
Ref. mass 401.9770 [m/z] Resolution: 11843 [5%height]

Ref. mass 425.9770 [m/z] Resolution: 11592 [5%height]



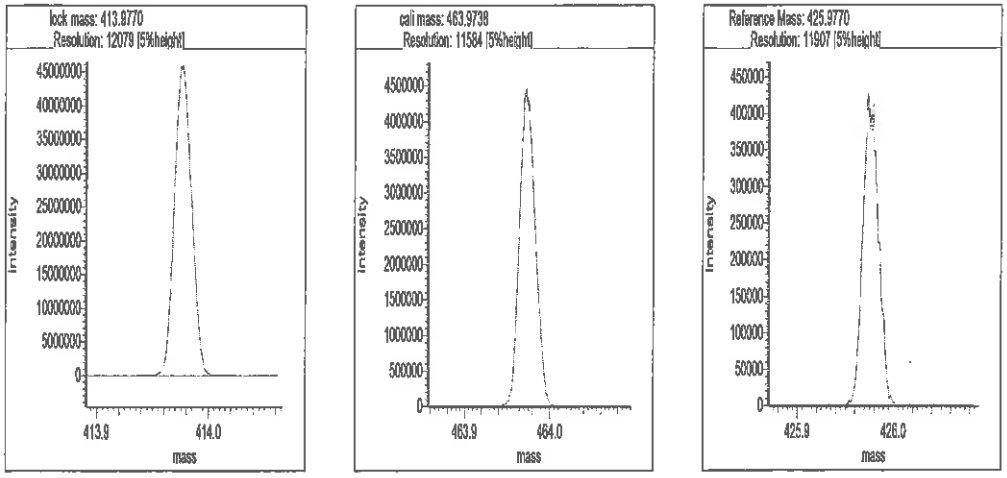




Segment 4

Lock mass 413.9770 [m/z] Resolution: 12079 [5%height]

Cali. mass 463.9738 [m/z] Resolution: 11584 [5%height]

Ref. mass 425.9770 [m/z] Resolution: 11907 [5%height]

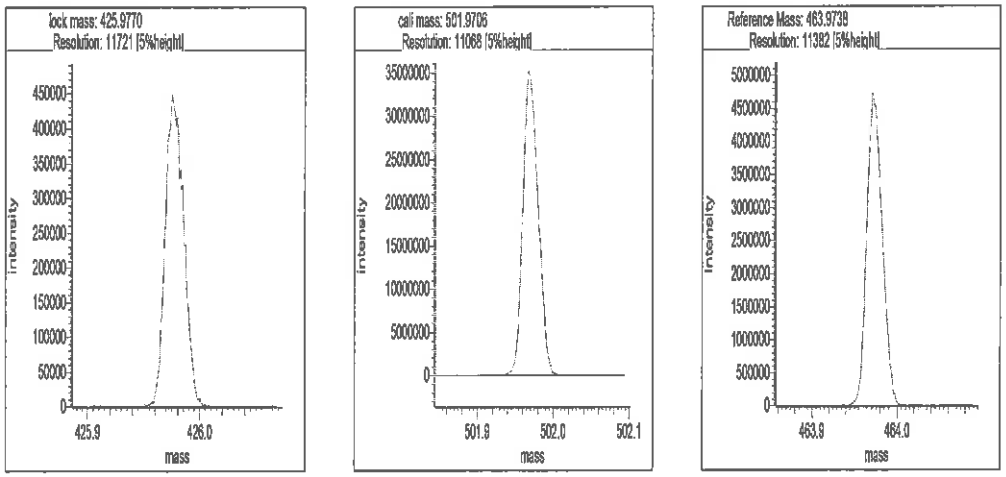



Segment 5

Lock mass 425.9770 [m/z] Resolution: 11721 [5%height]

Cali. mass 501.9706 [m/z] Resolution: 11068 [5%height]

Ref. mass 463.9738 [m/z] Resolution: 11382 [5%height]



Reports

```
21:37:29:  Peak matching procedure started
21:37:29:
21:37:30:  Reference mass: 313.98336
21:37:30:  Sample mass: 364.0
21:37:31:
21:37:31:  Finding reference mass
21:37:32:  Finding sample mass
21:37:32:
21:37:38:  [1]    363.9784 amu, mean: 363.9784
21:37:42:  [2]    363.9784 amu, mean: 363.9784      SD: 0.01 mmu or: 0.02 ppm
21:37:45:  [3]    363.9788 amu, mean: 363.9785      SD: 0.22 mmu or: 0.59 ppm
21:37:48:  [4]    363.9790 amu, mean: 363.9787      SD: 0.30 mmu or: 0.82 ppm
21:37:51:  [5]    363.9793 amu, mean: 363.9788      SD: 0.39 mmu or: 1.08 ppm
21:37:54:  [6]    363.9786 amu, mean: 363.9788      SD: 0.36 mmu or: 0.98 ppm
21:37:57:  [7]    363.9792 amu, mean: 363.9788      SD: 0.37 mmu or: 1.01 ppm
21:38:00:  [8]    363.9786 amu, mean: 363.9788      SD: 0.35 mmu or: 0.96 ppm
21:38:04:  [9]    363.9797 amu, mean: 363.9789      SD: 0.45 mmu or: 1.24 ppm
21:38:07:  [10]    363.9787 amu, mean: 363.9789      SD: 0.43 mmu or: 1.19 ppm
21:38:07:
21:38:07:  Stop requested. Please wait for procedure to finish.
21:38:07:
21:38:10:
21:38:10:  Peakmatching stopped
```

Signature PMP 1-29-19

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d
Lims ID: WDMCCV
Client ID:
Sample Type: WDMCCV
Inject. Date: 29-Jan-2019 09:51:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010667-001
Operator ID: Xcalibur_System Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 29-Jan-2019 10:59:26 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX1017

First Level Reviewer: davidsonm Date: 29-Jan-2019 10:59:26

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 30:59 | 557314 | 0.77 | 1.1733 | 9.877 | 9.877 | 0.0245 | 0.0245 | 98.77 | |
| A Non-2,3,7,8-sub-TCDD | 29:36 | 1431875 | 0.81 | 1.1733 | 25.4 | 25.4 | 0.0245 | 8.919 | 0.00 | |
| S Total TCDD | | | | | 35.3 | 35.3 | 0.0245 | 0.0245 | | |
| 2,3,7,8-TCDF | 28:58 | 850434 | 0.79 | 1.0881 | 9.931 | 9.931 | 0.0277 | 0.0277 | 99.31 | |
| A Non-2,3,7,8-sub-TCDF | 28:18 | | | | | | 0.0277 | 0.1539 | | RQU |
| S Total TCDF | | | | | 9.931 | 9.931 | 0.0277 | 0.0277 | | |
| 1,2,3,7,8-PeCDD | 40:38 | 1985514 | 1.65 | 1.0434 | 48.3 | 48.3 | 0.008430 | 0.008430 | 96.64 | |
| A Non-2,3,7,8-sub-PeCDD | 39:30 | | | | | | 0.008430 | 0.008430 | | |
| S Total PeCDD | | | | | 48.3 | 48.3 | 0.008430 | 0.008430 | | |
| 1,2,3,7,8-PeCDF | 38:50 | 3372974 | 1.57 | 1.1898 | 47.1 | 47.1 | 0.0709 | 0.0709 | 94.19 | |
| 2,3,4,7,8-PeCDF | 40:05 | 3181936 | 1.61 | 1.1095 | 48.6 | 48.6 | 0.0681 | 0.0681 | 97.17 | |
| A Non-2,3,7,8-sub-PeCDF | 38:06 | | | | | | 0.0693 | 0.6270 | | U |
| S Total PeCDF | | | | | 95.7 | 95.7 | 0.0695 | 0.0695 | | |
| 1,2,3,4,7,8-HxCDD | 44:54 | 2193526 | 1.26 | 1.1409 | 48.4 | 48.4 | 0.0547 | 0.0547 | 96.72 | |
| 1,2,3,6,7,8-HxCDD | 45:01 | 2509242 | 1.27 | 1.1481 | 48.7 | 48.7 | 0.0546 | 0.0546 | 97.31 | |
| 1,2,3,7,8,9-HxCDD | 45:23 | 2470250 | 1.25 | 1.2212 | 47.8 | 47.8 | 0.0512 | 0.0512 | 95.56 | |
| A Non-2,3,7,8-sub-HxCDD | 44:21 | | | | | | 0.0535 | 0.0535 | | |
| S Total HxCDD | | | | | 144.8 | 144.8 | 0.0535 | 0.0535 | | |
| 1,2,3,4,7,8-HxCDF | 43:52 | 3854956 | 1.30 | 1.3629 | 51.0 | 51.0 | 0.1272 | 0.1272 | 102 | |
| 1,2,3,6,7,8-HxCDF | 44:00 | 4266393 | 1.25 | 1.2762 | 47.7 | 47.7 | 0.1235 | 0.1235 | 95.39 | |
| 2,3,4,6,7,8-HxCDF | 44:42 | 3847003 | 1.24 | 1.2654 | 49.8 | 49.8 | 0.1418 | 0.1418 | 99.67 | |
| 1,2,3,7,8,9-HxCDF | 45:39 | 3171178 | 1.33 | 1.2573 | 46.4 | 46.4 | 0.1771 | 0.1771 | 92.71 | |
| A Non-2,3,7,8-sub-HxCDF | 44:13 | | | | | | 0.1397 | 0.1397 | | |
| S Total HxCDF | | | | | 194.9 | 194.9 | 0.1424 | 0.1424 | | |
| 1,2,3,4,6,7,8-HpCDD | 49:43 | 2199939 | 1.04 | 1.1204 | 51.0 | 51.0 | 0.0469 | 0.0469 | 102 | |
| A Non-2,3,7,8-sub-HpCDD | 49:07 | | | | | | 0.0469 | 1.484 | | U |
| S Total HpCDD | | | | | 51.0 | 51.0 | 0.0469 | 0.0469 | | |
| 1,2,3,4,6,7,8-HpCDF | 48:02 | 3659799 | 1.05 | 1.4984 | 49.3 | 49.3 | 0.0574 | 0.0574 | 98.65 | |
| 1,2,3,4,7,8,9-HpCDF | 50:21 | 2895359 | 1.07 | 1.3807 | 51.1 | 51.1 | 0.0847 | 0.0847 | 102 | |

Report Date: 29-Jan-2019 10:59:28 Chrom Revision: 2.3 28-Jan-2019 09:43:36
Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HpCDF | 49:20 | | | | | | 0.0688 | 0.7304 | | RQU |
| S Total HpCDF | | | | | 100.5 | 100.5 | 0.0711 | 0.0711 | | |
| OCDD | 53:56 | 3900997 | 0.89 | 1.2073 | 100.0 | 100.0 | 0.0099 | 0.0099 | 99.97 | |
| OCDF | 54:04 | 5139674 | 0.90 | 1.1162 | 102.1 | 102.1 | 0.0299 | 0.0299 | 102 | |
| D 13C-2,3,7,8-TCDD | 30:56 | 4809408 | 0.79 | 1.0709 | 98.6 | 98.6 | 0.1781 | 0.1781 | 98.63 | |
| D 13C-2,3,7,8-TCDF | 28:56 | 7870034 | 0.83 | 1.7545 | 98.5 | 98.5 | 0.1800 | 0.1800 | 98.52 | |
| D 13C-1,2,3,7,8-PeCDD | 40:37 | 3938120 | 1.59 | 0.8743 | 98.9 | 98.9 | 0.5914 | 0.5914 | 98.93 | |
| D 13C-1,2,3,7,8-PeCDF | 38:49 | 6019713 | 1.59 | 1.3704 | 96.5 | 96.5 | 0.9627 | 0.9627 | 96.47 | |
| D 13C-2,3,4,7,8-PeCDF | 40:04 | 5902887 | 1.59 | 1.3837 | 93.7 | 93.7 | 0.9534 | 0.9534 | 93.69 | |
| D 13C-1,2,3,4,7,8-HxCDD | 44:53 | 3975943 | 1.27 | 0.8772 | 98.5 | 98.5 | 0.1421 | 0.1421 | 98.49 | |
| D 13C-1,2,3,6,7,8-HxCDD | 45:00 | 4491678 | 1.28 | 0.9171 | 106.4 | 106.4 | 0.1359 | 0.1359 | 106 | |
| D 13C-1,2,3,4,7,8-HxCDF | 43:51 | 5549472 | 0.53 | 1.1892 | 101.4 | 101.4 | 0.4457 | 0.4457 | 101 | |
| D 13C-1,2,3,6,7,8-HxCDF | 43:59 | 7008893 | 0.54 | 1.4625 | 104.1 | 104.1 | 0.3624 | 0.3624 | 104 | |
| D 13C-2,3,4,6,7,8-HxCDF | 44:41 | 6100466 | 0.54 | 1.3197 | 100.4 | 100.4 | 0.4016 | 0.4016 | 100 | |
| D 13C-1,2,3,7,8,9-HxCDF | 45:38 | 5440953 | 0.53 | 1.2001 | 98.5 | 98.5 | 0.4416 | 0.4416 | 98.51 | |
| D 13C-1,2,3,4,6,7,8-HpCDD | 49:42 | 3849221 | 1.06 | 0.8155 | 102.6 | 102.6 | 0.3765 | 0.3765 | 103 | |
| D 13C-1,2,3,4,6,7,8-HpCDF | 48:01 | 4951834 | 0.47 | 1.0496 | 102.5 | 102.5 | 0.5957 | 0.5957 | 103 | |
| D 13C-1,2,3,4,7,8,9-HpCDF | 50:20 | 4101369 | 0.45 | 0.8947 | 99.6 | 99.6 | 0.6988 | 0.6988 | 99.61 | |
| D 13C-OCDD | 53:56 | 6464354 | 0.90 | 0.7044 | 199.4 | 199.4 | 0.4276 | 0.4276 | 99.71 | |
| D 13C-OCDF | 54:03 | 9019076 | 0.89 | 1.0615 | 184.6 | 184.6 | 0.3670 | 0.3670 | 92.32 | |
| $ 37Cl4-2,3,7,8-TCDD | 31:00 | 522000 | | 1.2266 | 9.347 | 9.347 | 0.0502 | 0.0502 | 93.47 | |
| * 13C-1,2,3,4-TCDD | 30:26 | 4553149 | 0.82 | 9.1E+04 | 100.0 | 100.0 | | | 100 | |
| * 13C-1,2,3,7,8,9-HxCDD | 45:22 | 4602063 | 1.26 | 1E+05 | 100.0 | 100.0 | | | 100 | |
| 1,3,6,8-TCDF | 22:37 | 988266 | 0.83 | | | | | | 0.00 | |
| 1,3,6,8-TCDD | 25:04 | 524425 | 0.76 | | | | | | 0.00 | |
| 1,2,8,9-TCDF | 33:59 | 797443 | 0.81 | | | | | | 0.00 | |
| 1,2,8,9-TCDD | 34:09 | 477848 | 0.78 | | | | | | 0.00 | |
| 1,3,4,6,8-PeCDF | 34:47 | 3351705 | 1.56 | | | | | | 0.00 | |
| 1,2,4,7,9-PeCDD | 37:42 | 1936222 | 1.57 | | | | | | 0.00 | |
| 1,2,3,8,9-PeCDD | 41:17 | 1968087 | 1.55 | | | | | | 0.00 | |
| 1,2,3,8,9-PeCDF | 41:25 | 3007104 | 1.56 | | | | | | 0.00 | |
| 1,2,3,4,6,8-HxCDF | 42:38 | 3828867 | 1.30 | | | | | | 0.00 | |
| 1,2,4,6,7,9-HxCDD | 43:19 | 2687614 | 1.25 | | | | | | 0.00 | |
| 1,2,3,4,8,9-HxCDF | 45:47 | 3403275 | 1.26 | | | | | | 0.00 | |
| 1,2,3,4,6,7,9-HpCDD | 48:32 | 2291327 | 1.06 | | | | | | 0.00 | |

## QC Flag Legend

Review Flags
U - Marked Undetected

## Reagents:

61WDML3OP_F/L_00052 Amount Added: 20.00 Units: uL

Report Date: 29-Jan-2019 10:59:28 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d
Lims ID: WDMCCV
Client ID:
Sample Type: WDMCCV
Inject. Date: 29-Jan-2019 09:51:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010667-001
Operator ID: Xcalibur_System Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 29-Jan-2019 10:59:26 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX1017

First Level Reviewer: davidsonm Date: 29-Jan-2019 10:59:26

| Signal | RT (min.) | Adj RT (min.) | Δ Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | |
| 319.8965 | 30:59 | 30:59 | 0 | 1.002 | 241713 | 25111 | 26 | 65 | 966 | | |
| 321.8936 | 30:59 | 30:59 | 0 | 1.002 | 315601 | 32116 | 32 | 80 | 1004 | 0.77(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | |
| 319.8965 | 30:28 | 29:36 | 52 | 0.985 | 210200 | 23219 | 26 | 65 | 893 | | |
| 321.8936 | 30:30 | 29:36 | 54 | 0.986 | 256124 | 27972 | 32 | 80 | 874 | 0.82(0.65-0.89) | |
| 319.8965 | 30:41 | 29:36 | 65 | 0.992 | 200814 | 20714 | 26 | 65 | 797 | | |
| 321.8936 | 30:42 | 29:36 | 66 | 0.993 | 261427 | 27007 | 32 | 80 | 844 | 0.77(0.65-0.89) | |
| 319.8965 | 31:28 | 29:36 | 111 | 1.017 | 227852 | 24675 | 26 | 65 | 949 | | |
| 321.8936 | 31:28 | 29:36 | 111 | 1.017 | 275458 | 29841 | 32 | 80 | 933 | 0.83(0.65-0.89) | |
| 2,3,7,8-TCDF | | | | | | | | | | | |
| 303.9016 | 28:58 | 28:58 | 0 | 1.001 | 374789 | 41741 | 45 | 112 | 928 | | |
| 305.8987 | 28:58 | 28:58 | 0 | 1.001 | 475645 | 55981 | 62 | 155 | 903 | 0.79(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | U |
| 303.9016 | 27:10 | 28:18 | -68 | 0.939 | 1943 | 305 | 45 | 112 | 7 | | |
| 305.8987 | 27:03 | 28:18 | -75 | 0.935 | 2889 | 288 | 62 | 155 | 5 | 0.67(0.65-0.89) | |
| 1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 355.8546 | 40:38 | 40:38 | 0 | 1.000 | 1236167 | 283520 | 21 | 52 | 13501 | | |
| 357.8516 | 40:38 | 40:38 | 0 | 1.000 | 749347 | 178877 | 11 | 27 | 16262 | 1.65(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | |
| 355.8546 | 39:30 | | | | | | 21 | 52 | | | |
| 357.8516 | 39:30 | | | | | | 11 | 27 | | | |
| 1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 38:50 | 38:50 | 0 | 1.000 | 2061518 | 412068 | 225 | 562 | 1831 | | |
| 341.8567 | 38:50 | 38:50 | 0 | 1.000 | 1311456 | 262764 | 172 | 430 | 1528 | 1.57(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 40:05 | 40:05 | 0 | 1.000 | 1962287 | 430457 | 225 | 562 | 1913 | | |
| 341.8567 | 40:05 | 40:05 | 0 | 1.000 | 1219649 | 276493 | 172 | 430 | 1608 | 1.61(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | U |
| 339.8597 | 37:17 | 38:06 | -49 | 0.960 | 25478 | 3598 | 225 | 562 | 16 | | |
| 341.8567 | 37:16 | 38:06 | -50 | 0.960 | 17491 | 2637 | 172 | 430 | 15 | 1.46(1.32-1.78) | |
| 1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 44:54 | 44:54 | 0 | 1.000 | 1223310 | 332299 | 140 | 350 | 2374 | | |
| 391.8127 | 44:54 | 44:54 | 0 | 1.000 | 970216 | 262460 | 123 | 307 | 2134 | 1.26(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:01 | 45:01 | 0 | 1.000 | 1404554 | 330590 | 140 | 350 | 2361 | | |
| 391.8127 | 45:01 | 45:01 | 0 | 1.000 | 1104688 | 261017 | 123 | 307 | 2122 | 1.27(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:23 | 45:23 | 0 | 1.011 | 1370377 | 286031 | 140 | 350 | 2043 | | |
| 391.8127 | 45:23 | 45:23 | 0 | 1.011 | 1099873 | 233882 | 123 | 307 | 1901 | 1.25(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | |
| 389.8158 | 44:21 | | | | | | 140 | 350 | | | |
| 391.8127 | 44:21 | | | | | | 123 | 307 | | | |
| 1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 43:52 | 43:52 | 0 | 1.000 | 2177739 | 579380 | 489 | 1222 | 1185 | | |
| 375.8178 | 43:52 | 43:52 | 0 | 1.000 | 1677217 | 456978 | 569 | 1422 | 803 | 1.30(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:00 | 44:00 | 0 | 1.000 | 2367170 | 589140 | 489 | 1222 | 1205 | | |
| 375.8178 | 44:00 | 44:00 | 0 | 1.000 | 1899223 | 454057 | 569 | 1422 | 798 | 1.25(1.05-1.43) | |
| 2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:42 | 44:42 | 0 | 1.000 | 2129906 | 527009 | 489 | 1222 | 1078 | | |
| 375.8178 | 44:42 | 44:42 | 0 | 1.000 | 1717097 | 425188 | 569 | 1422 | 747 | 1.24(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 45:39 | 45:39 | 0 | 1.000 | 1809567 | 438218 | 489 | 1222 | 896 | | |
| 375.8178 | 45:39 | 45:39 | 0 | 1.000 | 1361611 | 345545 | 569 | 1422 | 607 | 1.33(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:13 | | | | | | 489 | 1222 | | | |
| 375.8178 | 44:13 | | | | | | 569 | 1422 | | | |
| 1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 423.7767 | 49:43 | 49:43 | 0 | 1.000 | 1122072 | 207242 | 71 | 177 | 2919 | | |
| 425.7737 | 49:43 | 49:43 | 0 | 1.000 | 1077867 | 193810 | 80 | 200 | 2423 | 1.04(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | U |
| 423.7767 | 49:07 | 49:07 | 0 | 0.988 | 31904 | 1808 | 71 | 177 | | | |
| 425.7737 | 49:07 | 49:07 | 0 | 0.988 | 32083 | 1586 | 80 | 200 | | 0.99(0.88-1.20) | |
| 1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 407.7817 | 48:02 | 48:02 | 0 | 1.000 | 1877875 | 384224 | 164 | 410 | 2343 | | |
| 409.7788 | 48:02 | 48:02 | 0 | 1.000 | 1781924 | 365387 | 194 | 485 | 1883 | 1.05(0.88-1.20) | |
| 1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 407.7817 | 50:21 | 50:21 | 0 | 1.000 | 1497240 | 275790 | 164 | 410 | 1682 | | |
| 409.7788 | 50:21 | 50:21 | 0 | 1.000 | 1398119 | 260965 | 194 | 485 | 1345 | 1.07(0.88-1.20) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | U |
| 407.7817 | 48:26 | 49:20 | -55 | 1.008 | 21261 | 3477 | 164 | 410 | 21 | | |
| 409.7788 | 48:25 | 49:20 | -56 | 1.008 | 20074 | 2834 | 194 | 485 | 15 | 1.06(0.88-1.20) | |
| OCDD | | | | | | | | | | | |
| 457.7377 | 53:56 | 53:56 | 0 | 1.000 | 1832342 | 407317 | 15 | 37 | 27154 | | |
| 459.7348 | 53:56 | 53:56 | 0 | 1.000 | 2068655 | 459209 | 19 | 47 | 24169 | 0.89(0.76-1.02) | |
| OCDF | | | | | | | | | | | |
| 441.7428 | 54:04 | 54:04 | 0 | 1.000 | 2441217 | 576415 | 55 | 137 | 10480 | | |
| 443.7399 | 54:04 | 54:04 | 0 | 1.000 | 2698457 | 634182 | 79 | 197 | 8028 | 0.90(0.76-1.02) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 30:56 | 30:56 | -5 | 1.016 | 2129998 | 224335 | 221 | 552 | 1015 | | |
| 333.9338 | 30:57 | 30:56 | -4 | 1.017 | 2679410 | 280050 | 157 | 392 | 1784 | 0.79(0.65-0.89) | |
| 13C-2,3,7,8-TCDF | | | | | | | | | | | |
| 315.9419 | 28:56 | 28:55 | -3 | 0.951 | 3576916 | 405477 | 319 | 797 | 1271 | | |
| 317.9389 | 28:55 | 28:55 | -4 | 0.950 | 4293118 | 481624 | 307 | 767 | 1569 | 0.83(0.65-0.89) | |
| 13C-1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 367.8949 | 40:37 | 40:33 | -1 | 1.335 | 2418493 | 554961 | 672 | 1680 | 826 | | |
| 369.8919 | 40:37 | 40:33 | -1 | 1.335 | 1519627 | 354563 | 353 | 882 | 1004 | 1.59(1.32-1.78) | |
| 13C-1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 38:49 | 38:46 | -2 | 1.276 | 3699655 | 729805 | 1641 | 4102 | 445 | | |
| 353.8970 | 38:49 | 38:46 | -2 | 1.276 | 2320058 | 446361 | 974 | 2435 | 458 | 1.59(1.32-1.78) | |
| 13C-2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 40:04 | 40:01 | -2 | 1.316 | 3624611 | 800003 | 1641 | 4102 | 488 | | |
| 353.8970 | 40:04 | 40:01 | -2 | 1.316 | 2278276 | 513685 | 974 | 2435 | 527 | 1.59(1.32-1.78) | |
| 13C-1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 44:53 | 44:52 | -1 | 0.989 | 2220797 | 588580 | 242 | 605 | 2432 | | |
| 403.8529 | 44:53 | 44:52 | -1 | 0.989 | 1755146 | 464289 | 249 | 622 | 1865 | 1.27(1.05-1.43) | |
| 13C-1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:00 | 44:59 | -1 | 0.992 | 2525029 | 588418 | 242 | 605 | 2431 | | |
| 403.8529 | 45:00 | 44:59 | -1 | 0.992 | 1966649 | 459517 | 249 | 622 | 1845 | 1.28(1.05-1.43) | |
| 13C-1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 43:51 | 43:50 | -1 | 0.966 | 1920078 | 524248 | 1095 | 2737 | 479 | | |
| 385.8610 | 43:51 | 43:50 | -1 | 0.966 | 3629394 | 1001935 | 992 | 2480 | 1010 | 0.53(0.43-0.59) | |
| 13C-1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 43:59 | 43:58 | -1 | 0.969 | 2465907 | 588457 | 1095 | 2737 | 537 | | |
| 385.8610 | 43:59 | 43:58 | -1 | 0.969 | 4542986 | 1089930 | 992 | 2480 | 1099 | 0.54(0.43-0.59) | |
| 13C-2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44:41 | 44:41 | -2 | 0.985 | 2129041 | 505059 | 1095 | 2737 | 461 | | |
| 385.8610 | 44:41 | 44:41 | -2 | 0.985 | 3971425 | 969298 | 992 | 2480 | 977 | 0.54(0.43-0.59) | |
| 13C-1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 383.8639 | 45:38 | 45:38 | -2 | 1.006 | 1893326 | 418755 | 1095 | 2737 | 382 | | |
| 385.8610 | 45:38 | 45:38 | -2 | 1.006 | 3547627 | 769093 | 992 | 2480 | 775 | 0.53(0.43-0.59) | |
| 13C-1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 435.8169 | 49:42 | 49:41 | -2 | 1.095 | 1976228 | 375224 | 432 | 1080 | 869 | | |
| 437.8140 | 49:42 | 49:41 | -2 | 1.095 | 1872993 | 341505 | 777 | 1942 | 440 | 1.06(0.88-1.20) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 417.8250 | 48:01 | 48:00 | -1 | 1.059 | 1580608 | 338263 | 956 | 2390 | 354 | | |
| 419.8220 | 48:01 | 48:00 | -1 | 1.059 | 3371226 | 702997 | 1506 | 3765 | 467 | 0.47(0.37-0.51) | |
| 13C-1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 417.8250 | 50:20 | 50:20 | -2 | 1.110 | 1267002 | 237450 | 956 | 2390 | 248 | | |
| 419.8220 | 50:20 | 50:20 | -2 | 1.110 | 2834367 | 527527 | 1506 | 3765 | 350 | 0.45(0.37-0.51) | |
| 13C-OCDD | | | | | | | | | | | |
| 469.7780 | 53:56 | 53:55 | -1 | 1.189 | 3064285 | 668707 | 493 | 1232 | 1356 | | |
| 471.7750 | 53:56 | 53:55 | -1 | 1.189 | 3400069 | 746711 | 693 | 1732 | 1078 | 0.90(0.76-1.02) | |
| 13C-OCDF | | | | | | | | | | | |
| 453.7830 | 54:03 | 54:03 | -2 | 1.192 | 4237996 | 940642 | 917 | 2292 | 1026 | | |
| 455.7801 | 54:03 | 54:03 | -2 | 1.192 | 4781080 | 1069120 | 617 | 1542 | 1733 | 0.89(0.76-1.02) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31:00 | 31:00 | 0 | 1.018 | 522000 | 55985 | 122 | 305 | 459 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 30:26 | 30:26 | 0 | | 2053536 | 217920 | 221 | 552 | 986 | | |
| 333.9338 | 30:26 | 30:26 | 0 | | 2499613 | 277589 | 157 | 392 | 1768 | 0.82(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:22 | 45:22 | 0 | | 2561864 | 541468 | 242 | 605 | 2237 | | |
| 403.8529 | 45:22 | 45:22 | 0 | | 2040199 | 442901 | 249 | 622 | 1779 | 1.26(1.05-1.43) | |
| 1,3,6,8-TCDF | | | | | | | | | | | |
| 303.9016 | 22:37 | 22:37 | 0 | 0.782 | 447922 | 67866 | 45 | 112 | 1508 | | |
| 305.8987 | 22:37 | 22:37 | 0 | 0.782 | 540344 | 80484 | 62 | 155 | 1298 | 0.83(0.65-0.89) | |
| 1,3,6,8-TCDD | | | | | | | | | | | |
| 319.8965 | 25:04 | 25:04 | 0 | 0.810 | 226714 | 29964 | 26 | 65 | 1152 | | |
| 321.8936 | 25:04 | 25:04 | 0 | 0.810 | 297711 | 40744 | 32 | 80 | 1273 | 0.76(0.65-0.89) | |
| 1,2,8,9-TCDF | | | | | | | | | | | |
| 303.9016 | 33:59 | 33:59 | 0 | 1.175 | 355804 | 38643 | 45 | 112 | 859 | | |
| 305.8987 | 33:58 | 33:59 | -1 | 1.174 | 441639 | 46379 | 62 | 155 | 748 | 0.81(0.65-0.89) | |
| 1,2,8,9-TCDD | | | | | | | | | | | |
| 319.8965 | 34:09 | 34:09 | 0 | 1.104 | 210029 | 22664 | 26 | 65 | 872 | | |
| 321.8936 | 34:08 | 34:09 | -1 | 1.104 | 267819 | 30280 | 32 | 80 | 946 | 0.78(0.65-0.89) | |
| 1,3,4,6,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 34:47 | 34:47 | 0 | 0.896 | 2041704 | 256185 | 225 | 562 | 1139 | | |
| 341.8567 | 34:46 | 34:47 | -1 | 0.896 | 1310001 | 166885 | 172 | 430 | 970 | 1.56(1.32-1.78) | |
| 1,2,4,7,9-PeCDD | | | | | | | | | | | |
| 355.8546 | 37:42 | 37:42 | 0 | 0.928 | 1183094 | 188787 | 21 | 52 | 8990 | | |
| 357.8516 | 37:42 | 37:42 | 0 | 0.928 | 753128 | 120859 | 11 | 27 | 10987 | 1.57(1.32-1.78) | |
| 1,2,3,8,9-PeCDD | | | | | | | | | | | |
| 355.8546 | 41:17 | 41:17 | 0 | 1.017 | 1196146 | 273377 | 21 | 52 | 13018 | | |
| 357.8516 | 41:17 | 41:17 | 0 | 1.017 | 771941 | 178539 | 11 | 27 | 16231 | 1.55(1.32-1.78) | |
| 1,2,3,8,9-PeCDF | | | | | | | | | | | |
| 339.8597 | 41:25 | 41:25 | 0 | 1.067 | 1831389 | 420850 | 225 | 562 | 1870 | | |
| 341.8567 | 41:25 | 41:25 | 0 | 1.067 | 1175715 | 266723 | 172 | 430 | 1551 | 1.56(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 42:38 | 42:38 | 0 | 0.972 | 2162417 | 569373 | 489 | 1222 | 1164 | | |
| 375.8178 | 42:38 | 42:38 | 0 | 0.972 | 1666450 | 432719 | 569 | 1422 | 760 | 1.30(1.05-1.43) | |
| 1,2,4,6,7,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 43:19 | 43:19 | 0 | 0.965 | 1494515 | 403748 | 140 | 350 | 2884 | | |
| 391.8127 | 43:19 | 43:19 | 0 | 0.965 | 1193099 | 320091 | 123 | 307 | 2602 | 1.25(1.05-1.43) | |
| 1,2,3,4,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 45:47 | 45:47 | 0 | 1.044 | 1896893 | 402005 | 489 | 1222 | 822 | | |
| 375.8178 | 45:46 | 45:47 | -1 | 1.044 | 1506382 | 317188 | 569 | 1422 | 557 | 1.26(1.05-1.43) | |
| 1,2,3,4,6,7,9-HpCDD | | | | | | | | | | | |
| 423.7767 | 48:32 | 48:32 | 0 | 0.977 | 1176721 | 231796 | 71 | 177 | 3265 | | |
| 425.7737 | 48:32 | 48:32 | 0 | 0.977 | 1114606 | 218587 | 80 | 200 | 2732 | 1.06(0.88-1.20) | |

## QC Flag Legend

Review Flags

U - Marked Undetected

## Reagents:

61WDML3OP_F/L_00052 Amount Added: 20.00 Units: uL

TestAmerica Knoxville
CCV Relative RT Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d
Lims ID: WDMCCV
Client ID:
Sample Type: WDMCCV
Inject. Date: 29-Jan-2019 09:51:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010667-001
Operator ID: Xcalibur_System Instrument ID: D2A
Sublist: chrom-D2A_Dioxin*sub1

Method: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 29-Jan-2019 10:59:26 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX1017

First Level Reviewer: davidsonm Date: 29-Jan-2019 10:59:26

Start Cal Date: 16-May-2014 14:26:00
End Cal Date: 16-May-2014 18:31:00

| Compound | T/L | ICAL RT | CCV RT | RT (secs) | RT Lmt | ICAL RRT | CCV RRT | RRT Limits |
|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4-TCDD | | 31:17 | 30:26 | -50 | | 1.000 | 1.000 | 0.000 - 0.000 |
| 2,3,7,8-TCDD | | 31:50 | 30:59 | -51 | | 1.001 | 1.002 | 0.999 - 1.002 |
| 37Cl4-2,3,7,8-TCDD | | 31:50 | 31:00 | -50 | | 1.018 | 1.018 | 0.989 - 1.052 |
| 13C-2,3,7,8-TCDD | | 31:48 | 30:56 | -52 | | 1.017 | 1.016 | 0.976 - 1.043 |
| 2,3,7,8-TCDF | | 29:47 | 28:58 | -48 | | 1.002 | 1.001 | 0.999 - 1.003 |
| 13C-2,3,7,8-TCDF | | 29:44 | 28:56 | -47 | | 0.951 | 0.951 | 0.923 - 1.103 |
| 13C-1,2,3,7,8-PeCDD | | 41:00 | 40:37 | -23 | | 1.311 | 1.335 | 1.000 - 1.567 |
| 1,2,3,7,8-PeCDD | | 41:01 | 40:38 | -23 | | 1.000 | 1.000 | 0.999 - 1.002 |
| 1,2,3,7,8-PeCDF | | 39:18 | 38:50 | -27 | | 1.000 | 1.000 | 0.999 - 1.002 |
| 13C-1,2,3,7,8-PeCDF | | 39:17 | 38:49 | -27 | | 1.256 | 1.276 | 1.000 - 1.425 |
| 2,3,4,7,8-PeCDF | | 40:30 | 40:05 | -25 | | 1.000 | 1.000 | 0.999 - 1.002 |
| 13C-2,3,4,7,8-PeCDF | | 40:29 | 40:04 | -25 | | 1.295 | 1.316 | 1.011 - 1.526 |
| 13C-1,2,3,7,8,9-HxCDD | | 45:45 | 45:22 | -22 | | 1.000 | 1.000 | 0.000 - 0.000 |
| 13C-1,2,3,4,7,8-HxCDD | | 45:14 | 44:53 | -21 | | 0.989 | 0.989 | 0.977 - 1.000 |
| 1,2,3,4,7,8-HxCDD | | 45:15 | 44:54 | -21 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-1,2,3,6,7,8-HxCDD | | 45:21 | 45:00 | -21 | | 0.992 | 0.992 | 0.981 - 1.003 |
| 1,2,3,6,7,8-HxCDD | | 45:22 | 45:01 | -21 | | 1.000 | 1.000 | 0.998 - 1.004 |
| 1,2,3,7,8,9-HxCDD | | 45:46 | 45:23 | -22 | | 1.012 | 1.011 | 1.000 - 1.019 |
| 13C-1,2,3,4,7,8-HxCDF | | 44:11 | 43:51 | -20 | | 0.966 | 0.966 | 0.936 - 0.996 |
| 1,2,3,4,7,8-HxCDF | | 44:12 | 43:52 | -20 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-1,2,3,6,7,8-HxCDF | | 44:20 | 43:59 | -20 | | 0.969 | 0.969 | 0.949 - 0.975 |
| 1,2,3,6,7,8-HxCDF | | 44:21 | 44:00 | -20 | | 1.000 | 1.000 | 0.997 - 1.005 |
| 2,3,4,6,7,8-HxCDF | | 45:04 | 44:42 | -21 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-2,3,4,6,7,8-HxCDF | | 45:03 | 44:41 | -21 | | 0.985 | 0.985 | 0.977 - 1.047 |

Report Date: 29-Jan-2019 10:59:28 Chrom Revision: 2.3 28-Jan-2019 09:43:36
Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d

| Compound | T/L | ICAL RT | CCV RT | Δ RT (secs) | RT Lmt | ICAL RRT | CCV RRT | RRT Limits |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,7,8,9-HxCDF | | 46:03 | 45:39 | -23 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-1,2,3,7,8,9-HxCDF | | 46:02 | 45:38 | -23 | | 1.006 | 1.006 | 0.959 - 1.021 |
| 1,2,3,4,6,7,8-HpCDD | | 50:12 | 49:43 | -29 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-1,2,3,4,6,7,8-HpCDD | | 50:11 | 49:42 | -29 | | 1.097 | 1.095 | 1.086 - 1.110 |
| 13C-1,2,3,4,6,7,8-HpCDF | | 48:28 | 48:01 | -26 | | 1.059 | 1.059 | 1.043 - 1.085 |
| 1,2,3,4,6,7,8-HpCDF | | 48:29 | 48:02 | -26 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 1,2,3,4,7,8,9-HpCDF | | 50:49 | 50:21 | -28 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-1,2,3,4,7,8,9-HpCDF | | 50:48 | 50:20 | -28 | | 1.111 | 1.110 | 1.057 - 1.151 |
| OCDD | | 54:19 | 53:56 | -22 | | 1.000 | 1.000 | 0.999 - 1.001 |
| 13C-OCDD | | 54:18 | 53:56 | -21 | | 1.187 | 1.189 | 1.032 - 1.311 |
| OCDF | | 54:27 | 54:04 | -22 | | 1.000 | 1.000 | 0.999 - 1.008 |
| 13C-OCDF | | 54:26 | 54:03 | -22 | | 1.190 | 1.192 | 1.091 - 1.291 |

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d
Lims ID: WDMCCV
Client ID:
Inject. Date: 29-Jan-2019 09:51:00 Dil. Factor: 1.0000
Sample Type: WDMCCV, Combo WDM and CCV
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27242 Lims Sample ID: 1
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDD, RT: 29.595

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 1.173 | D 13C-2,3,7,8-TCDD | 100.000 | 4809408 | 504385 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.173 | | 100.000 | 4809408 | 504385 |

Sum the Uncalibrated Results

| RT | 319.8965 Area | 319.8965 Height | 321.8936 Area | 321.8936 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 30:28 | 210200 | 23219 | 256124 | 27972 | 8.26 | 0.82 | |
| 30:41 | 200814 | 20714 | 261427 | 27007 | 8.19 | 0.77 | |
| 31:28 | 227852 | 24675 | 275458 | 29841 | 8.92 | 0.83 | |
| Signal Totals: | | | | | | | |
| | 638866 | 68608 | 793009 | 84820 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 1431875 | 153428 | | | | 0.81 | |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 25.375 = (1431875 * 100.000) / (4809408 * 1.173)

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d
Lims ID: WDMCCV
Client ID:
Inject. Date: 29-Jan-2019 09:51:00 Dil. Factor: 1.0000
Sample Type: WDMCCV, Combo WDM and CCV
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27242 Lims Sample ID: 1
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-TCDF, RT: 28.298

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 2,3,7,8-TCDF | 1.088 | D 13C-2,3,7,8-TCDF | 100.000 | 7870034 | 887101 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.088 | | 100.000 | 7870034 | 887101 |

Sum the Uncalibrated Results

| RT | 303.9016 Area | 303.9016 Height | 305.8987 Area | 305.8987 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 27:10 | 1943 | 305 | 2889 | 288 | 0.0564 | 0.67 | n |
| 27:52 | 5735 | 702 | 9420 | 1269 | 0.1770 | 0.61 | RQ |
| 27:52 | 5735 | 702 | 7448 | 911 | 0.1539 | | Empc Correction |

Compound is Marked ND

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d
Lims ID: WDMCCV
Client ID:
Inject. Date: 29-Jan-2019 09:51:00 Dil. Factor: 1.0000
Sample Type: WDMCCV, Combo WDM and CCV
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27242 Lims Sample ID: 1
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-PeCDF, RT: 38.091

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,7,8-PeCDF | 1.190 | D 13C-1,2,3,7,8-PeCDF | 100.000 | 6019713 | 1176166 |
| 2,3,4,7,8-PeCDF | 1.109 | D 13C-2,3,4,7,8-PeCDF | 100.000 | 5902887 | 1313688 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.150 | | 100.000 | 5961300 | 1244927 |

Sum the Uncalibrated Results

| RT | 339.8597 Area | 339.8597 Height | 341.8567 Area | 341.8567 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 37:17 | 25478 | 3598 | 17491 | 2637 | 0.6270 | 1.46 | |

Compound is Marked ND

Report Date: 29-Jan-2019 10:59:28 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d
Lims ID: WDMCCV
Client ID:
Inject. Date: 29-Jan-2019 09:51:00 Dil. Factor: 1.0000
Sample Type: WDMCCV, Combo WDM and CCV
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27242 Lims Sample ID: 1
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-HpCDD, RT: 49.112

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 1.120 | D 13C-1,2,3,4,6,7,8-HpCDD | 100.000 | 3849221 | 716729 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.120 | | 100.000 | 3849221 | 716729 |

Sum the Uncalibrated Results

| RT | 423.7767 Area | 423.7767 Height | 425.7737 Area | 425.7737 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 50:04 | 31904 | 1808 | 32083 | 1586 | 1.48 | 0.99 | |

Compound is Marked ND

Report Date: 29-Jan-2019 10:59:28 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d
Lims ID: WDMCCV
Client ID:
Inject. Date: 29-Jan-2019 09:51:00 Dil. Factor: 1.0000
Sample Type: WDMCCV, Combo WDM and CCV
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27242 Lims Sample ID: 1
Sublist: chrom-D2A_Dioxin*sub1

Non-2,3,7,8-sub-HpCDF, RT: 49.331

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDF | 1.498 | D 13C-1,2,3,4,6,7,8-HpCDF | 100.000 | 4951834 | 1041260 |
| 1,2,3,4,7,8,9-HpCDF | 1.381 | D 13C-1,2,3,4,7,8,9-HpCDF | 100.000 | 4101369 | 764977 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.440 | | 100.000 | 4526601 | 903118 |

Sum the Uncalibrated Results

| RT | 407.7817 Area | 407.7817 Height | 409.7788 Area | 409.7788 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 48:26 | 21261 | 3477 | 20074 | 2834 | 0.6343 | 1.06 | |
| 48:40 | 30956 | 5016 | 23330 | 4620 | 0.8331 | 1.33 | RQ |
| 48:40 | 24263 | 4804 | 23330 | 4620 | 0.7304 | | Empc Correction |

Compound is Marked ND

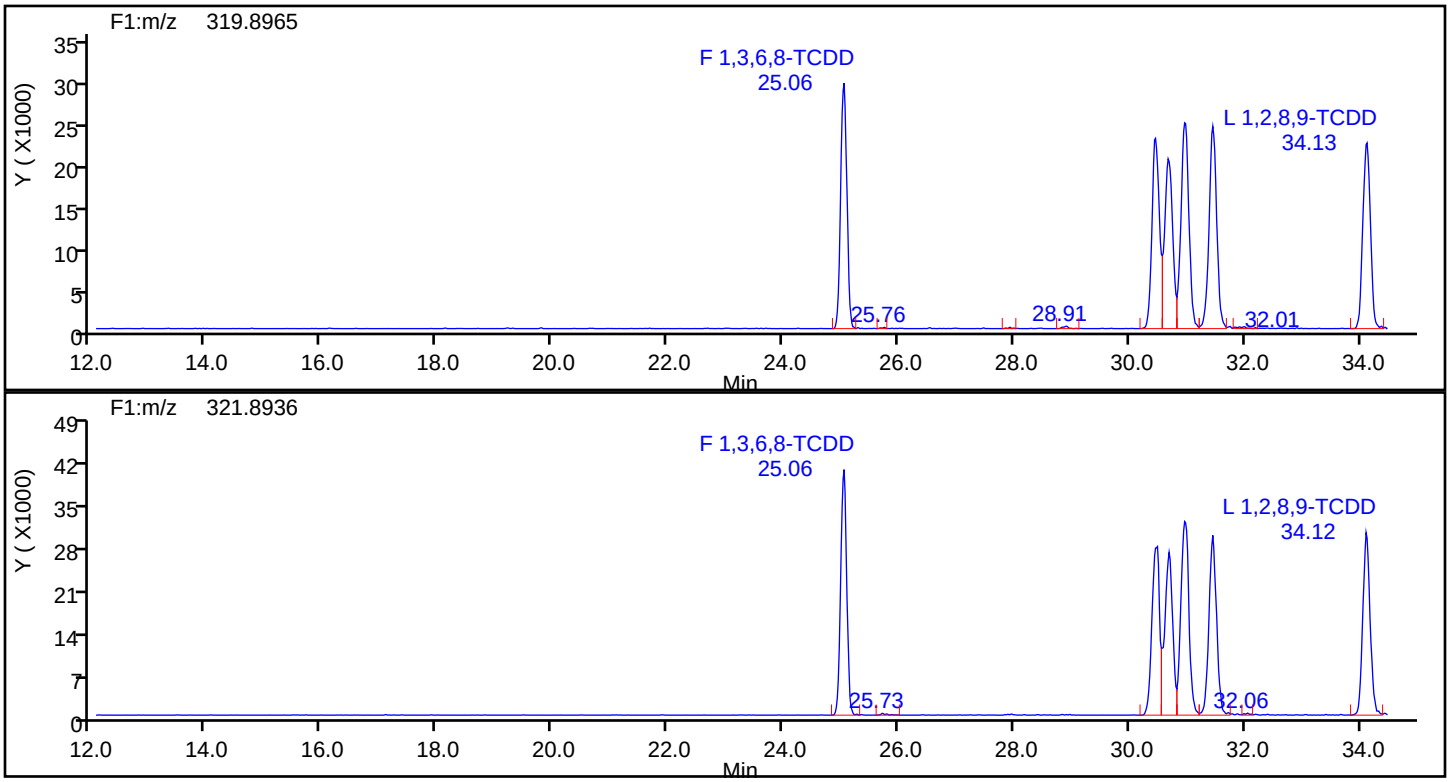
Report Date: 29-Jan-2019 10:59:28 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d

| | | | |
|---|---|---|---|
| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

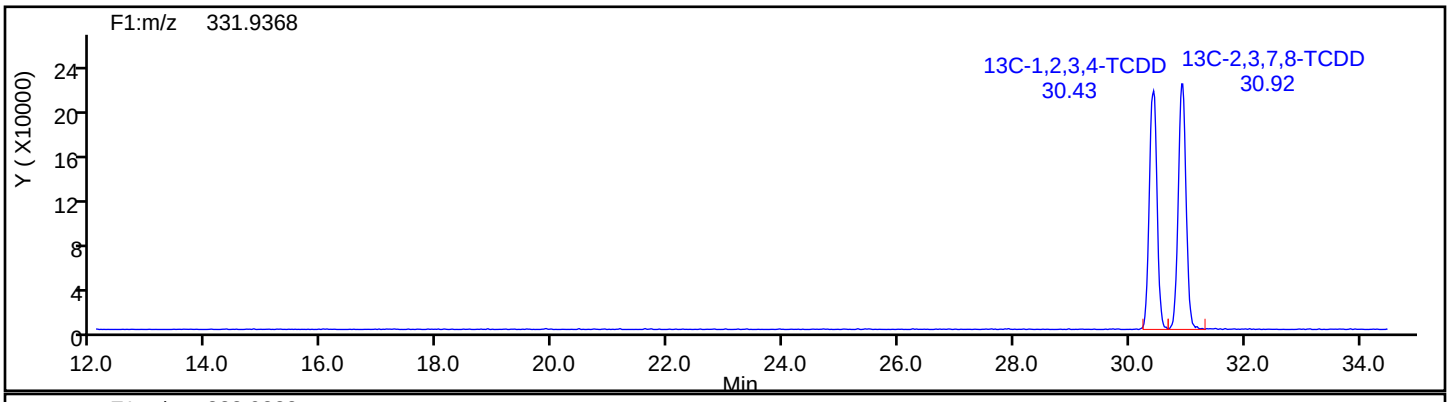
TCDD

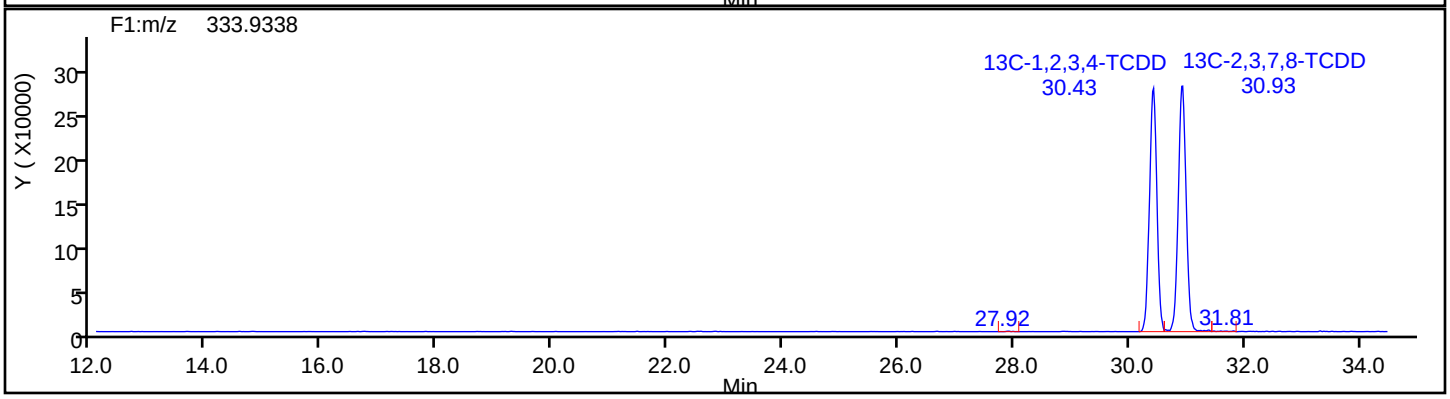






TCDD Standards



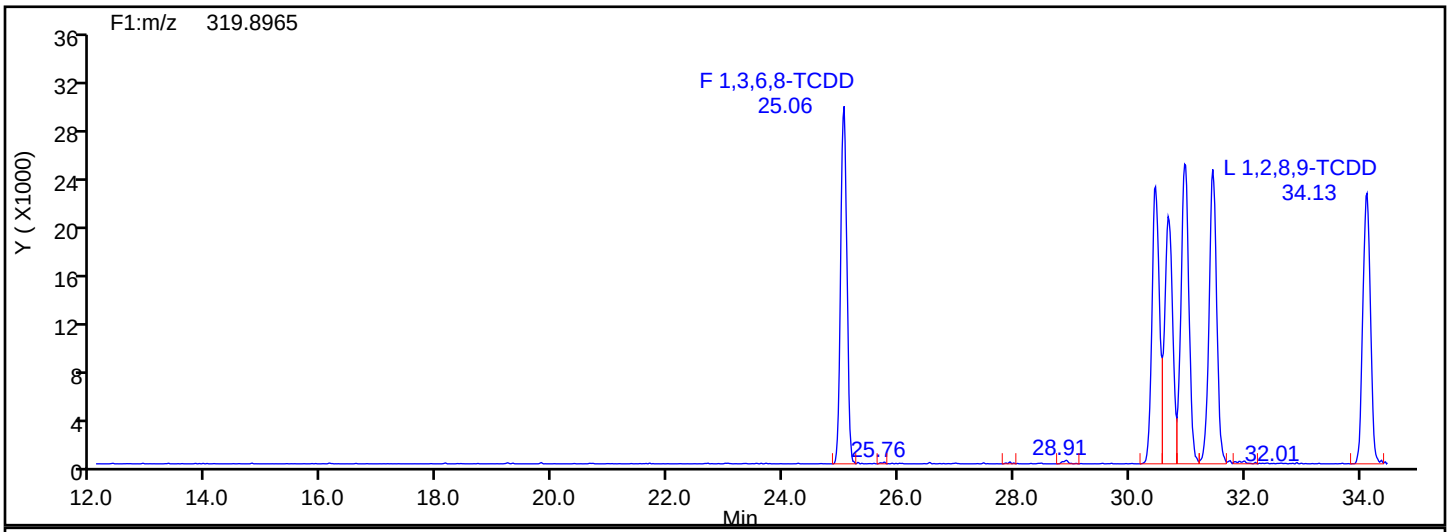



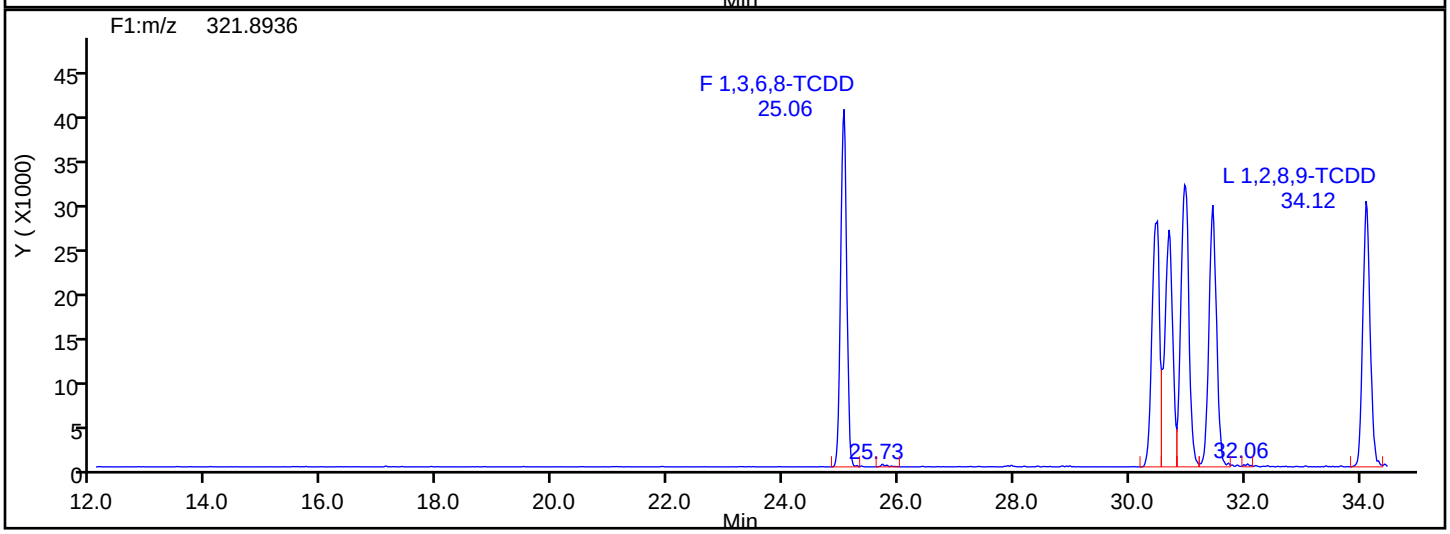
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TestAmerica Knoxville

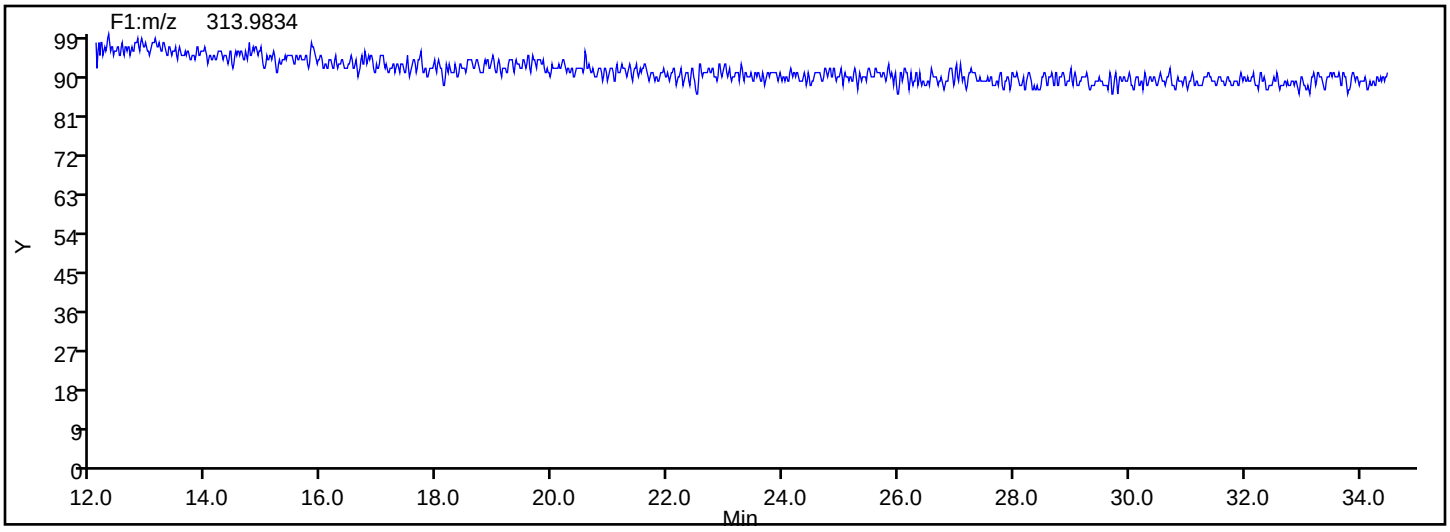
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| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



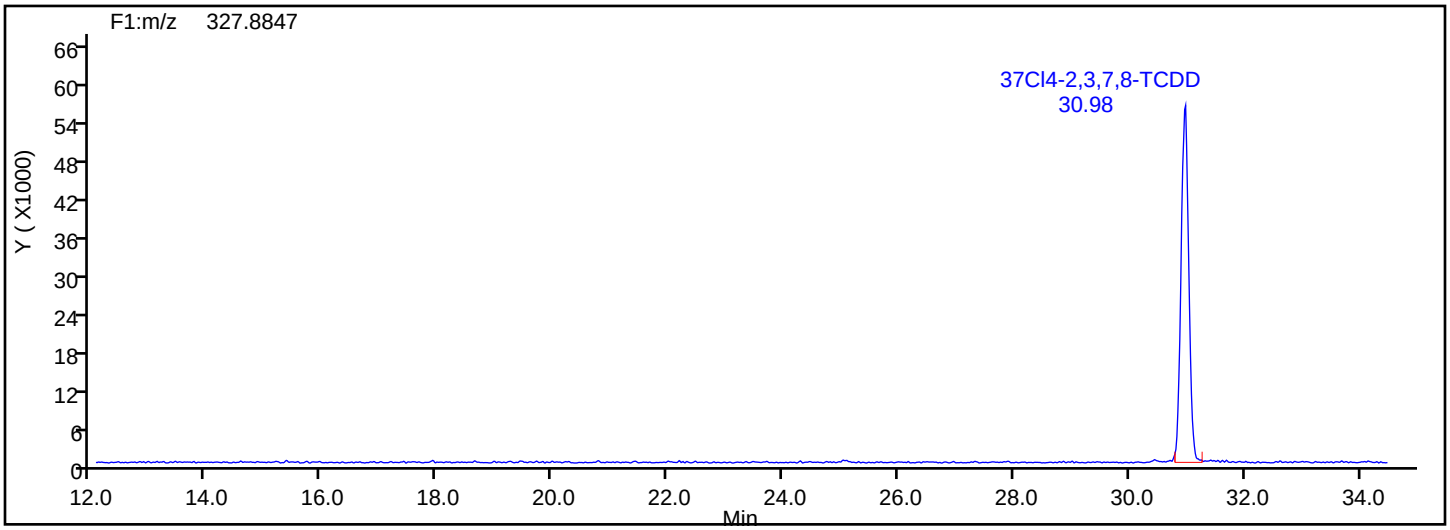
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TestAmerica Knoxville

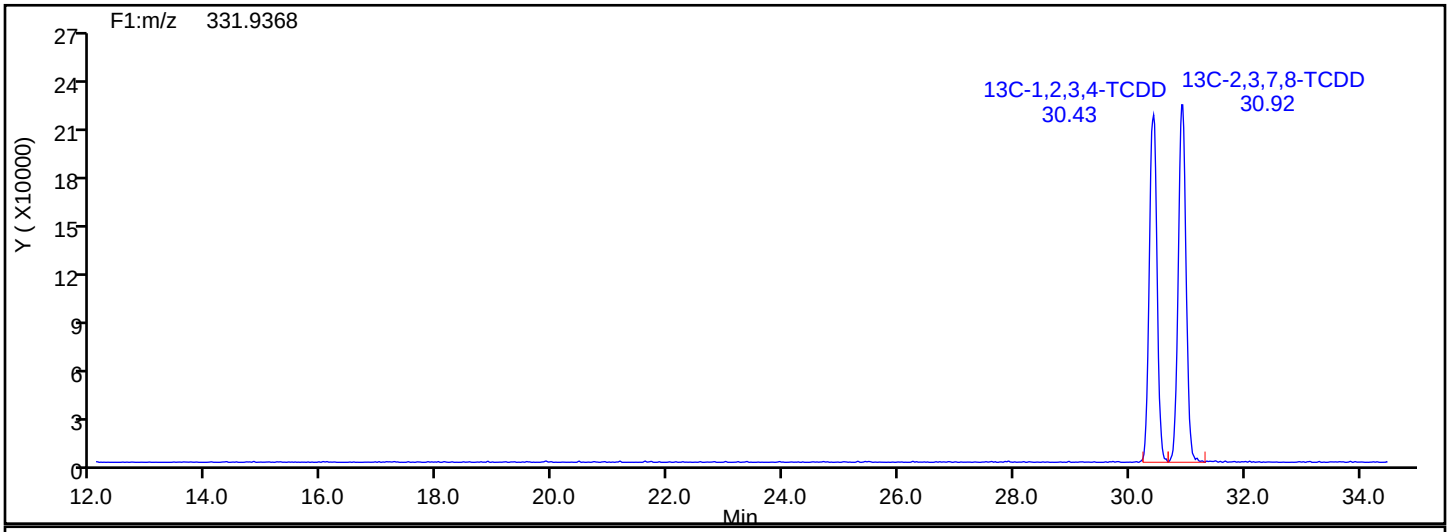
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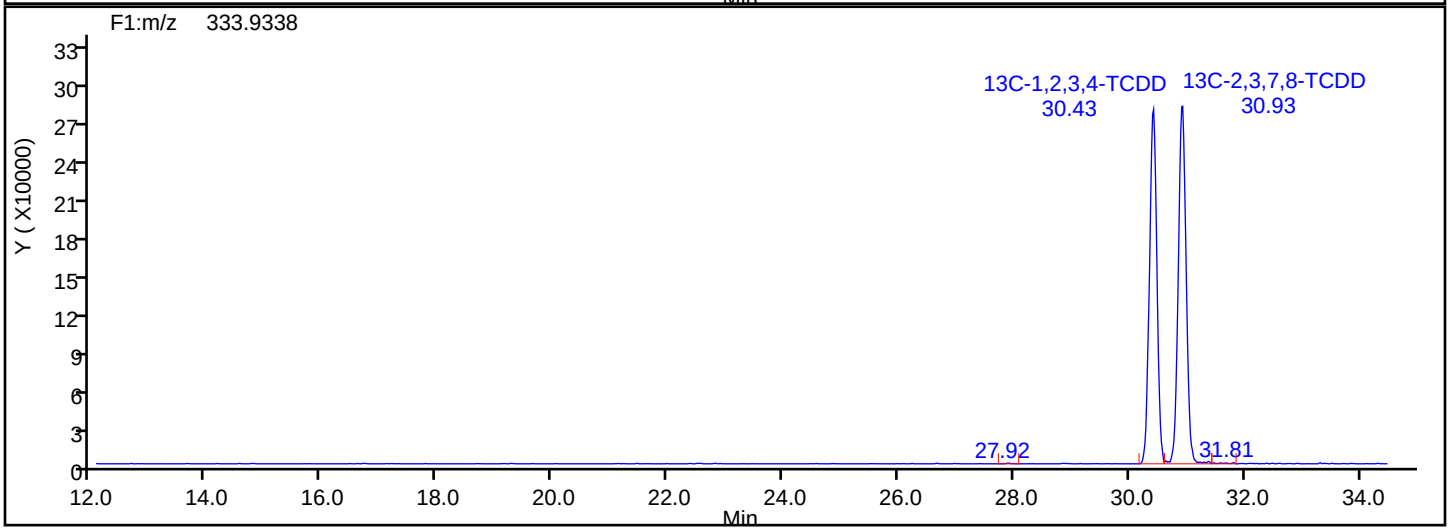
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|---|---|---|---|
| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



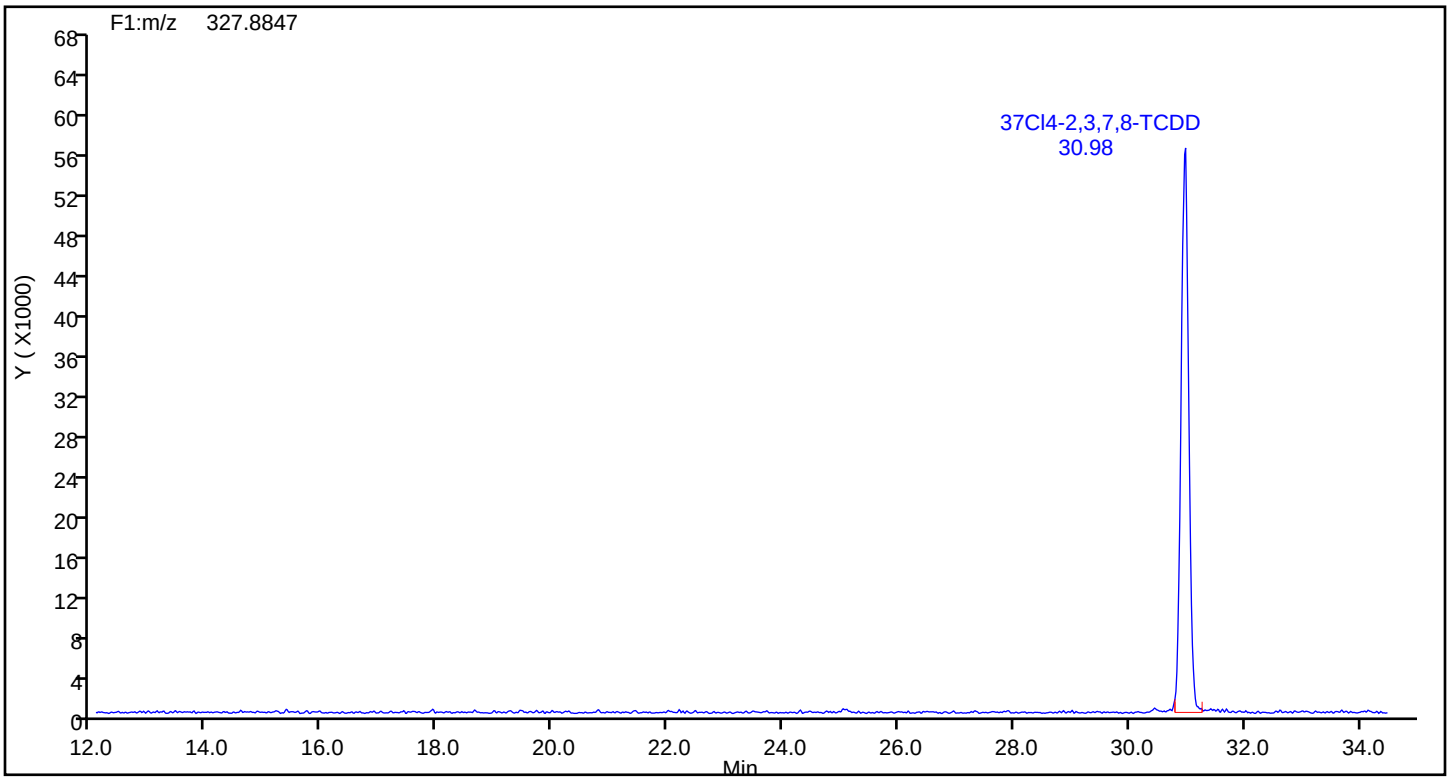
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TestAmerica Knoxville

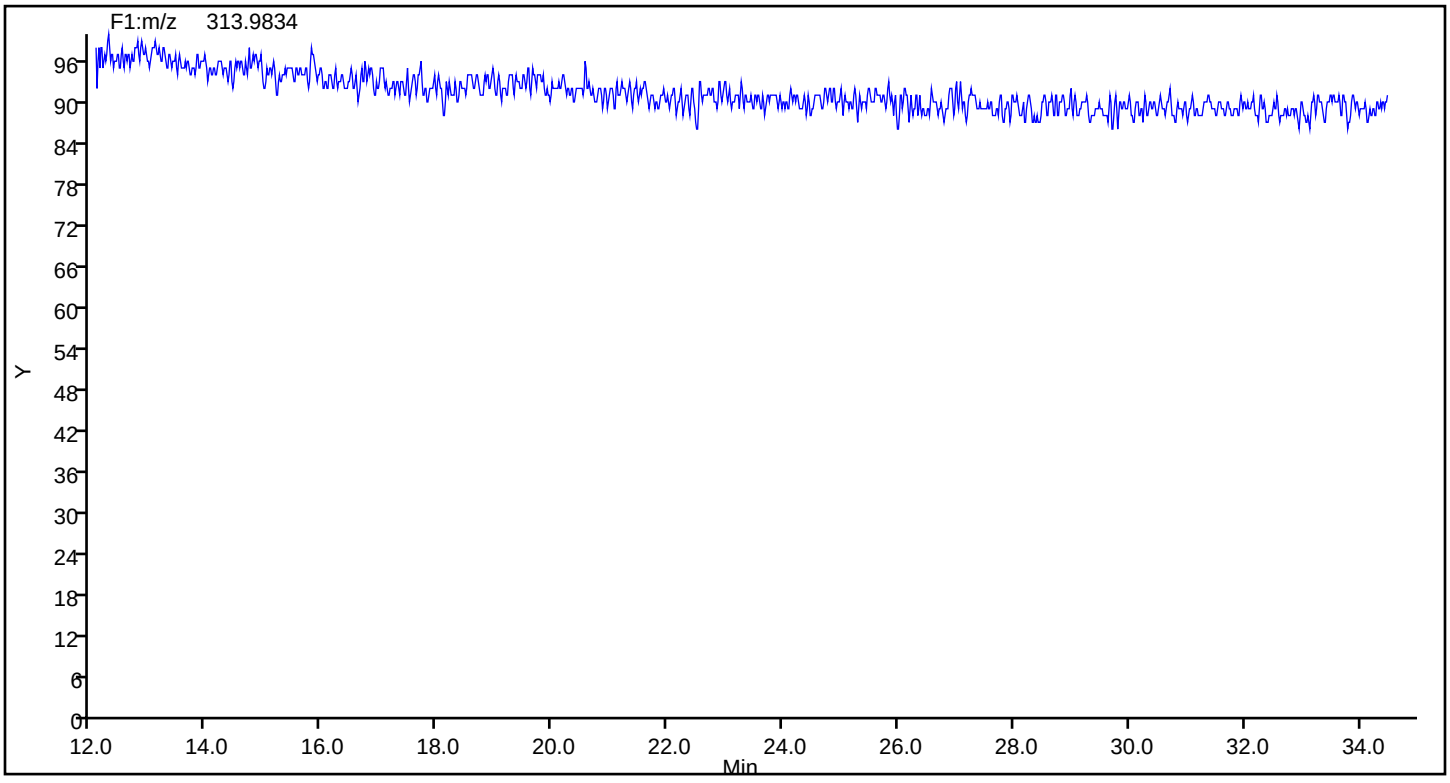
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| | | | |
|---|---|---|---|
| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Lock Mass



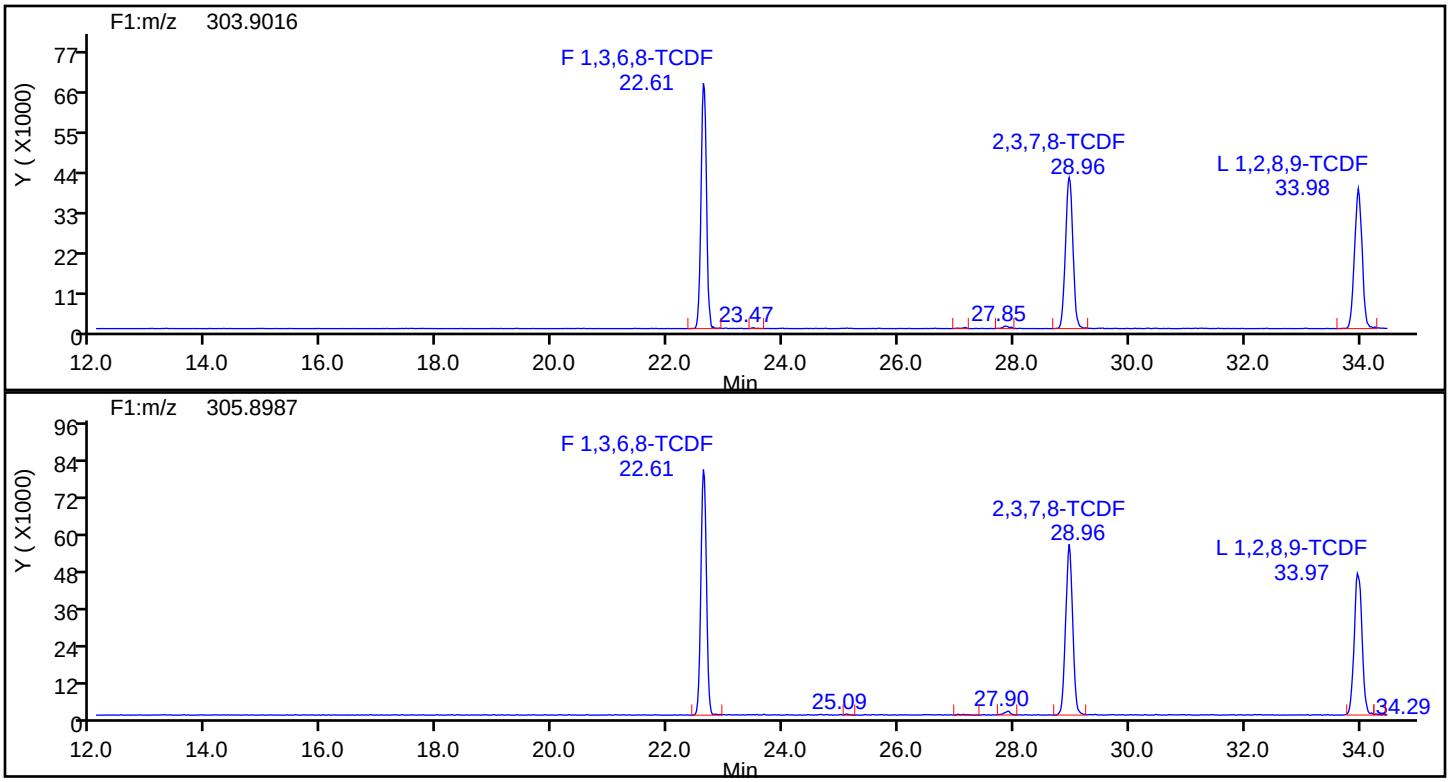
Report Date: 29-Jan-2019 10:59:28 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

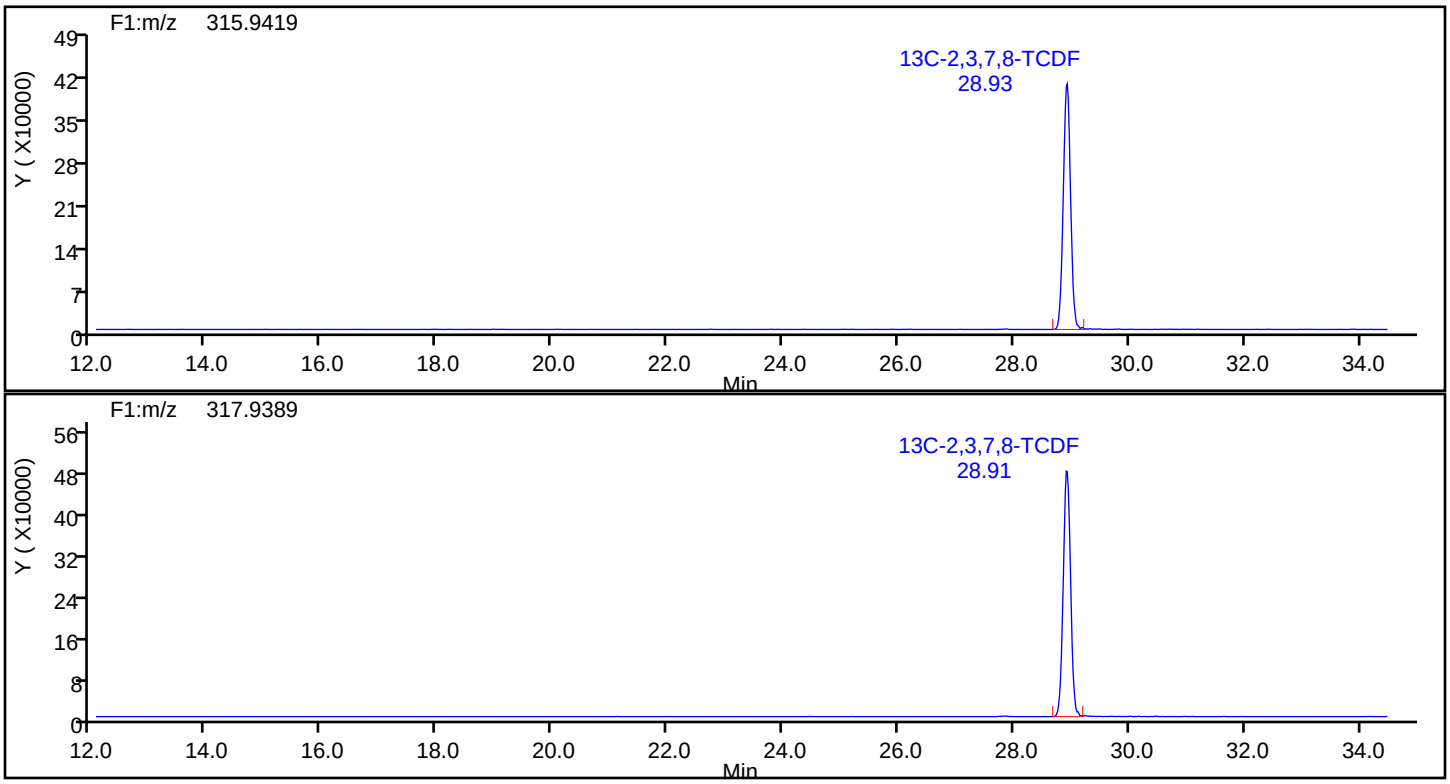
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| | | | |
|---|---|---|---|
| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

TCDF




TCDF Standards

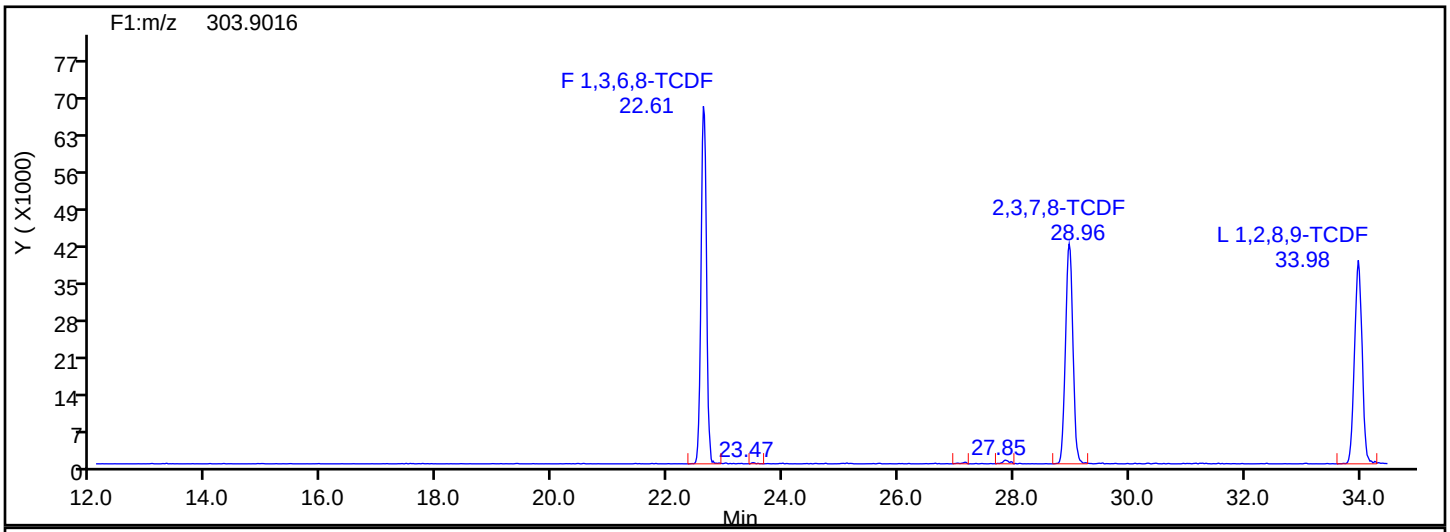


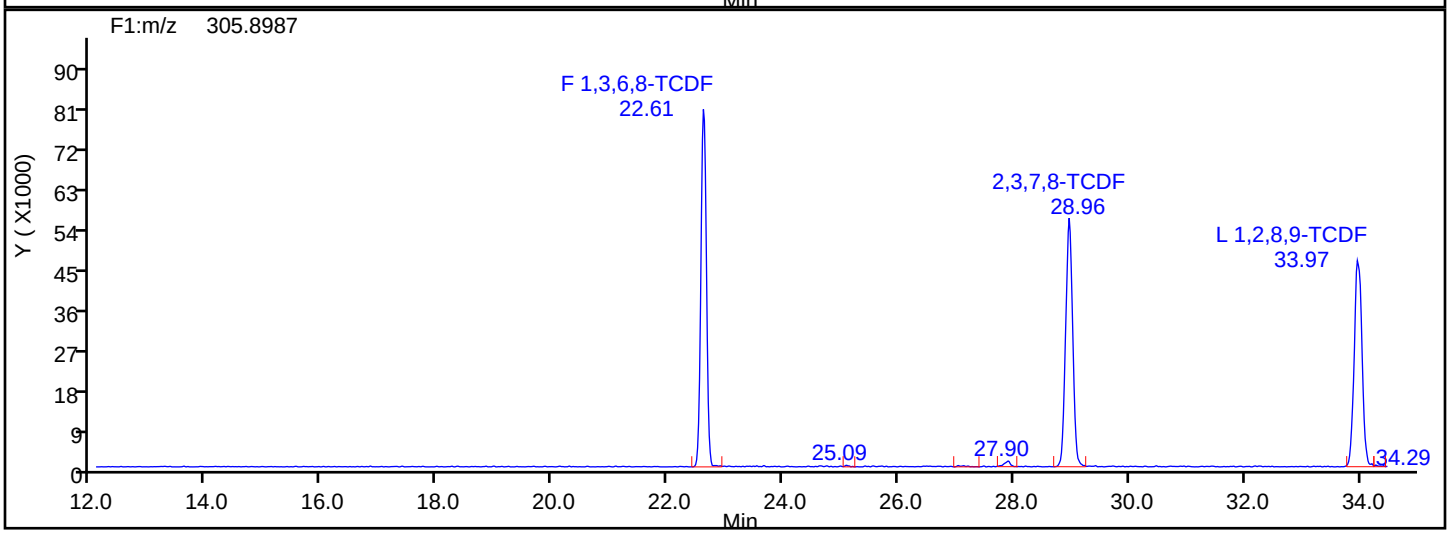
Report Date: 29-Jan-2019 10:59:29 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

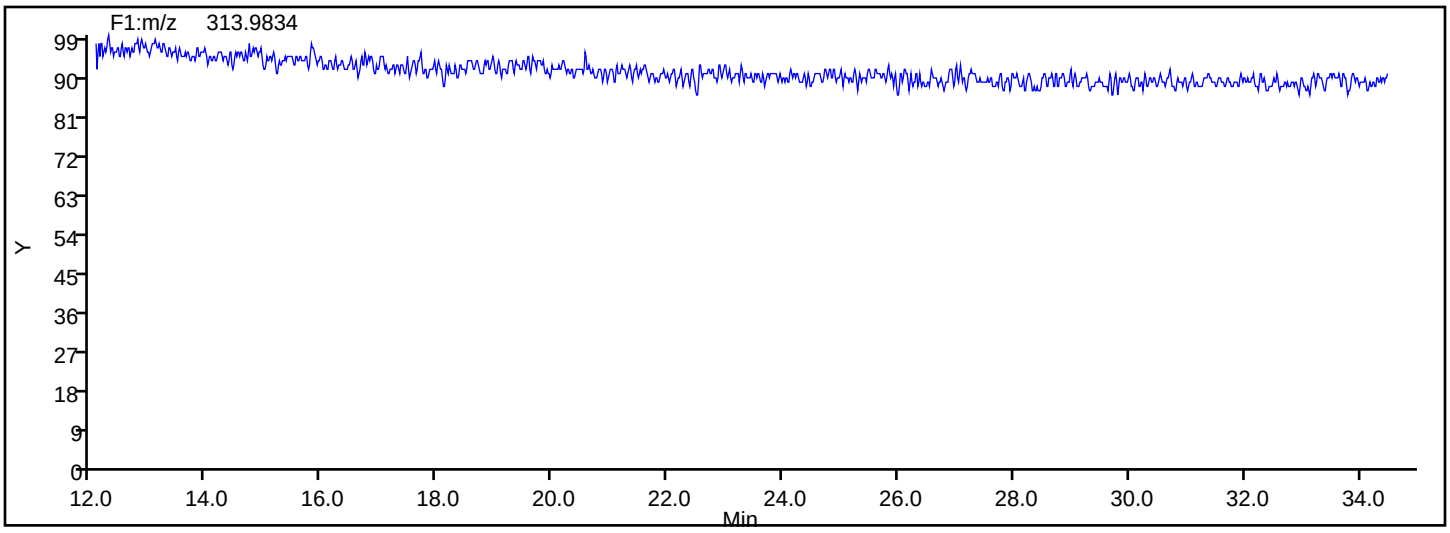
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| Data File: | \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d | | |
| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

TCDF




TCDF Lock Mass

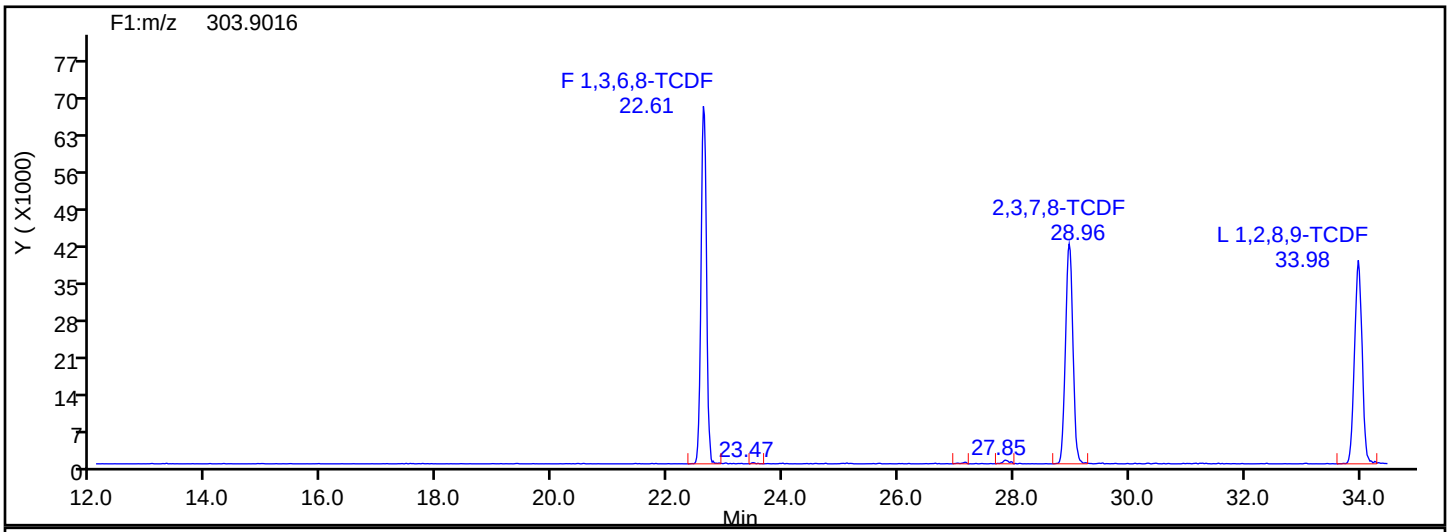


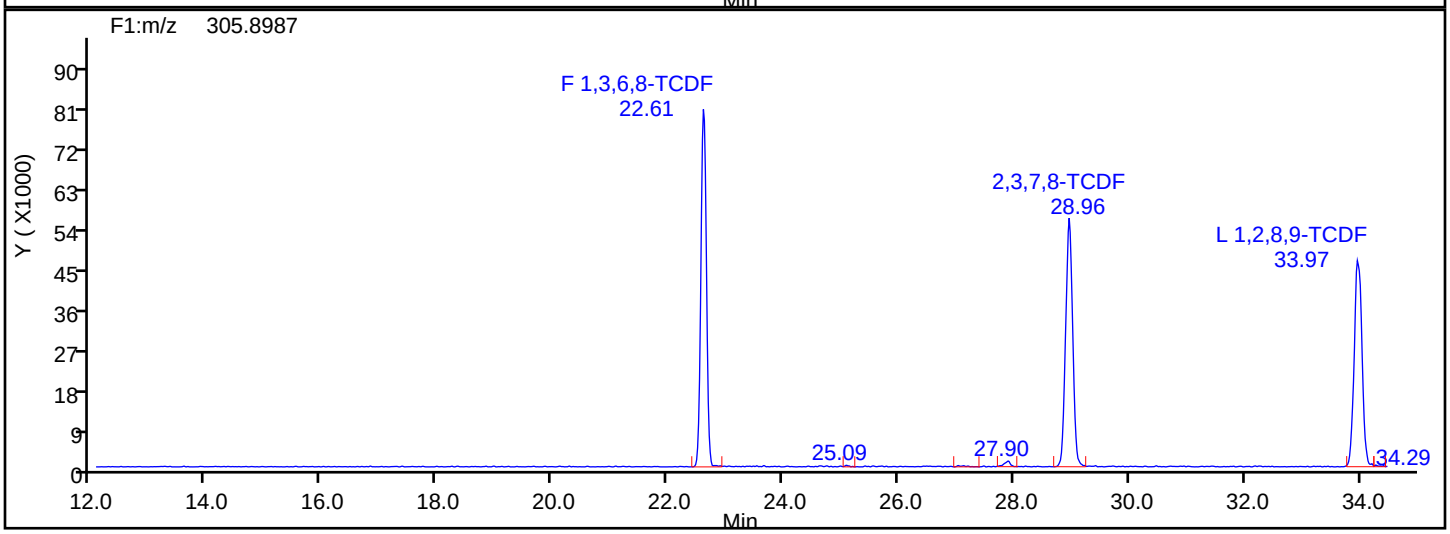
Report Date: 29-Jan-2019 10:59:29 Chrom Revision: 2.3 28-Jan-2019 09:43:36

TestAmerica Knoxville

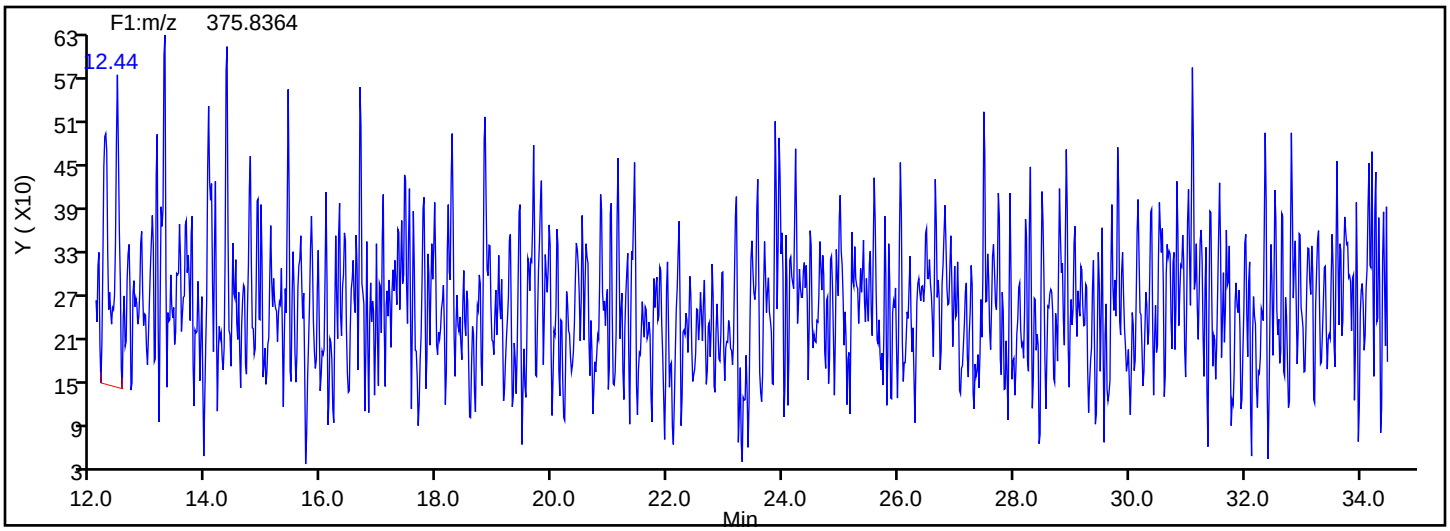
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| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

TCDF




TCDF Interference Mass



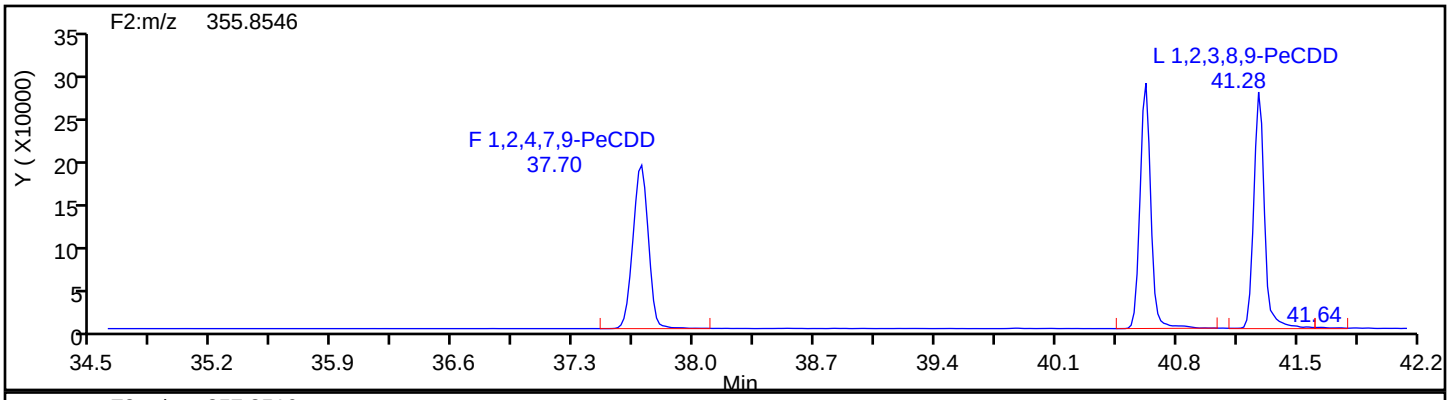
Report Date: 29-Jan-2019 10:59:29 Chrom Revision: 2.3 28-Jan-2019 09:43:36

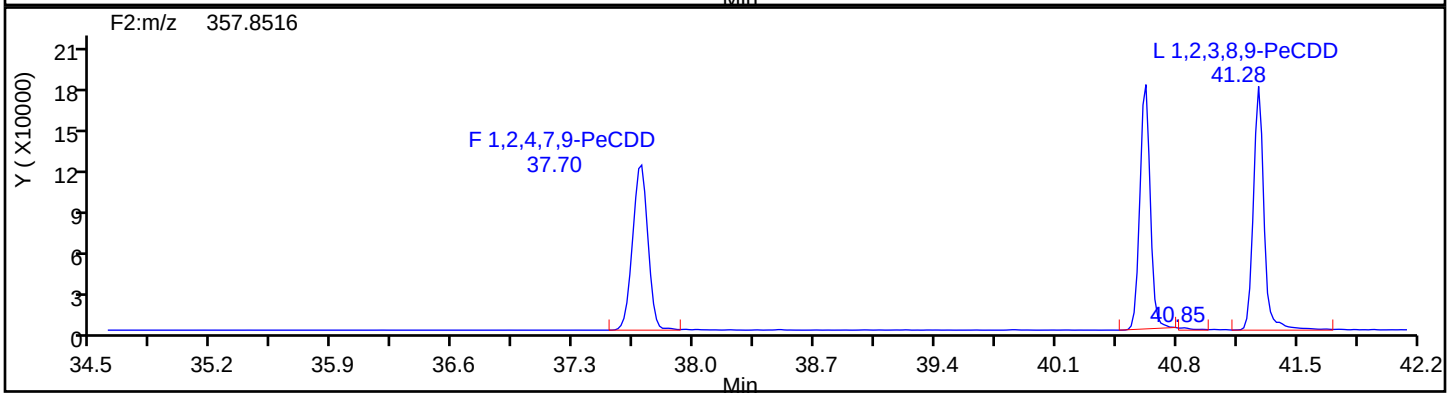
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d

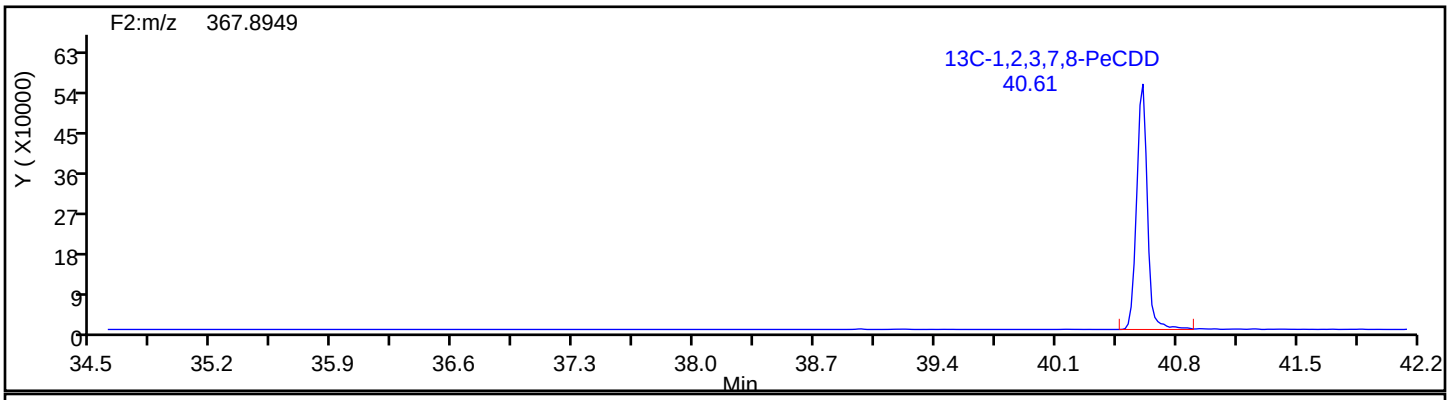
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| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

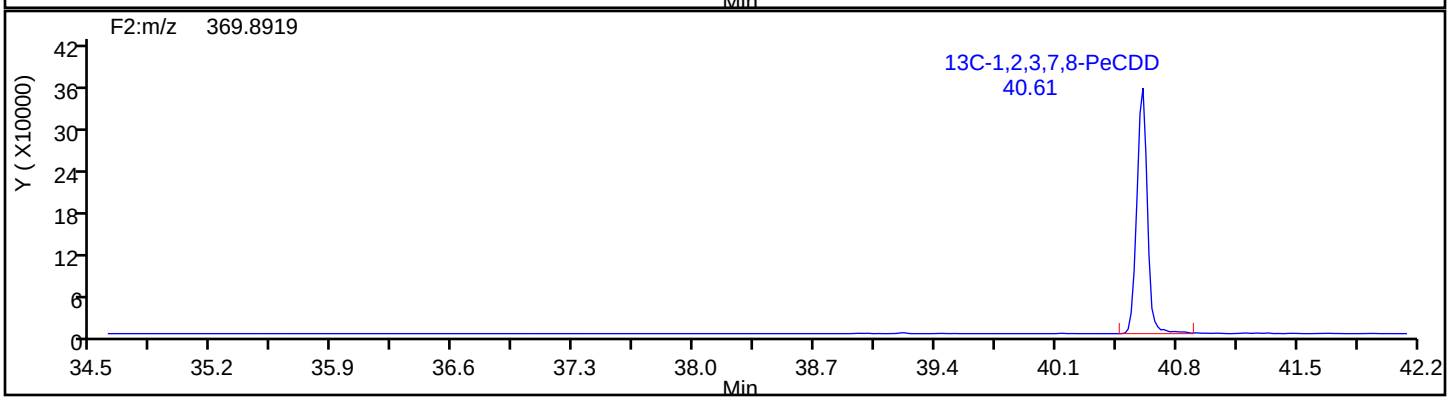
PeCDD




PeCDD Standards



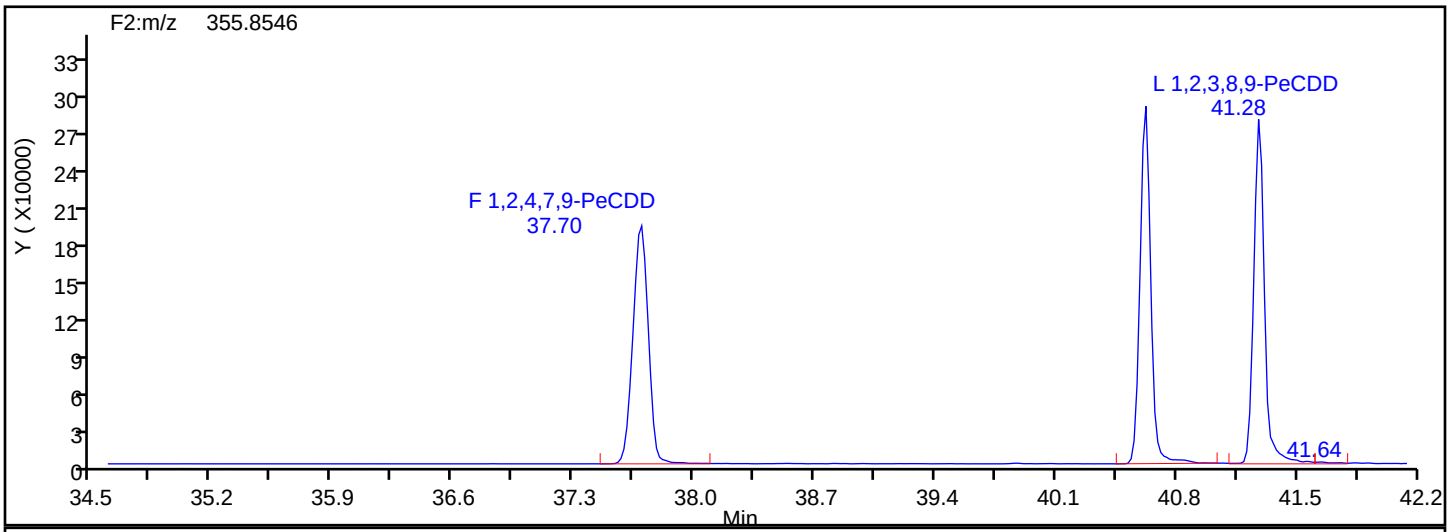
Report Date: 29-Jan-2019 10:59:29 Chrom Revision: 2.3 28-Jan-2019 09:43:36

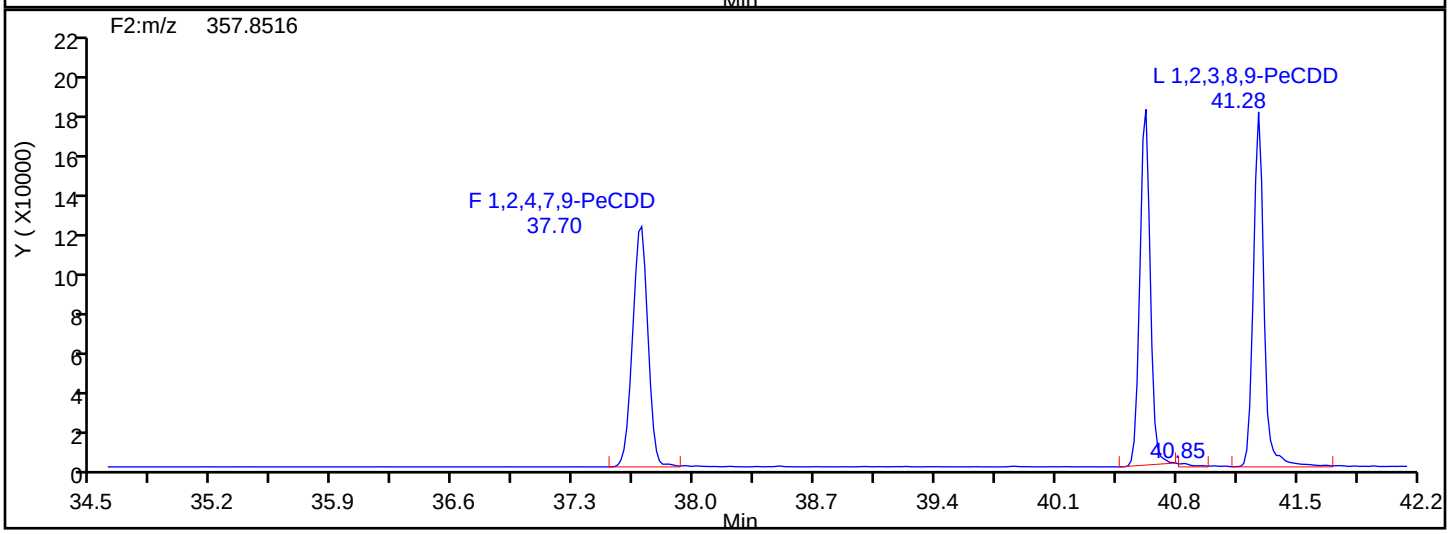
TestAmerica Knoxville

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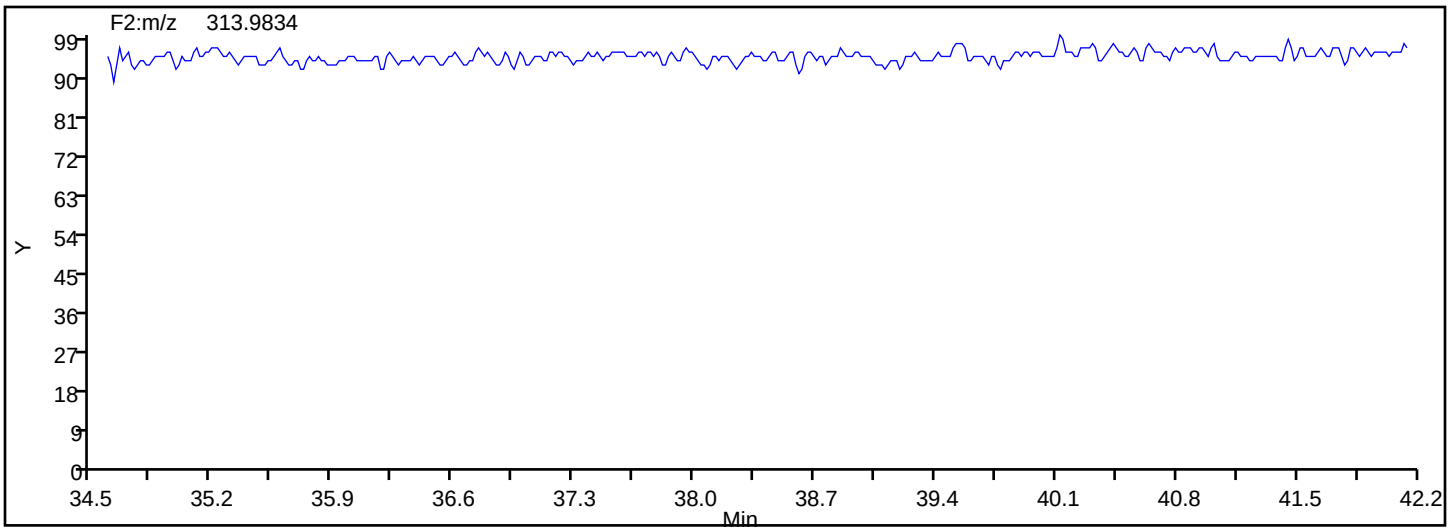
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| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
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| Column Type: | | Column Dia: | |

PeCDD




PeCDD Lock Mass



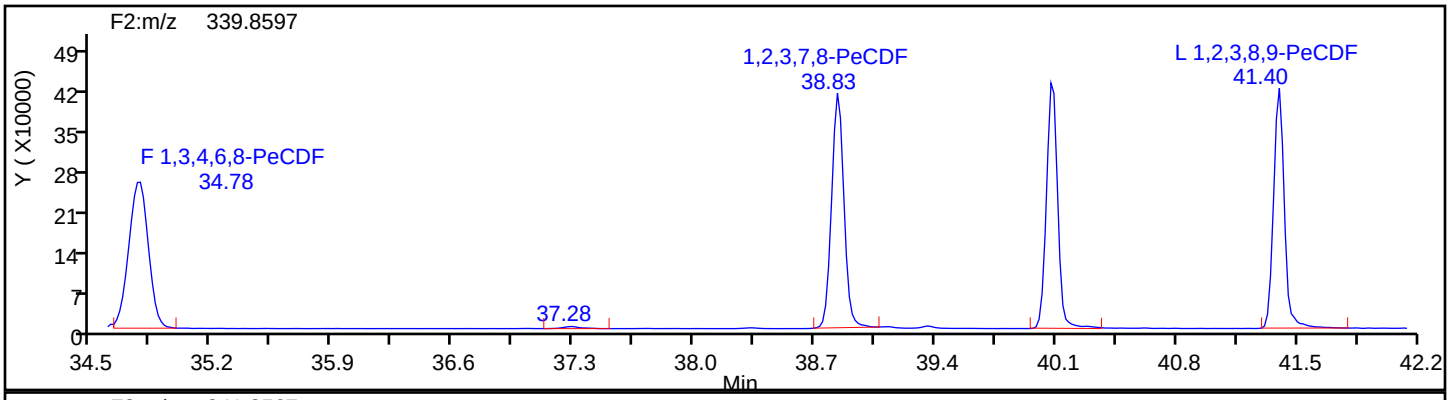
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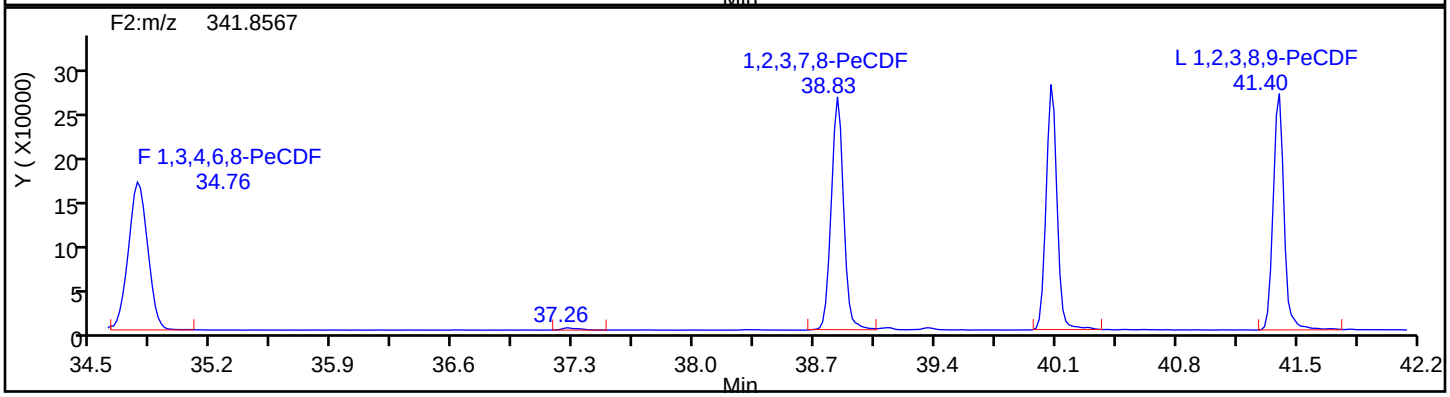
TestAmerica Knoxville

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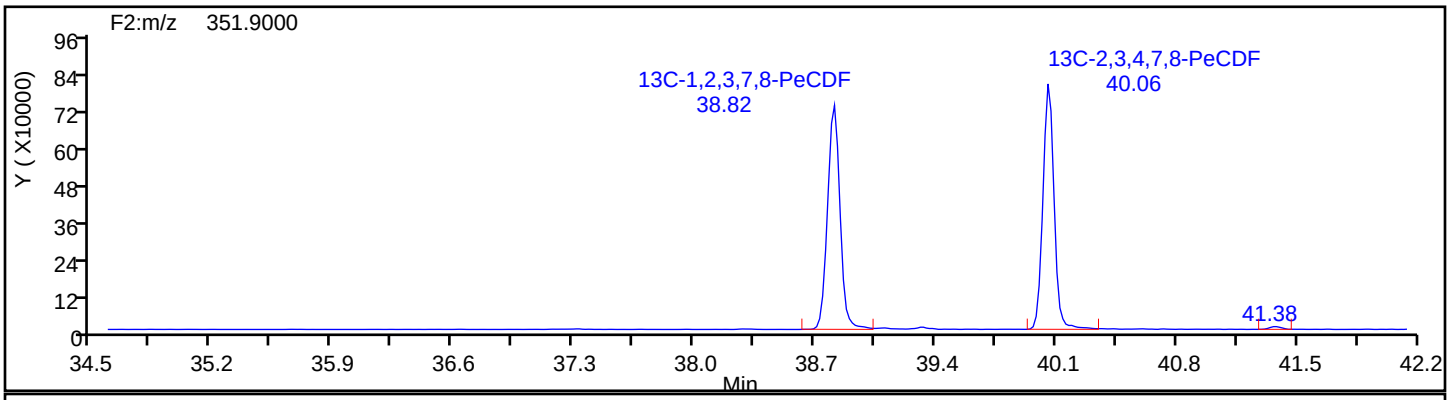
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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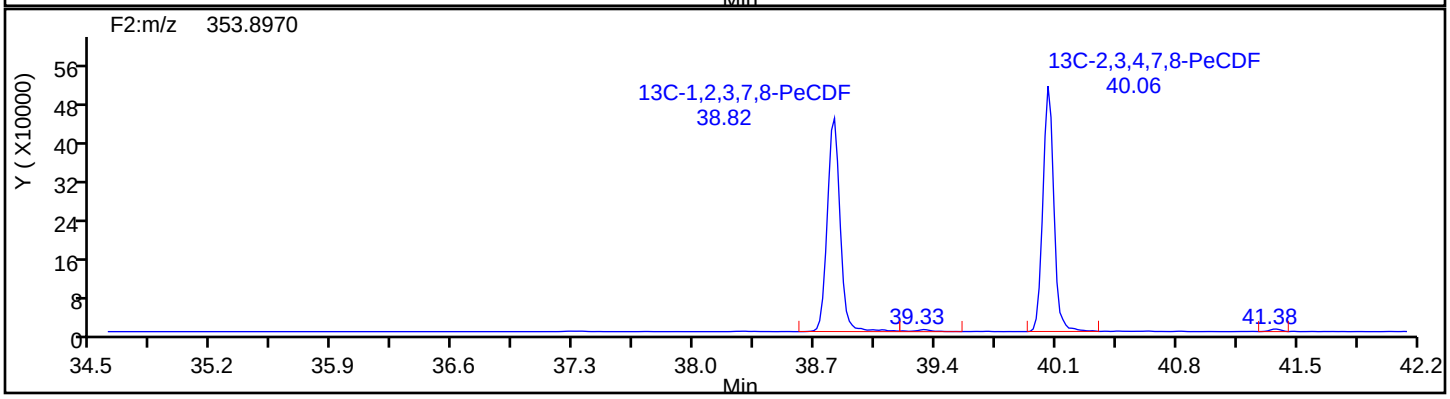
PeCDF




PeCDF Standards



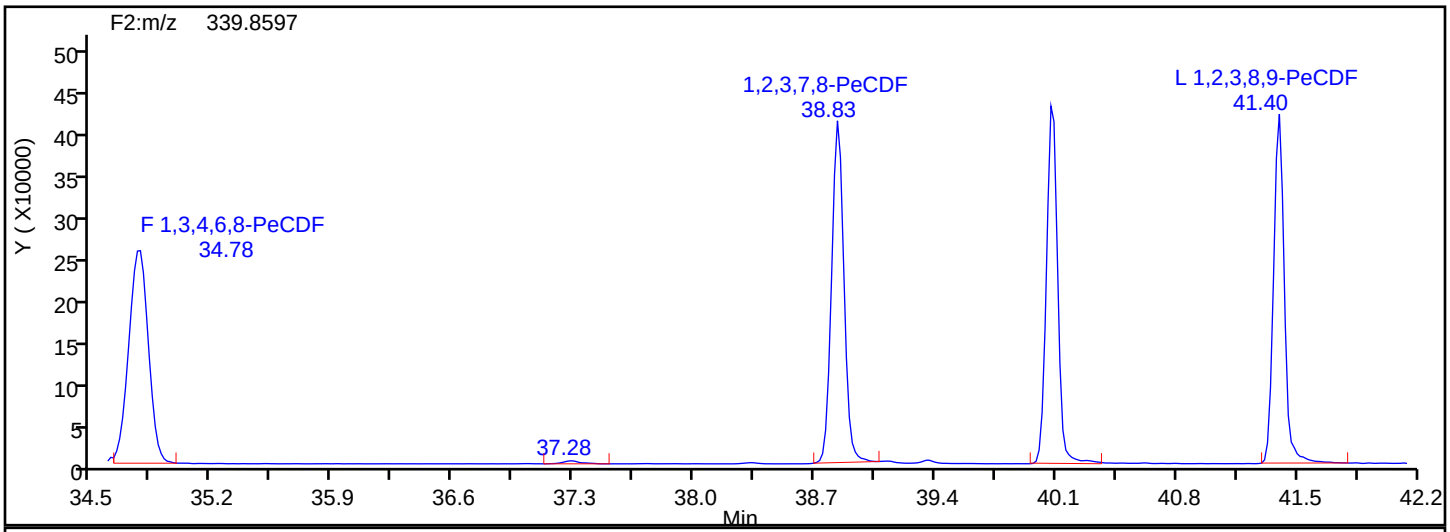
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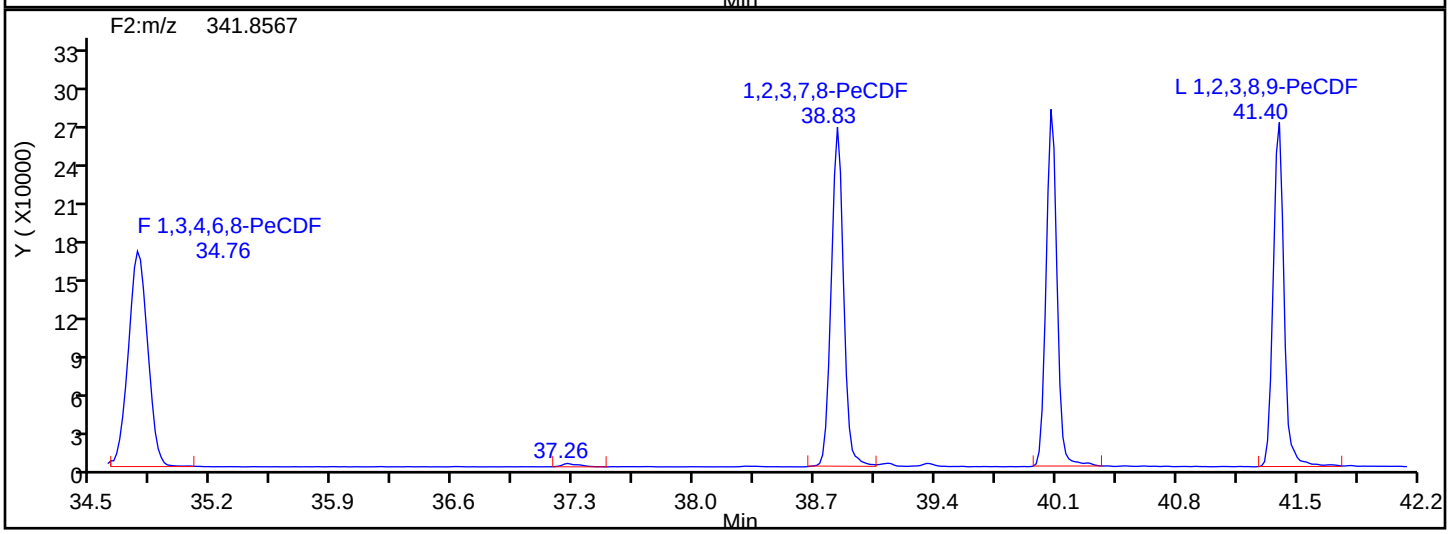
TestAmerica Knoxville

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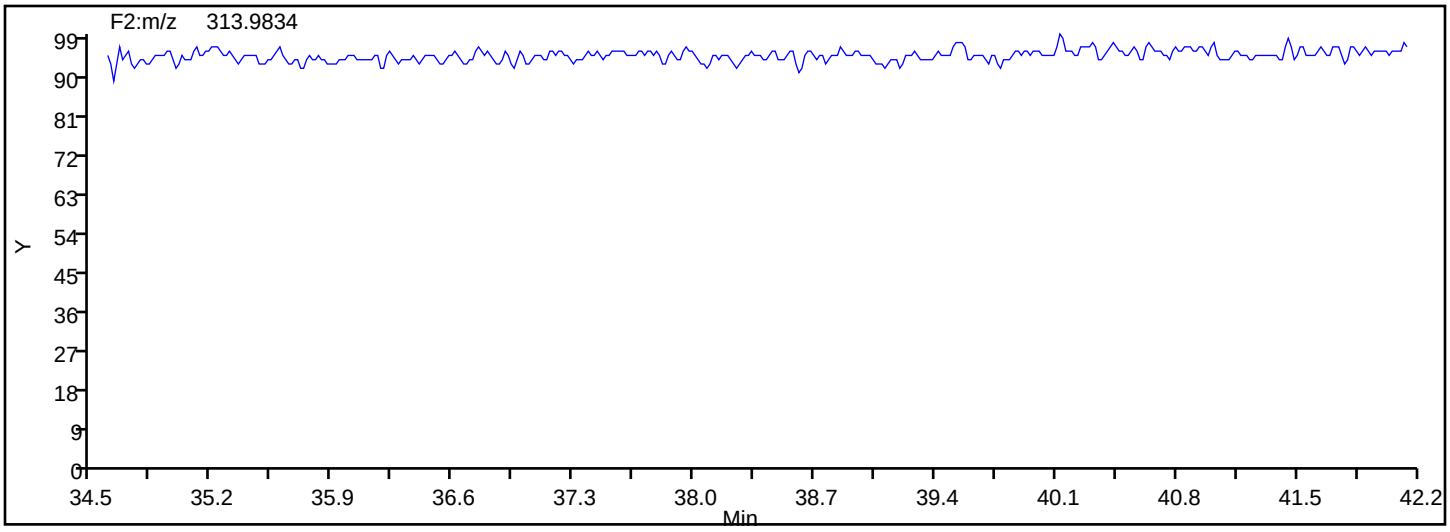
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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PeCDF




PeCDF Lock Mass



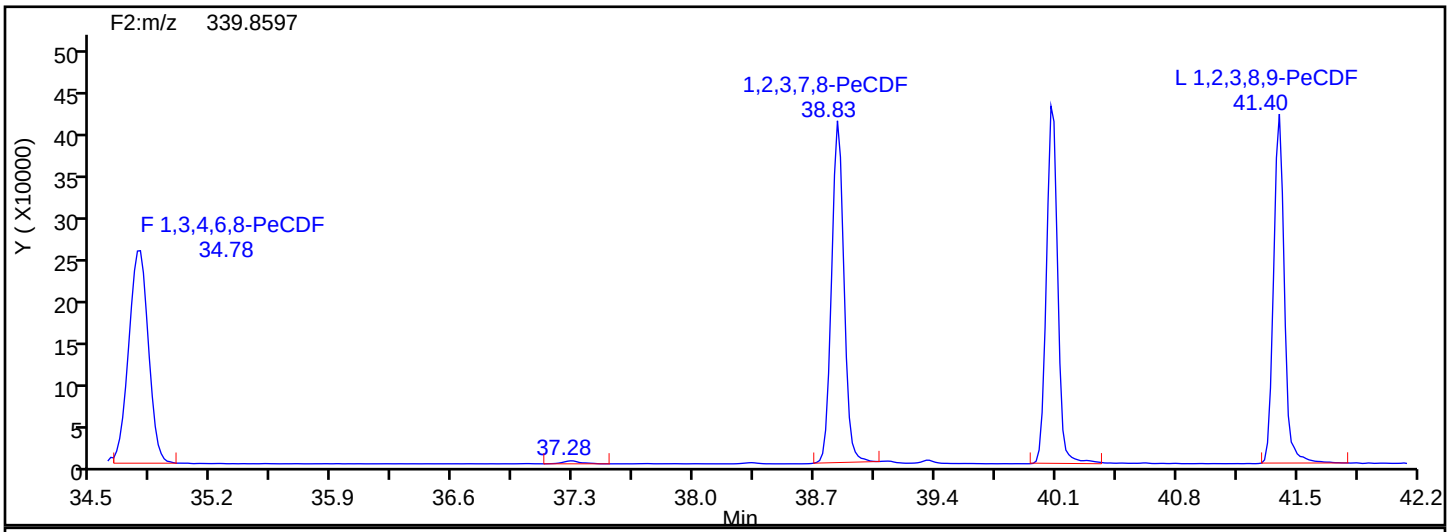
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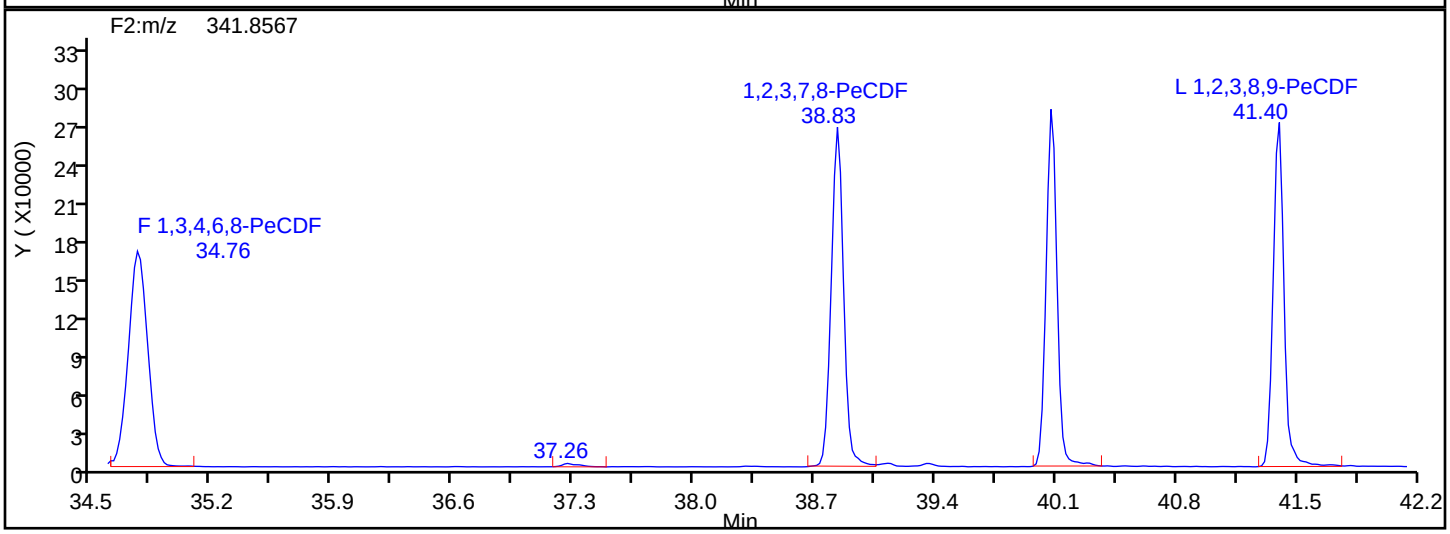
TestAmerica Knoxville

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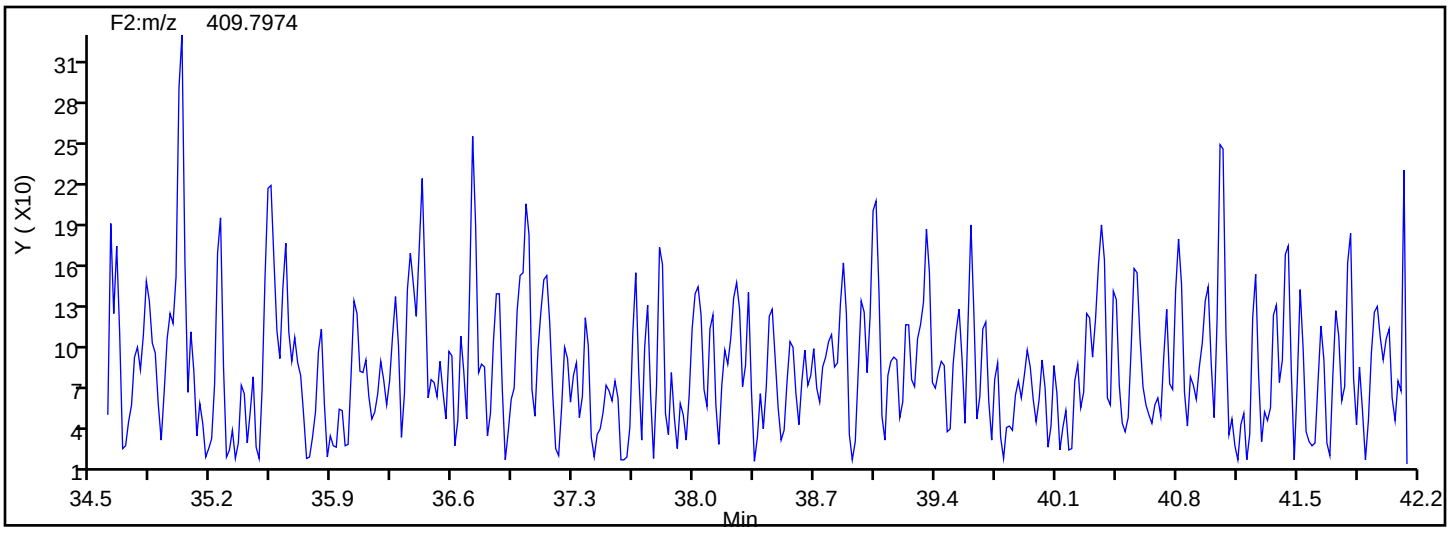
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

PeCDF




PeCDF Interference Mass



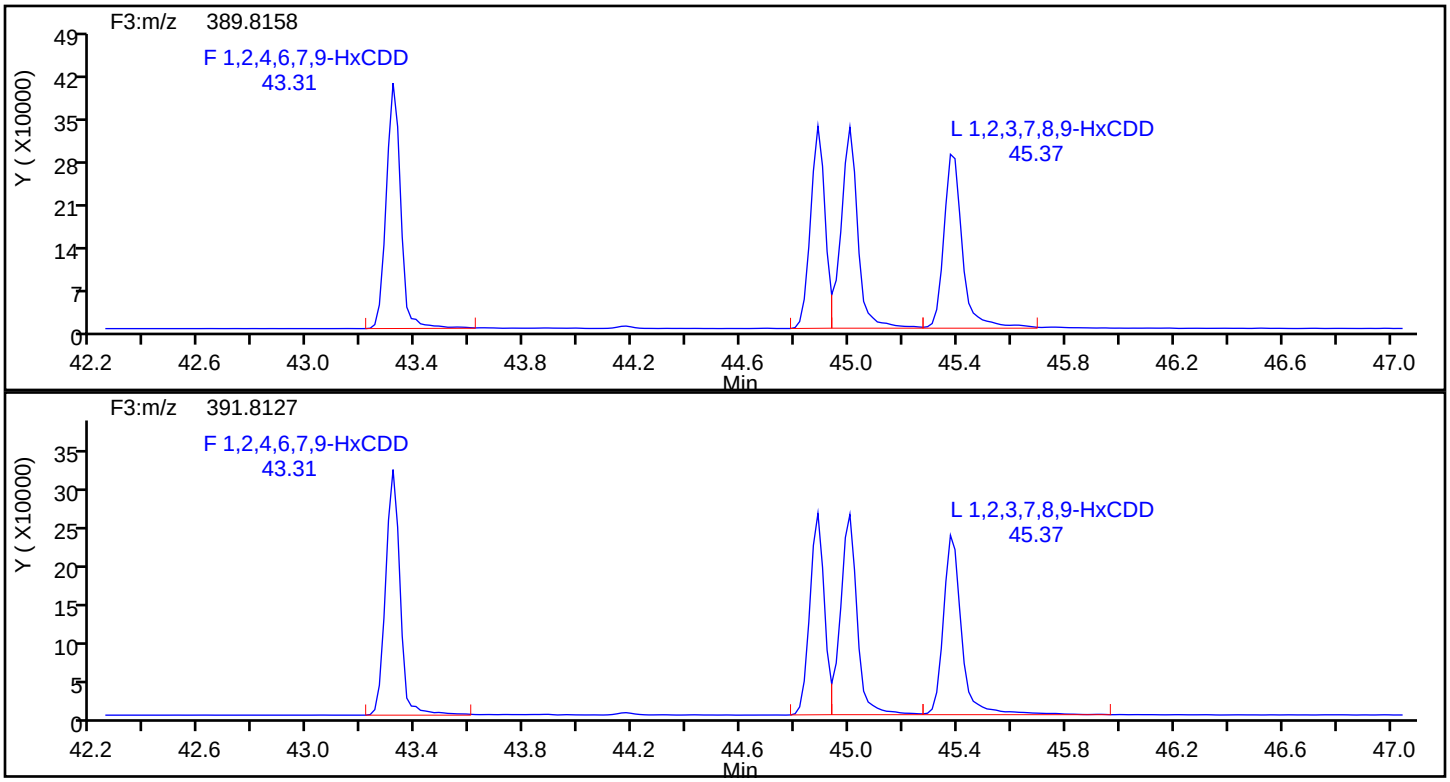
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TestAmerica Knoxville

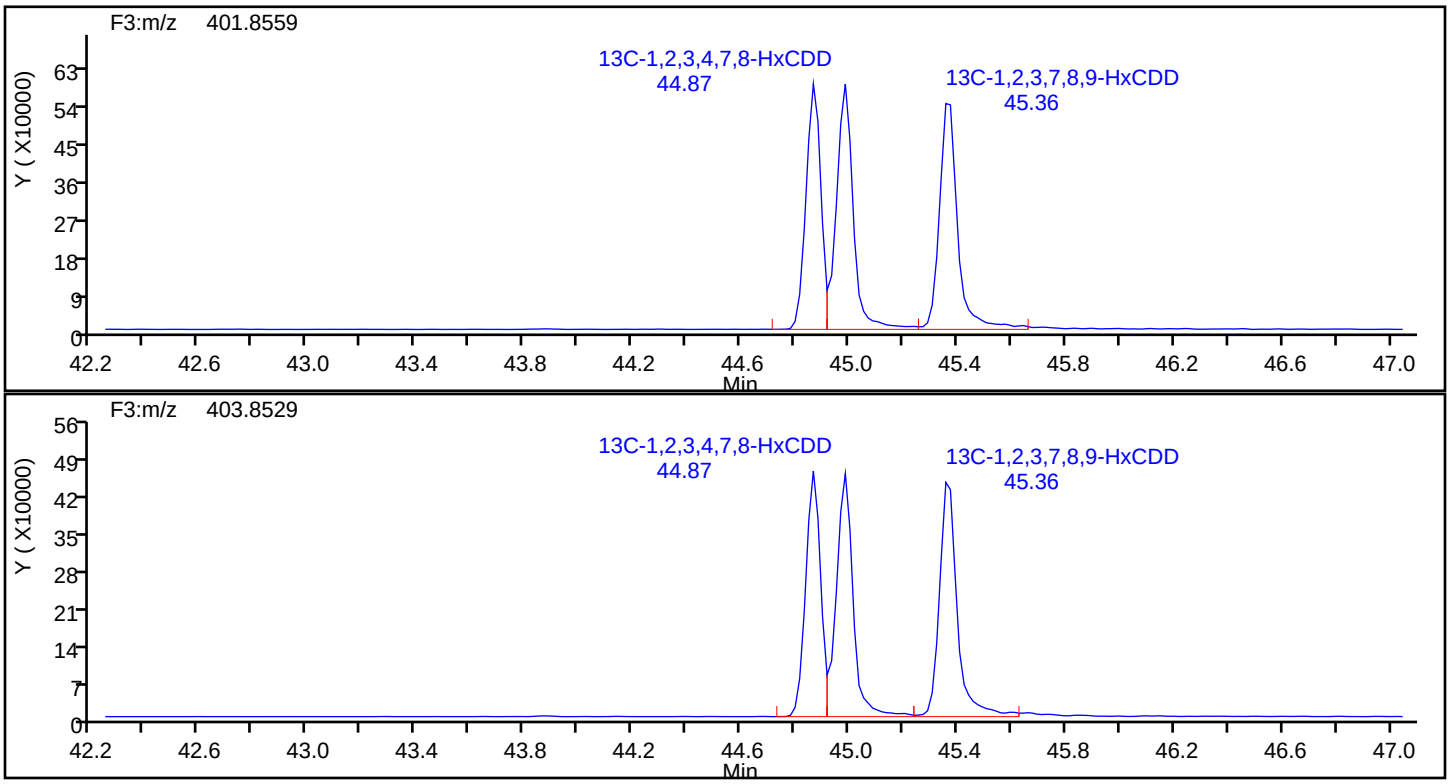
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HxCDD




HxCDD Standards



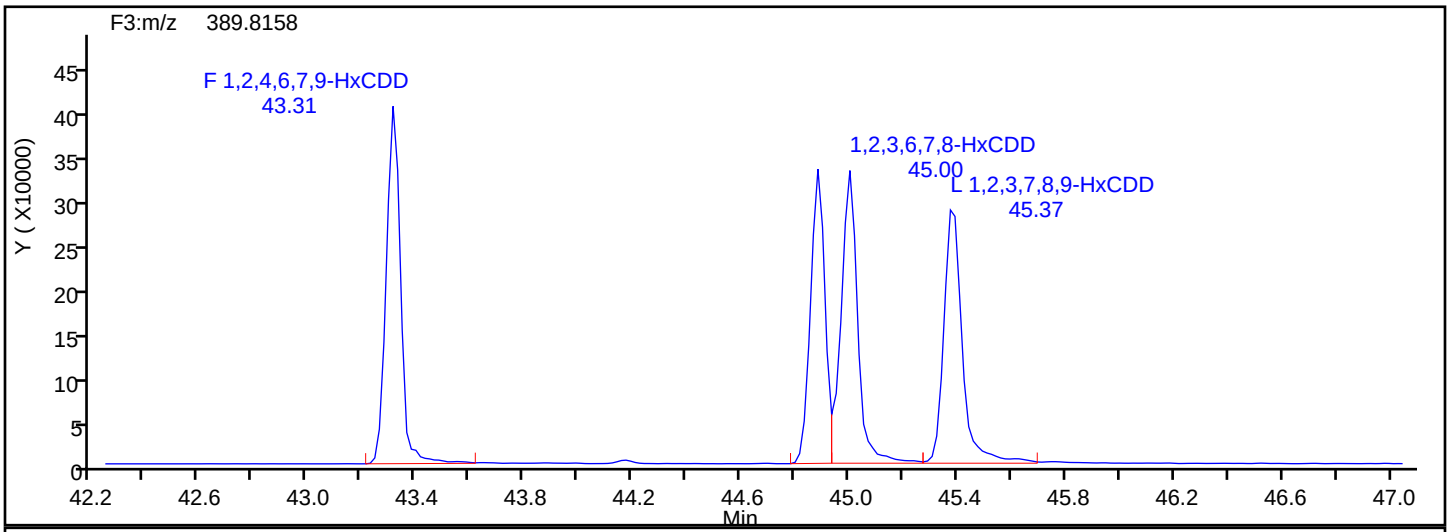
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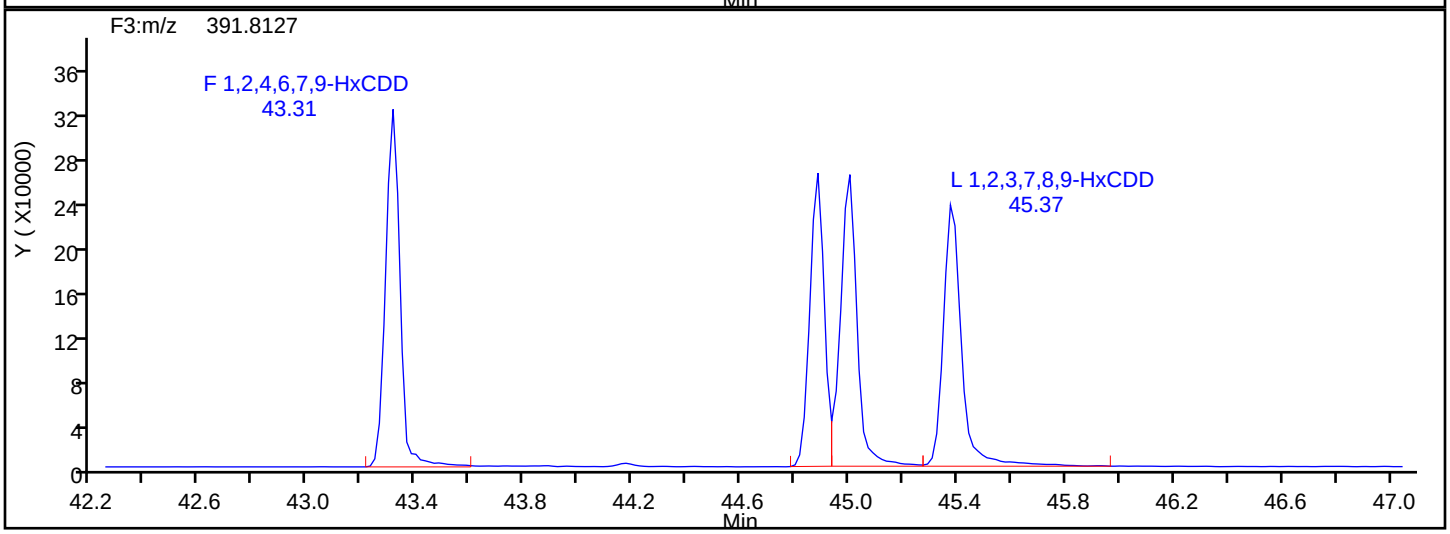
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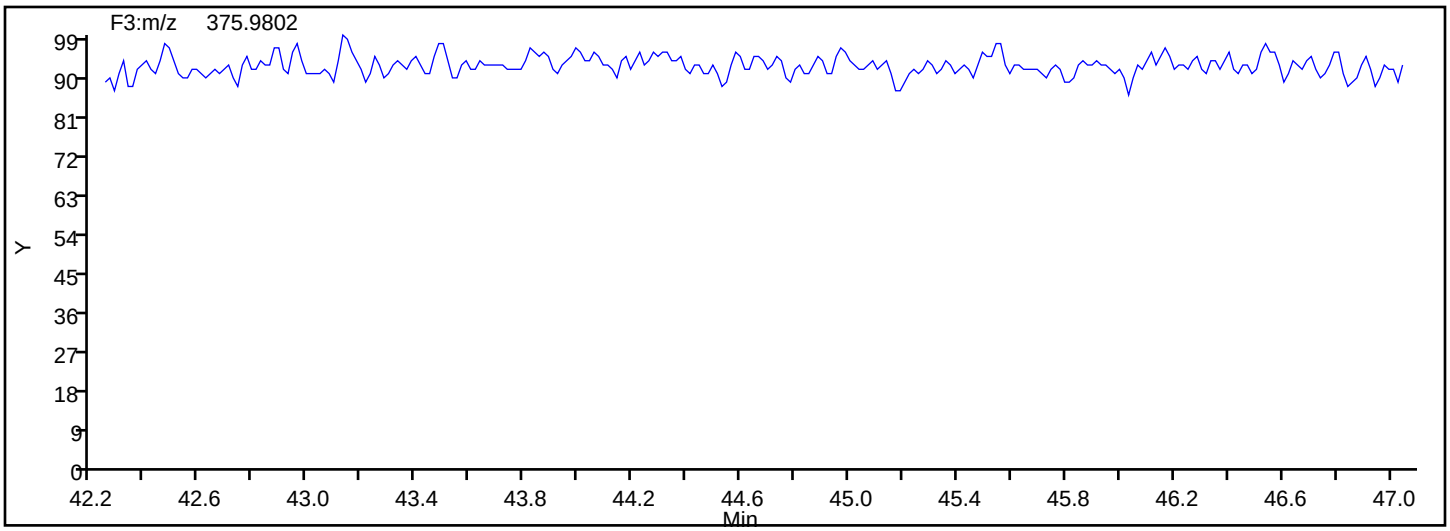
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

HxCDD




HxCDD Lock Mass



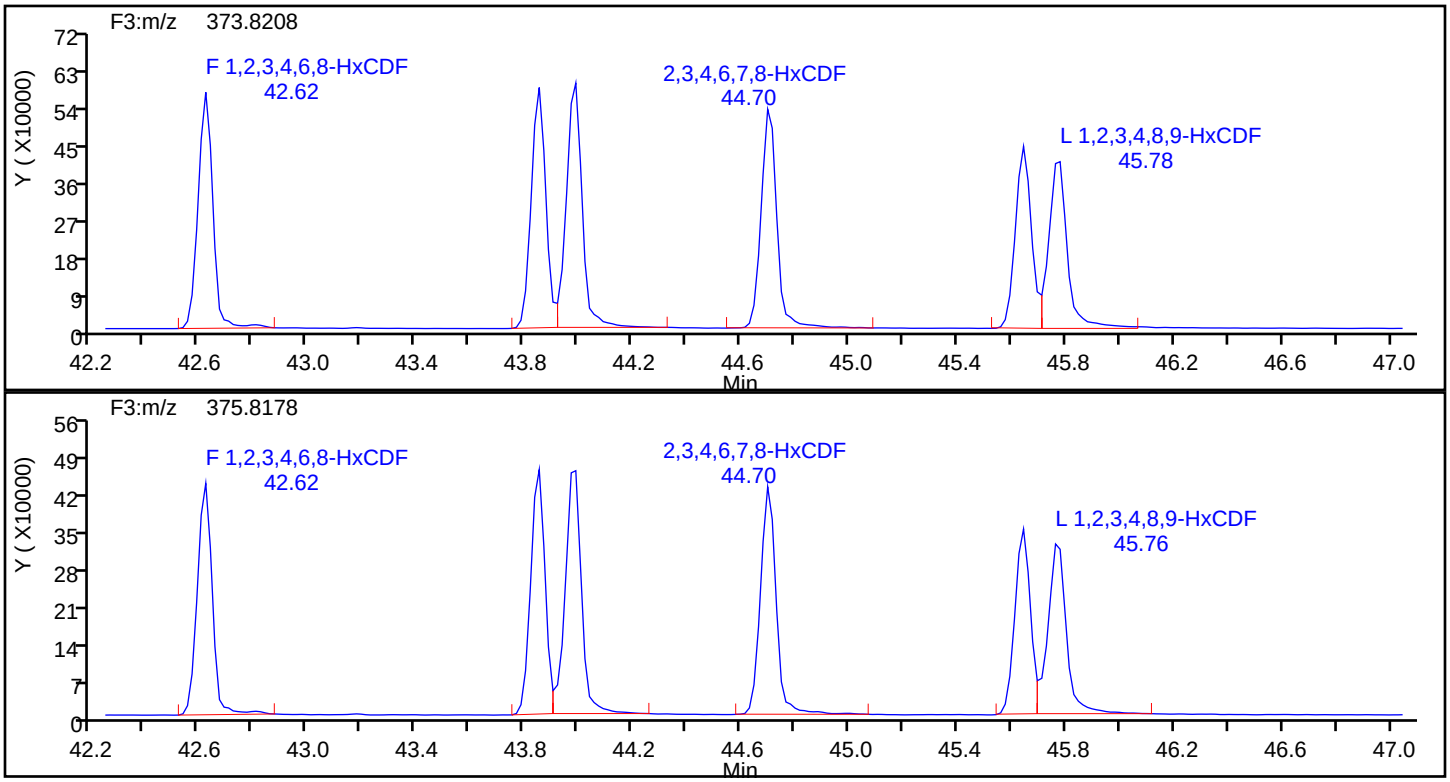
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TestAmerica Knoxville

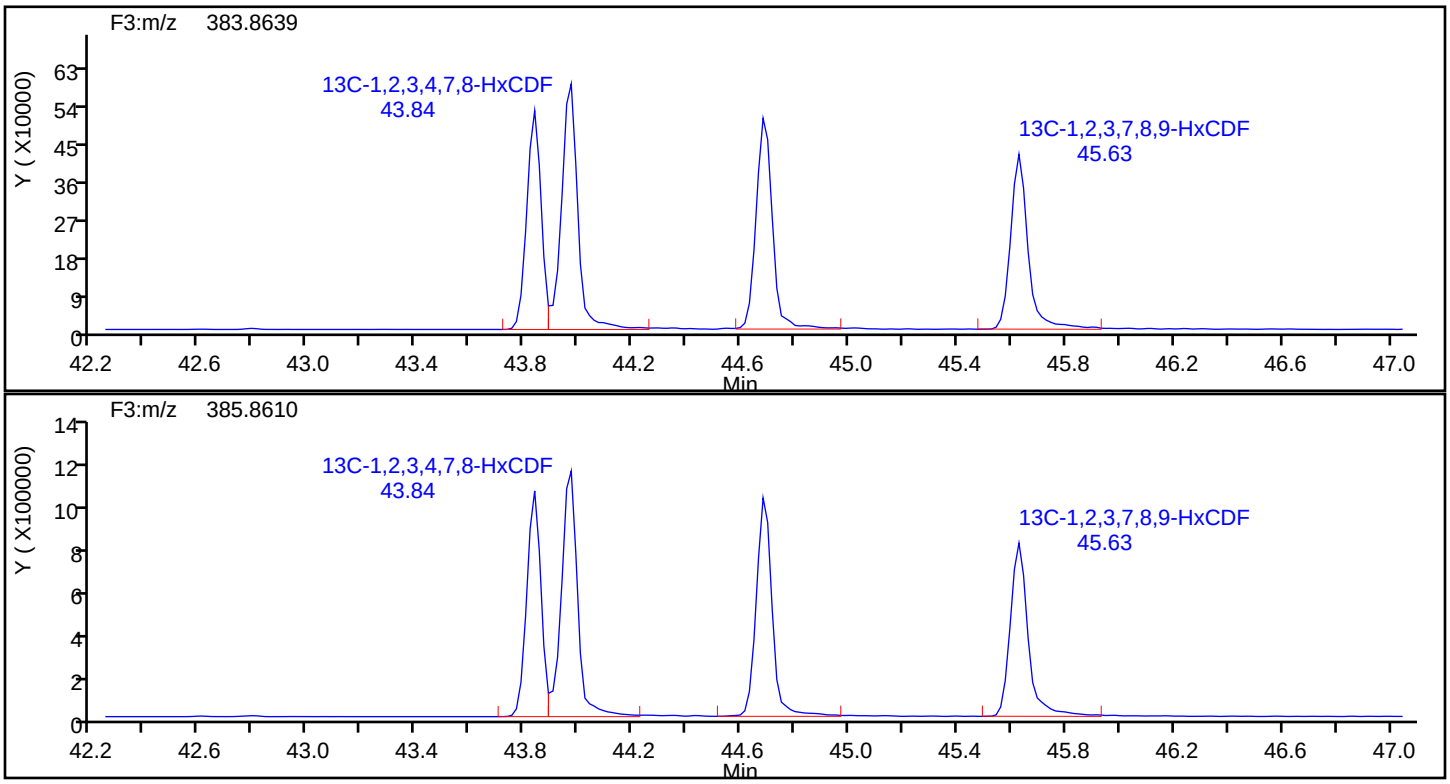
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HxCDF




HxCDF Standards



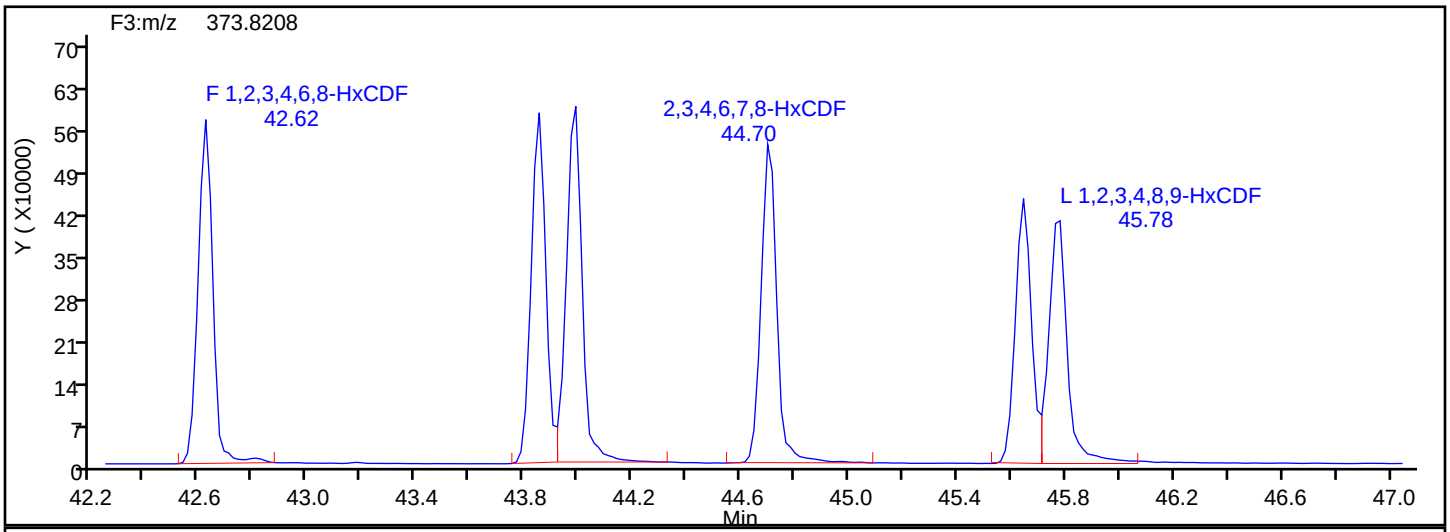
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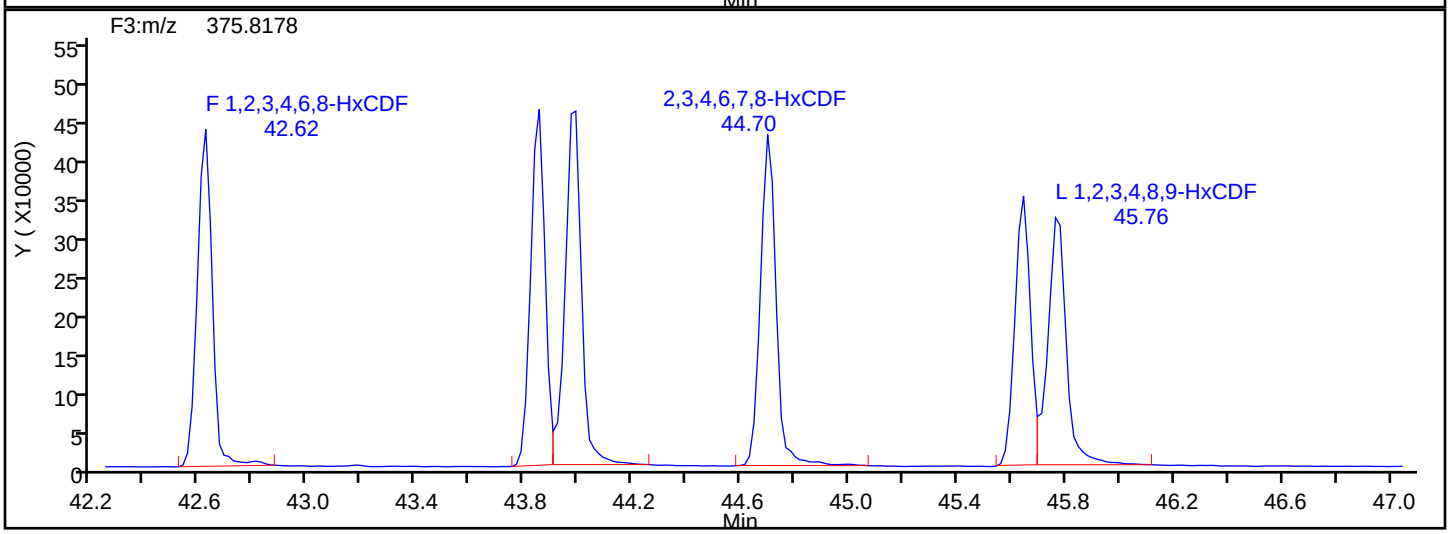
TestAmerica Knoxville

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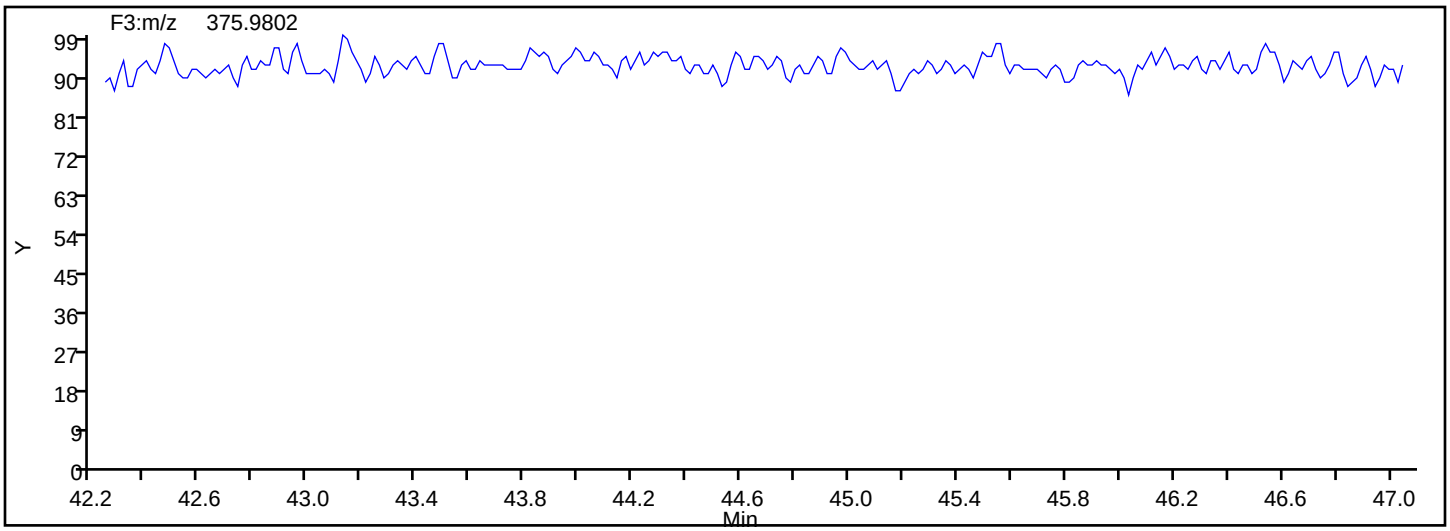
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HxCDF




HxCDF Lock Mass



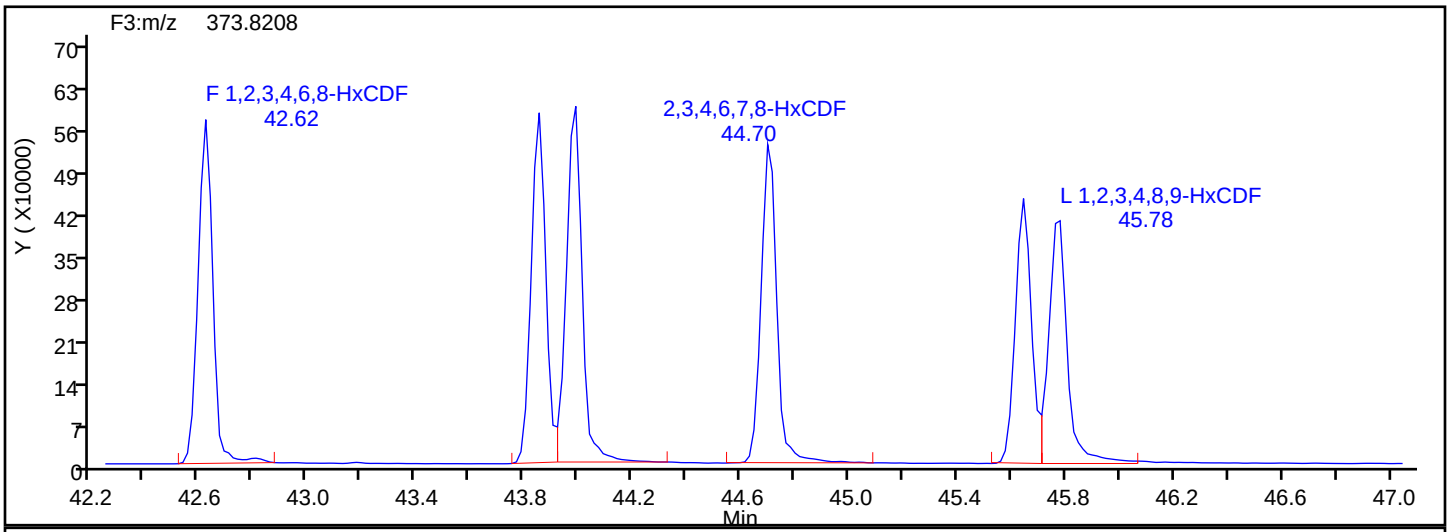
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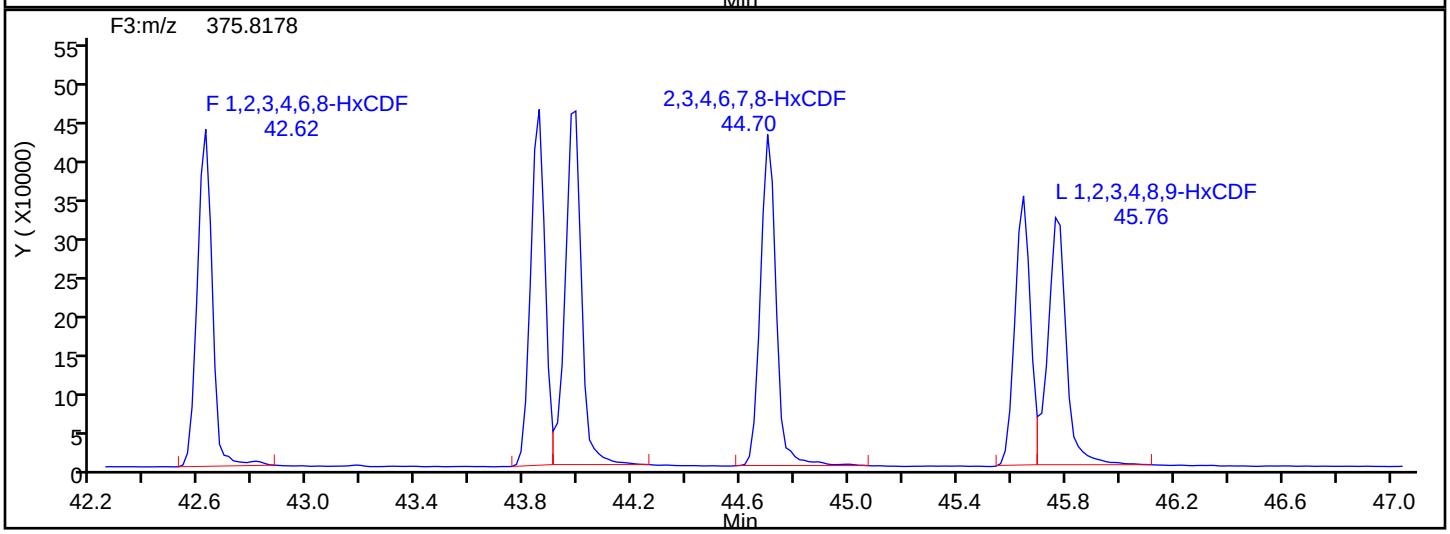
TestAmerica Knoxville

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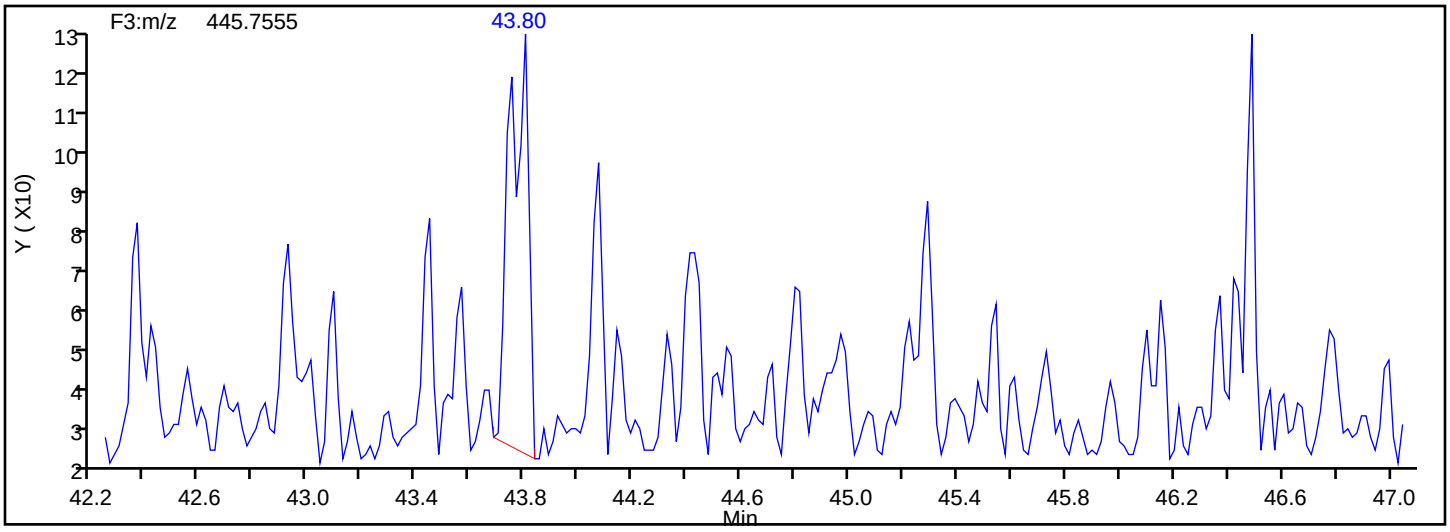
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HxCDF




HxCDF Interference Mass



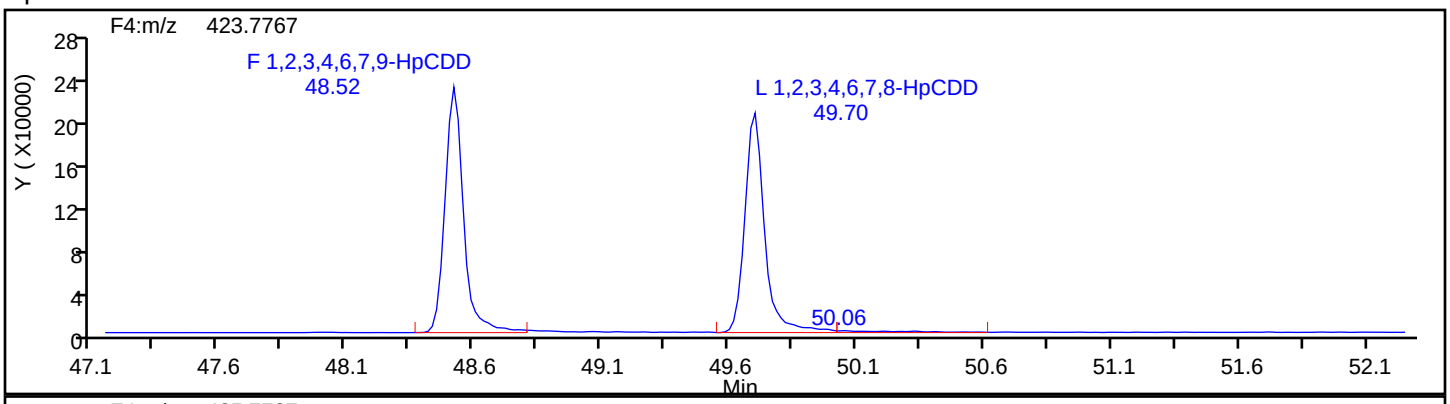
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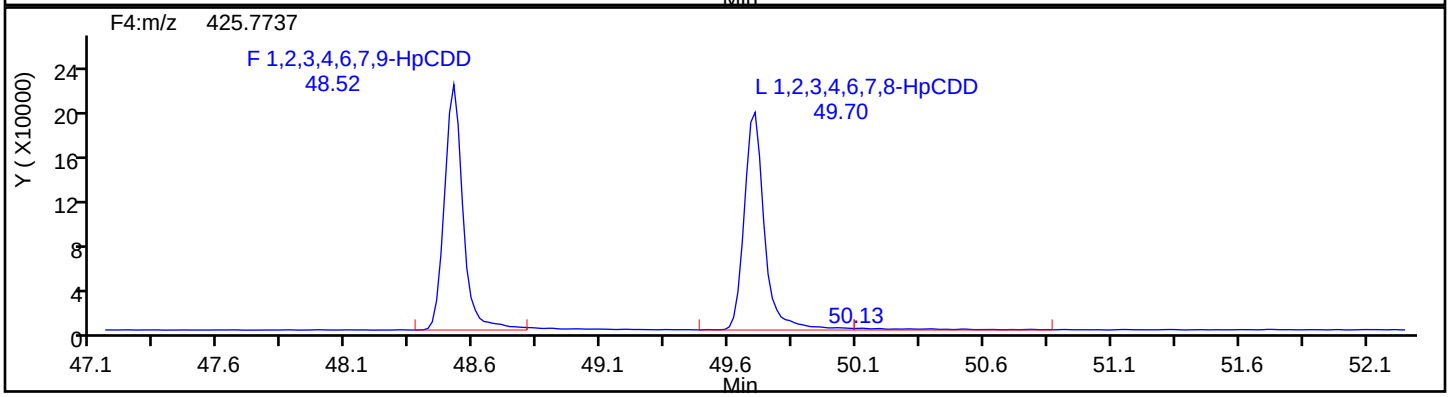
TestAmerica Knoxville

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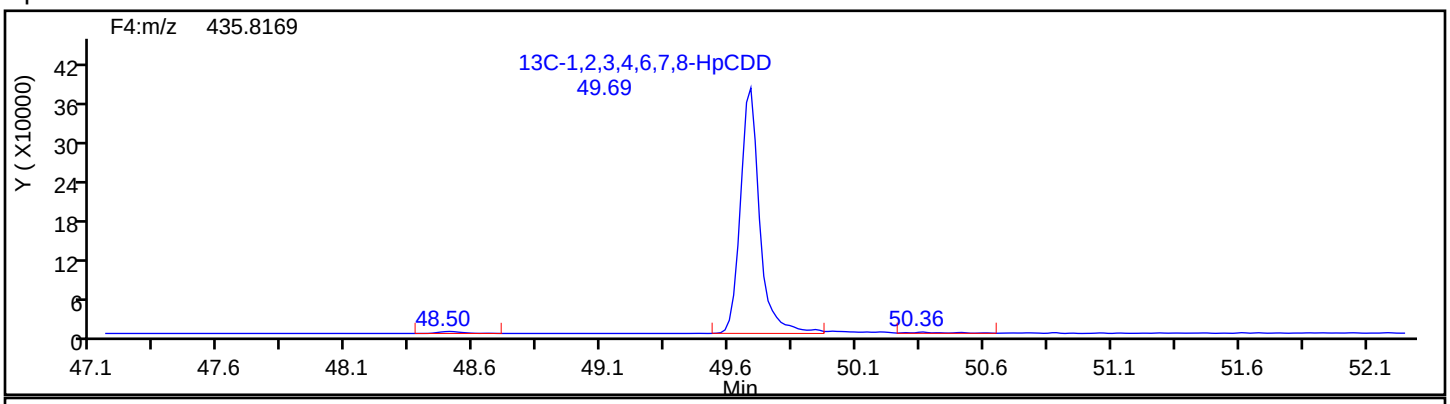
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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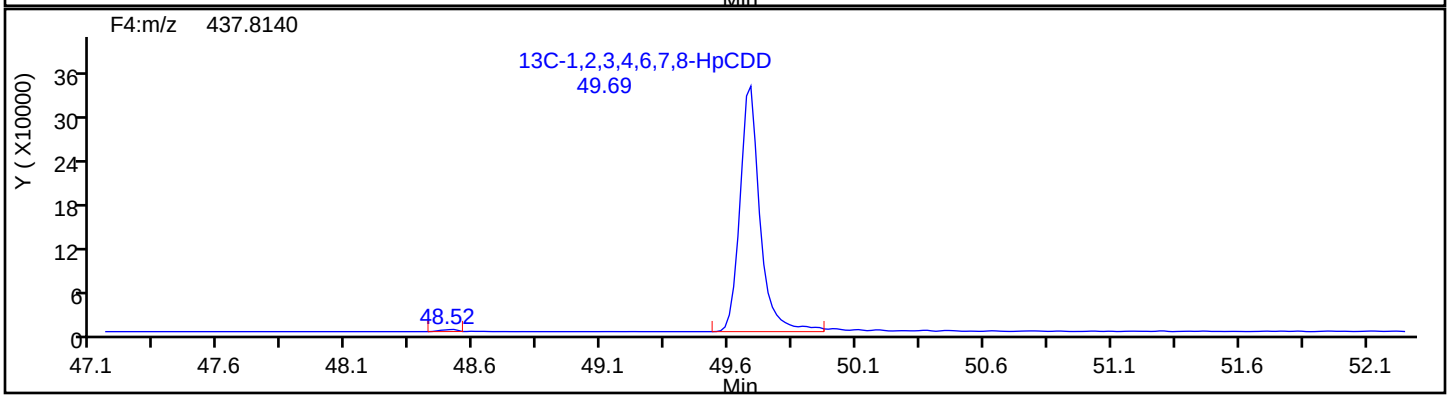
HpCDD




HpCDD Standards



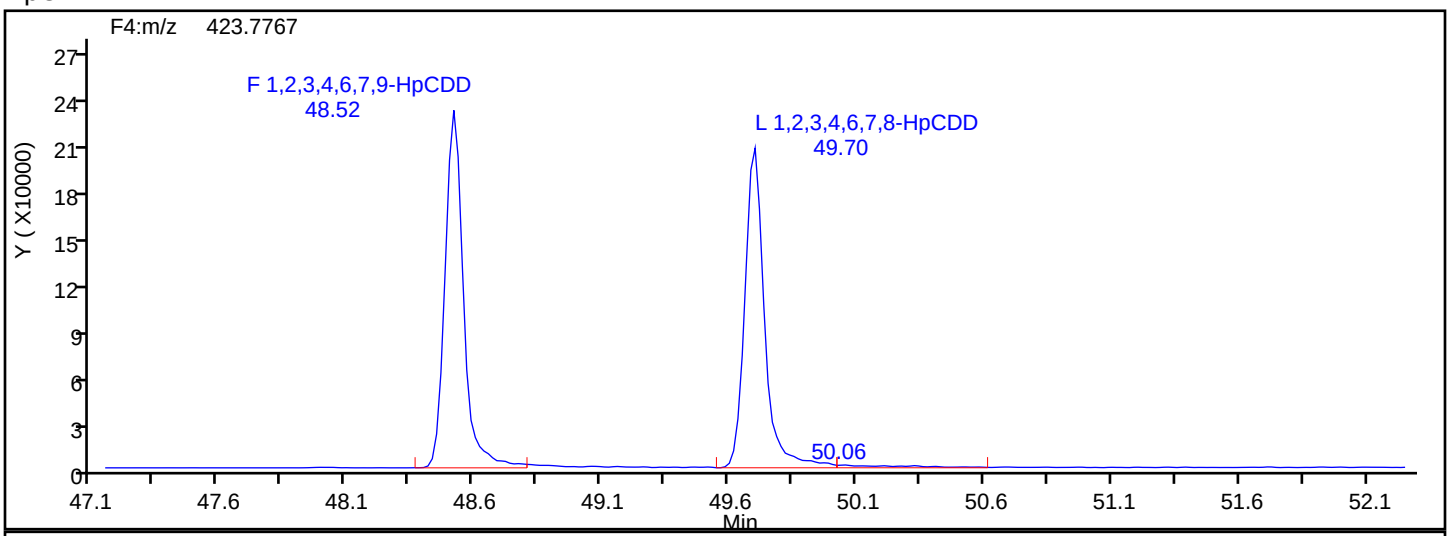
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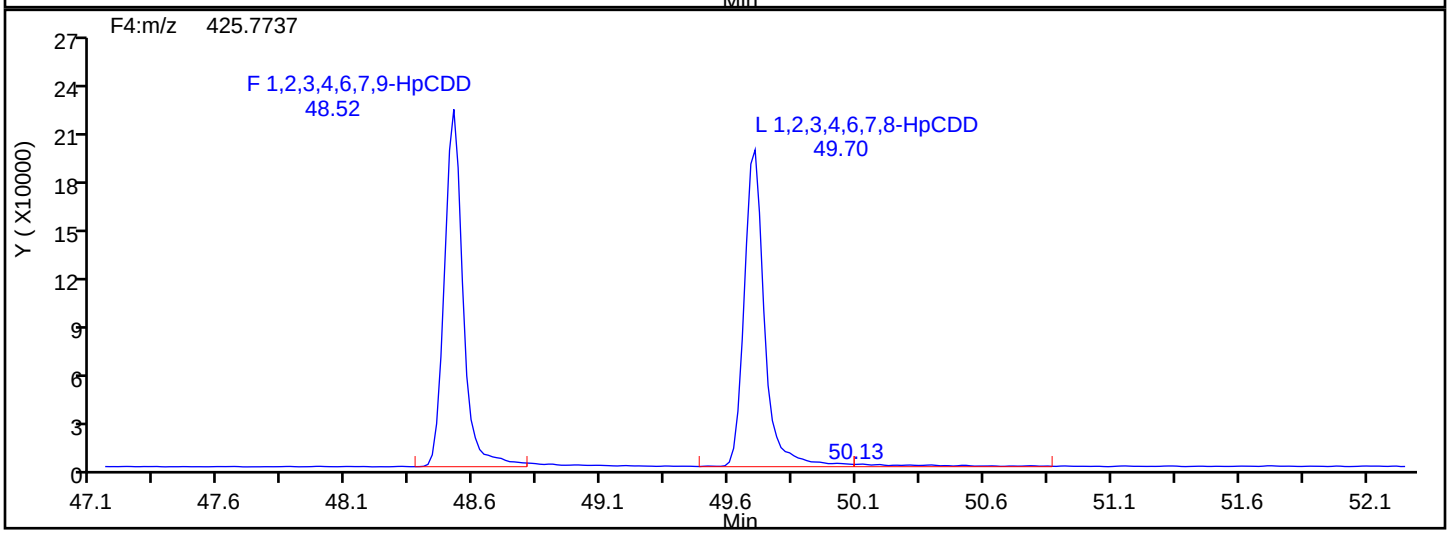
TestAmerica Knoxville

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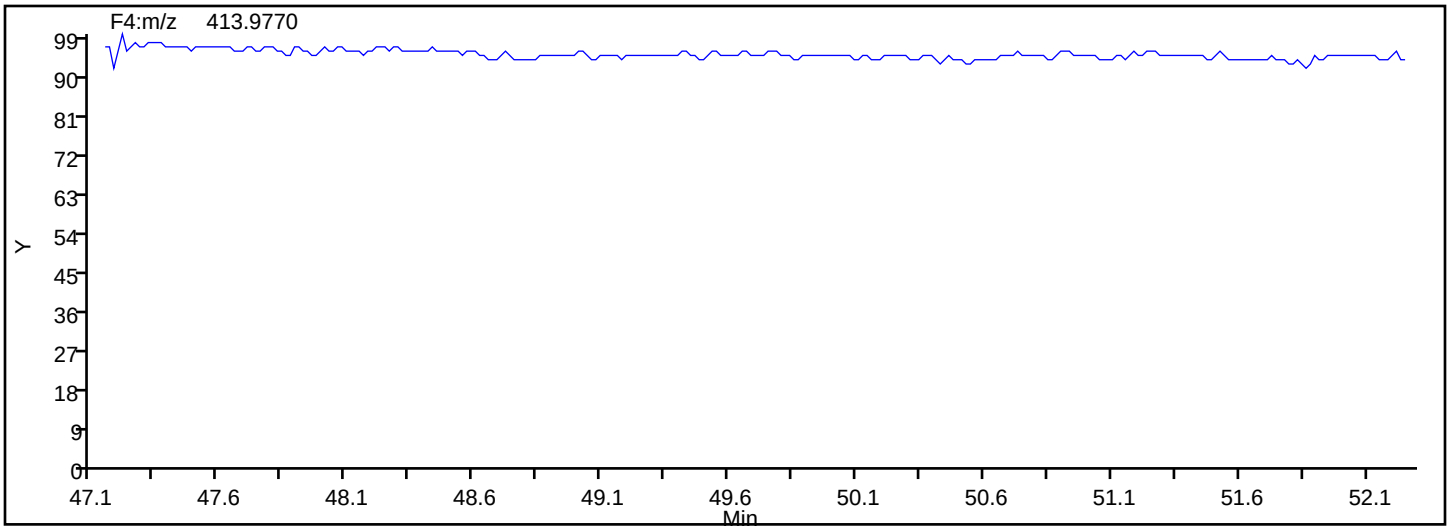
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HpCDD




HpCDD Lock Mass



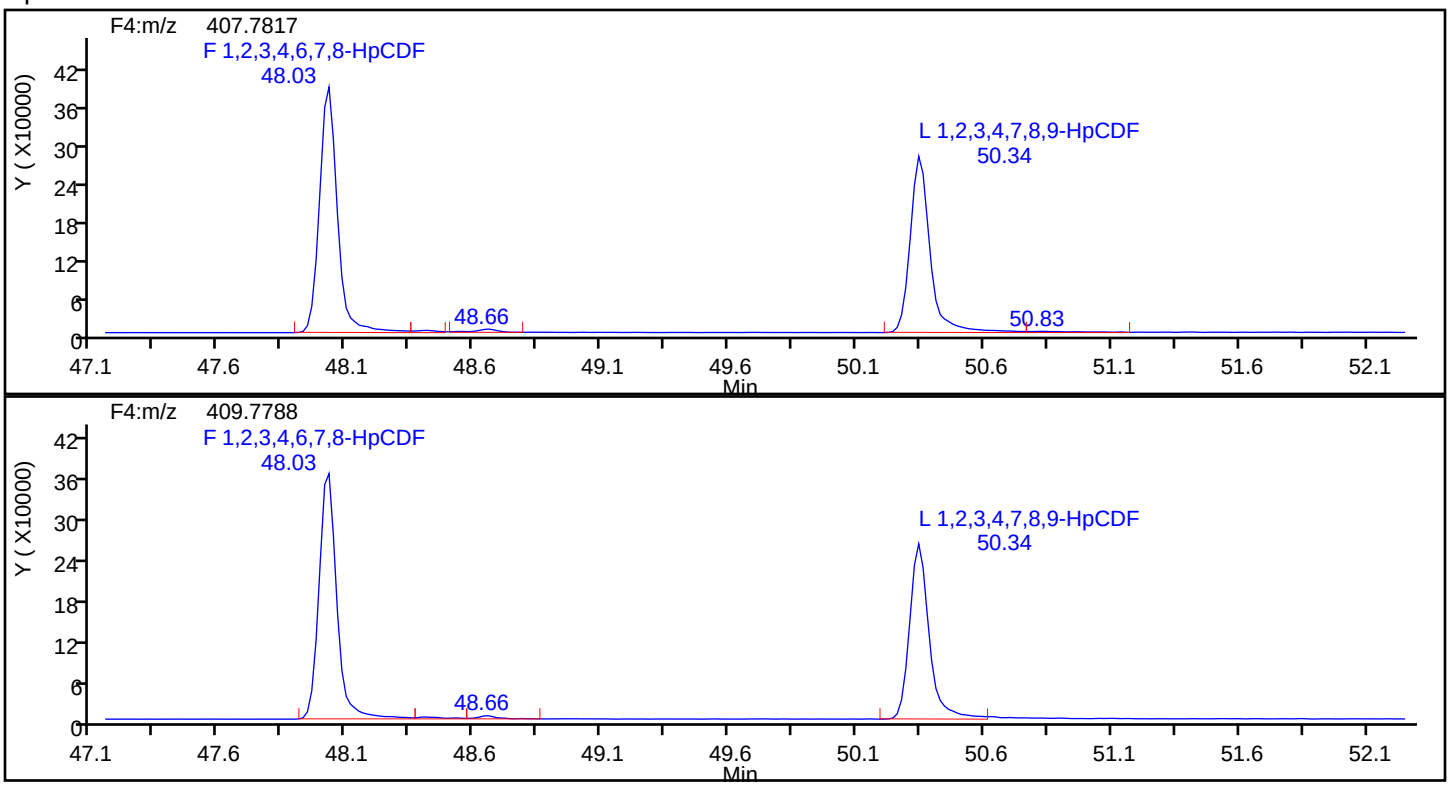
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TestAmerica Knoxville

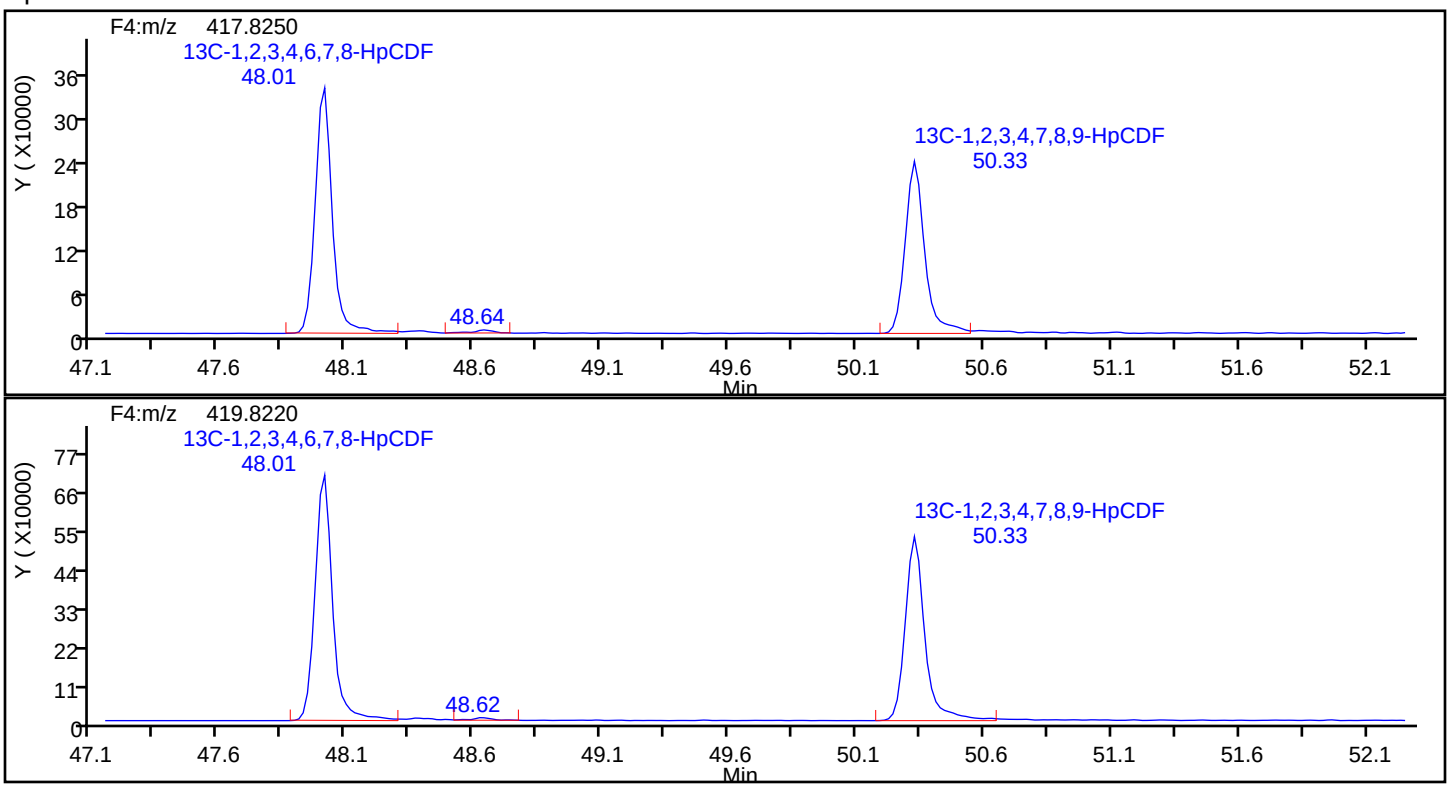
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HpCDF




HpCDF Standards



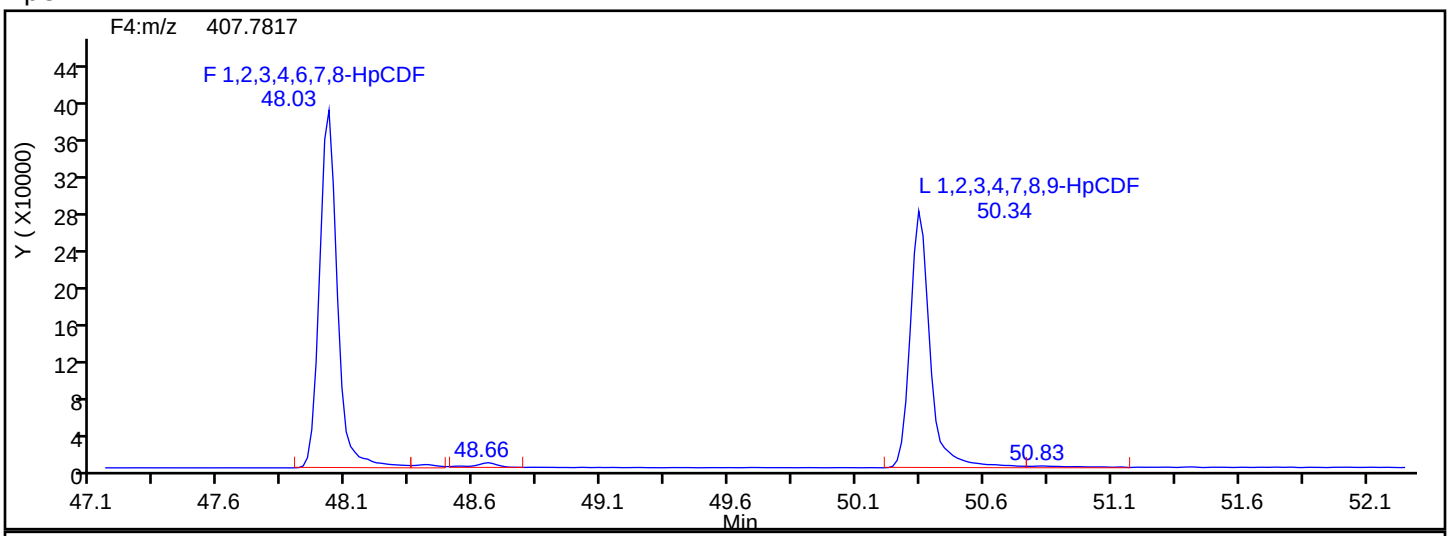
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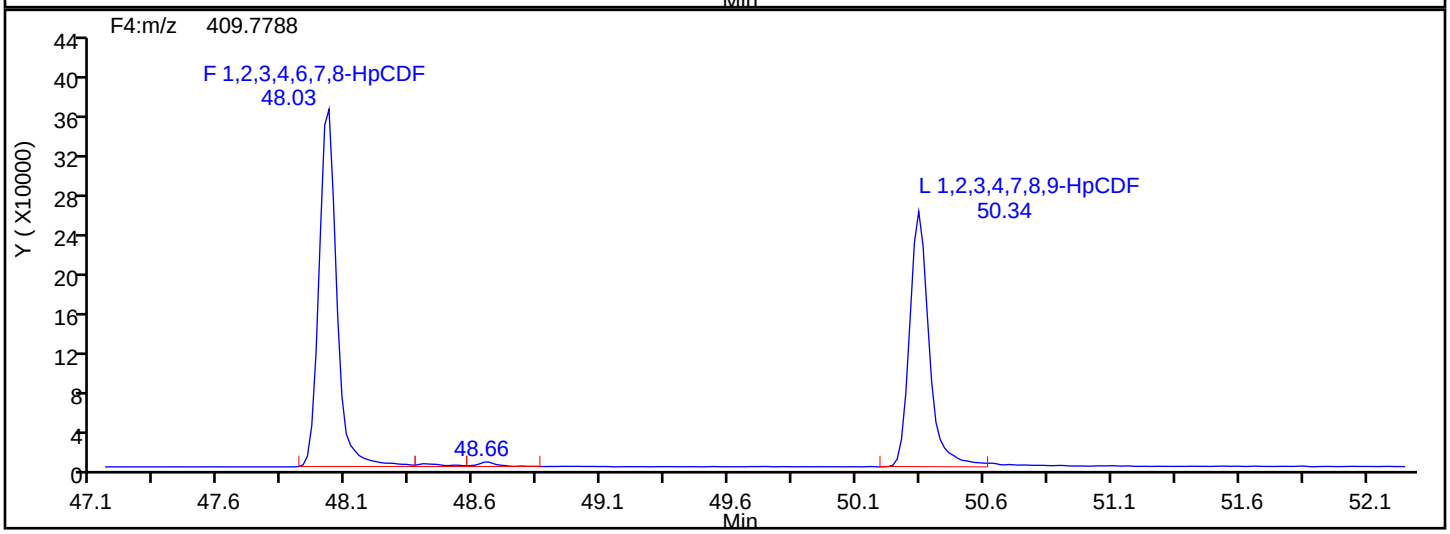
TestAmerica Knoxville

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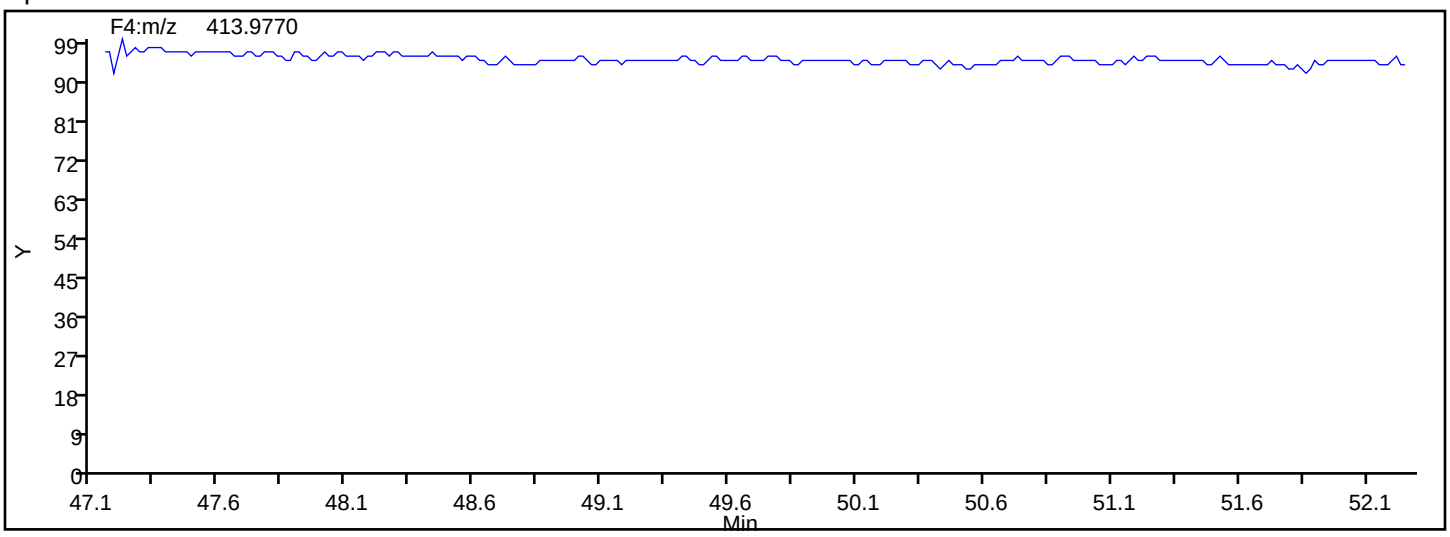
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| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

HpCDF




HpCDF Lock Mass



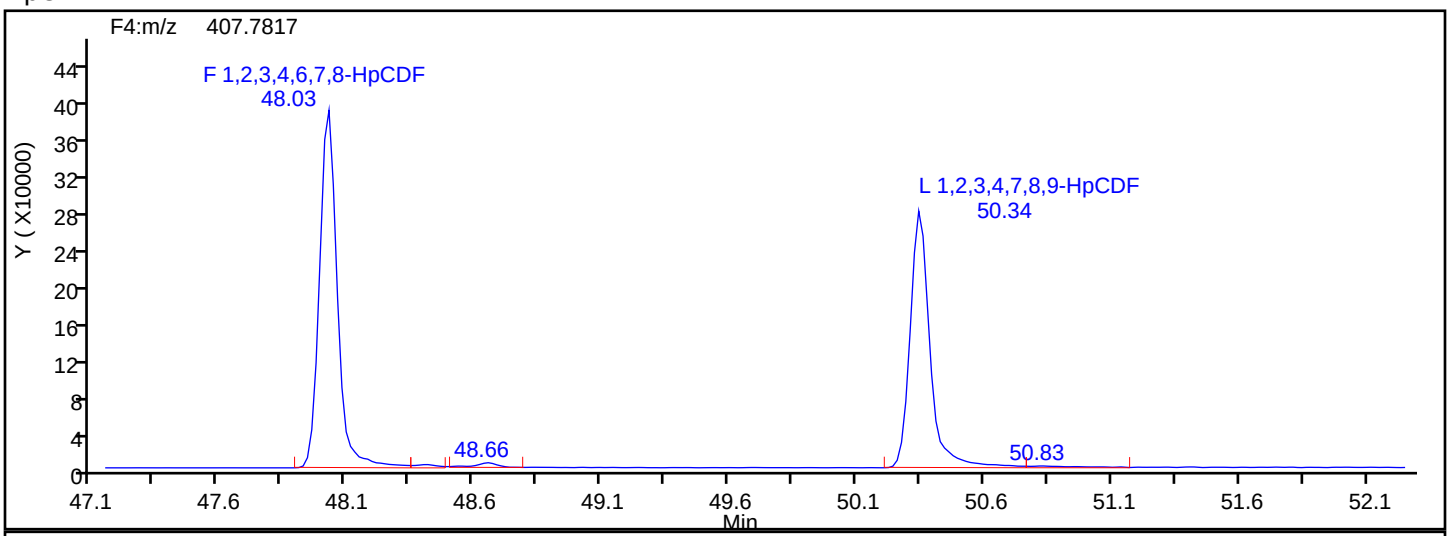
Report Date: 29-Jan-2019 10:59:29 Chrom Revision: 2.3 28-Jan-2019 09:43:36

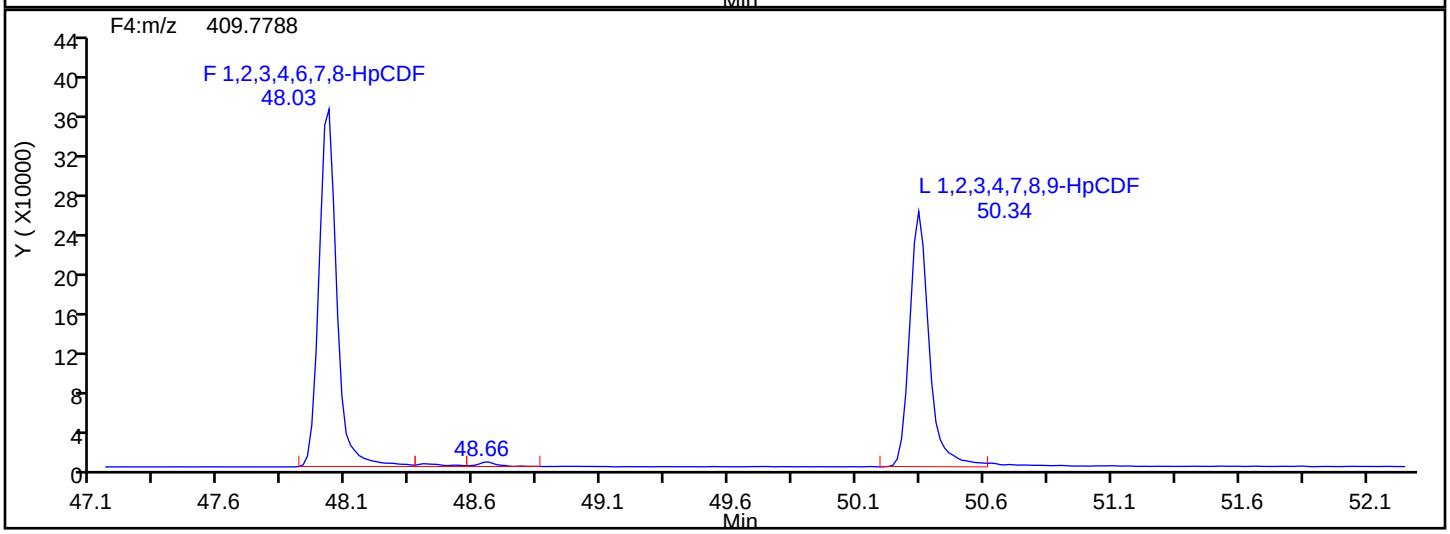
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d

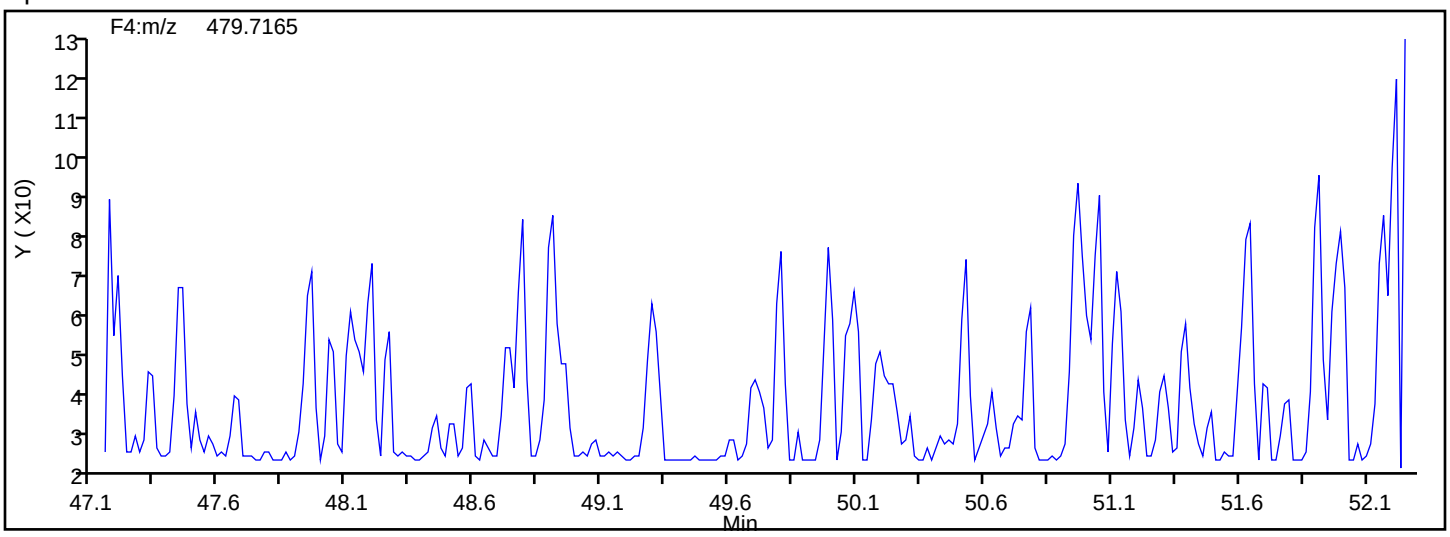
| | | | |
|---|---|---|---|
| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

HpCDF




HpCDF Interference Mass



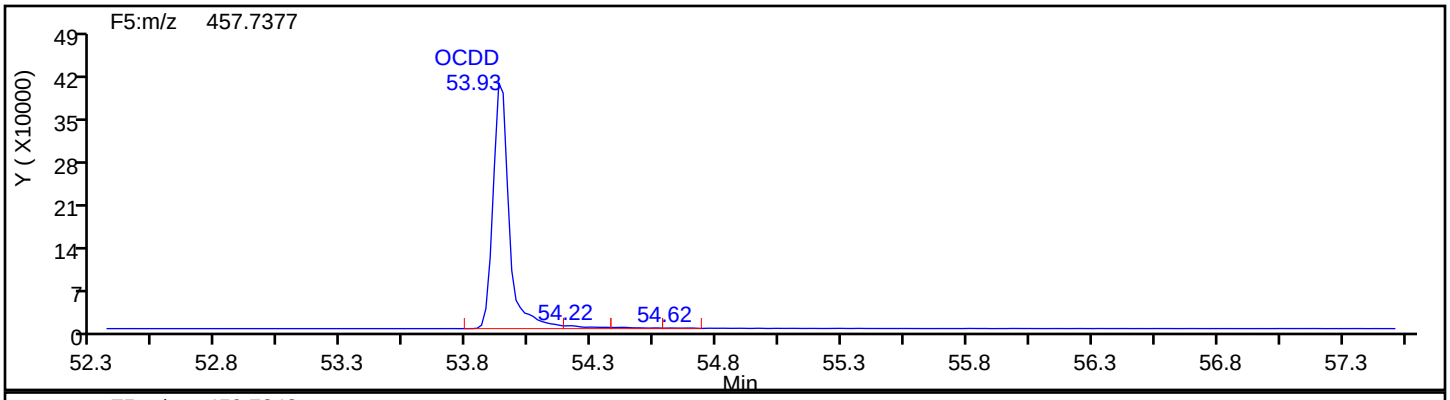
Report Date: 29-Jan-2019 10:59:29 Chrom Revision: 2.3 28-Jan-2019 09:43:36

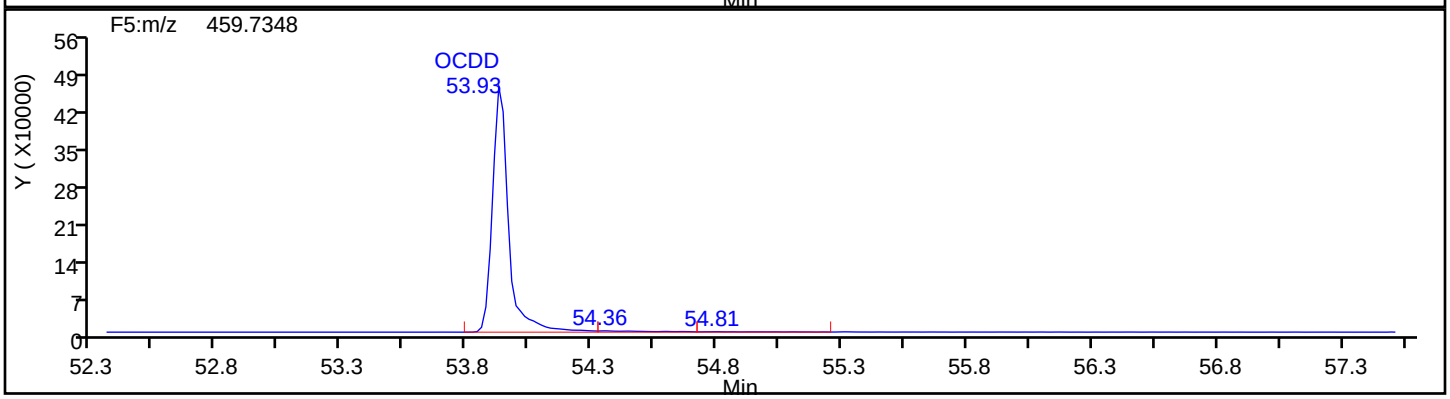
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d

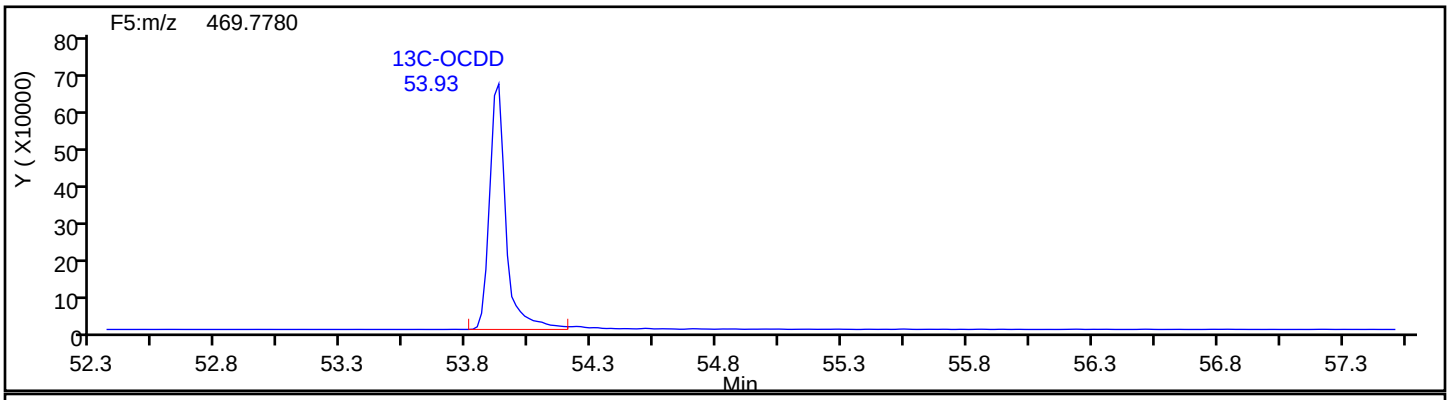
| | | | |
|---|---|---|---|
| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

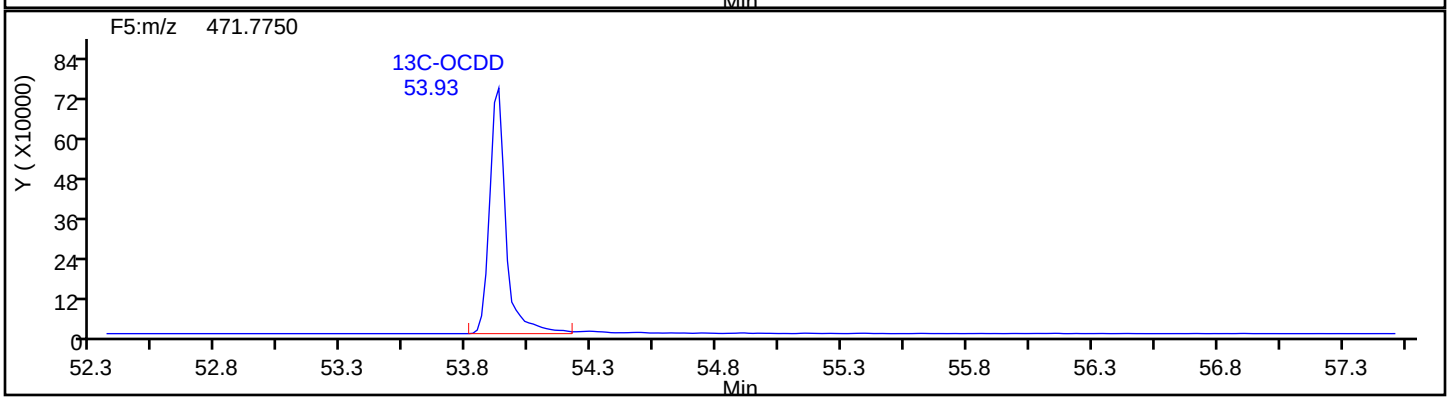
OCDD




OCDD Standards



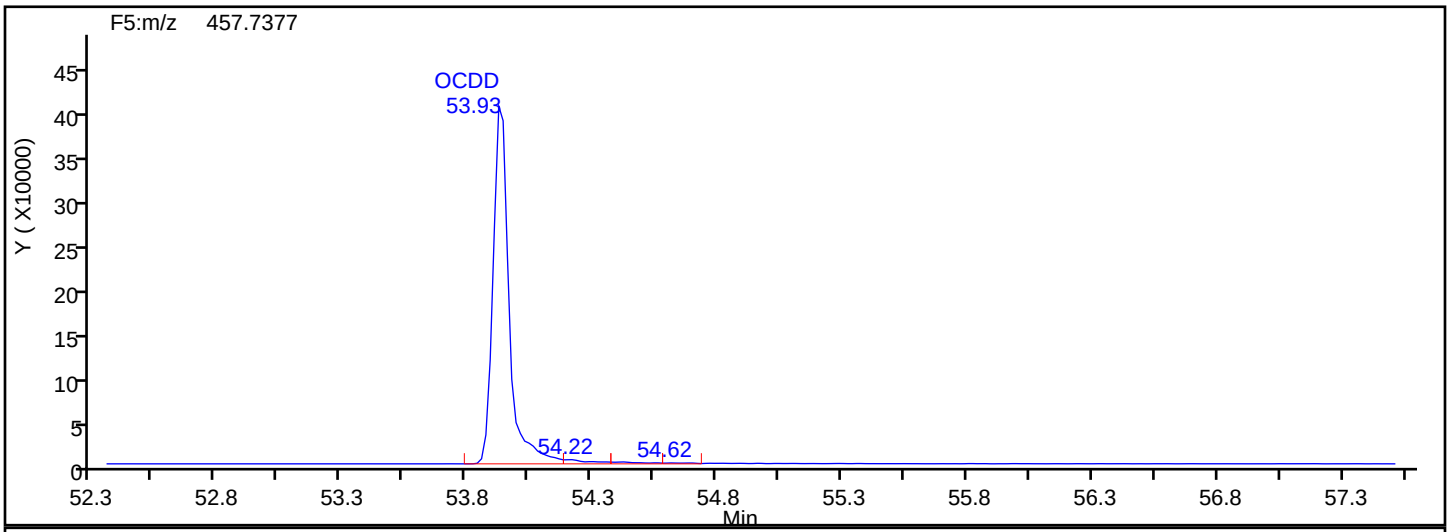
Report Date: 29-Jan-2019 10:59:29 Chrom Revision: 2.3 28-Jan-2019 09:43:36

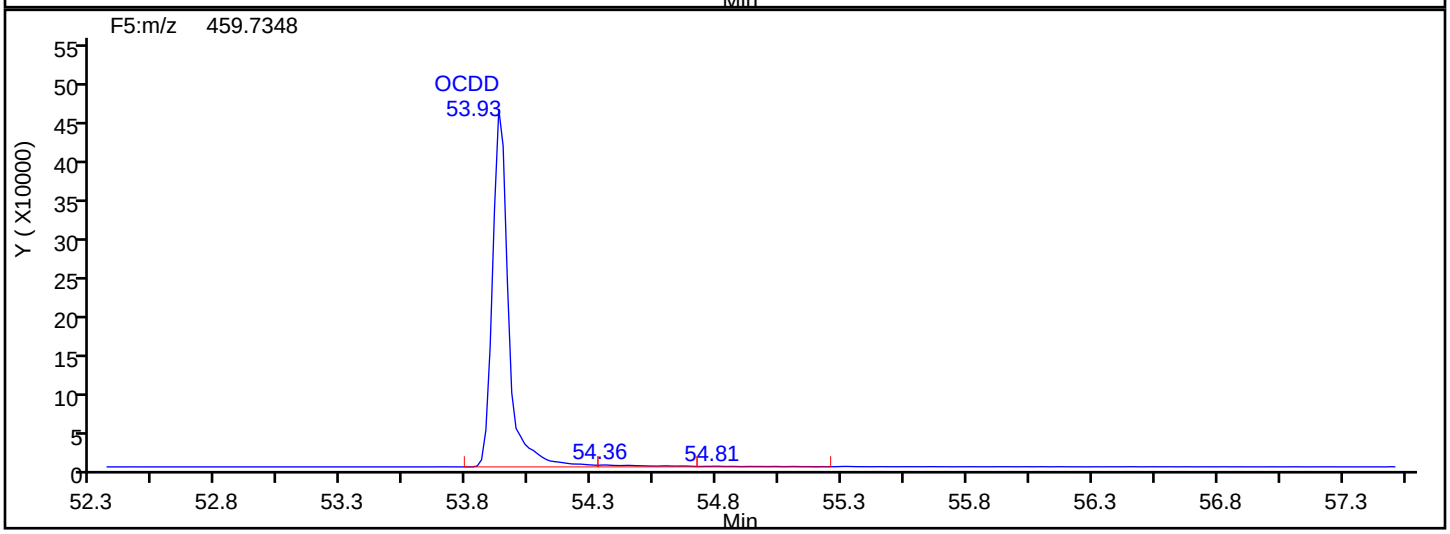
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d

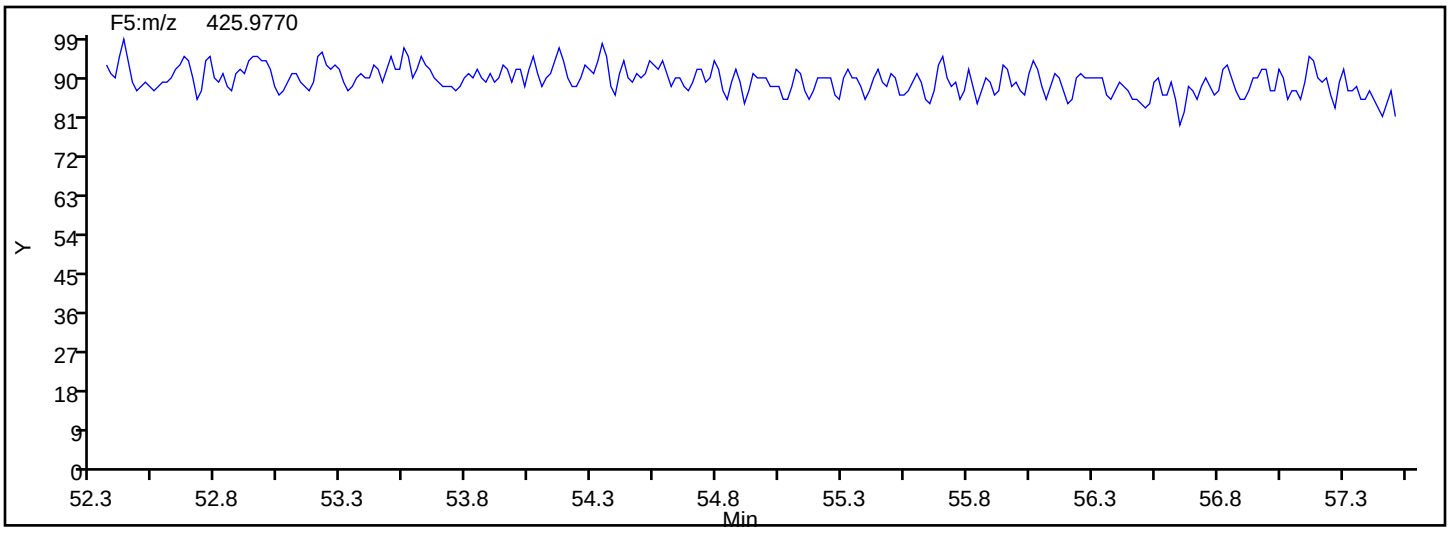
| | | | |
|---|---|---|---|
| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

OCDD




OCDD Lock Mass



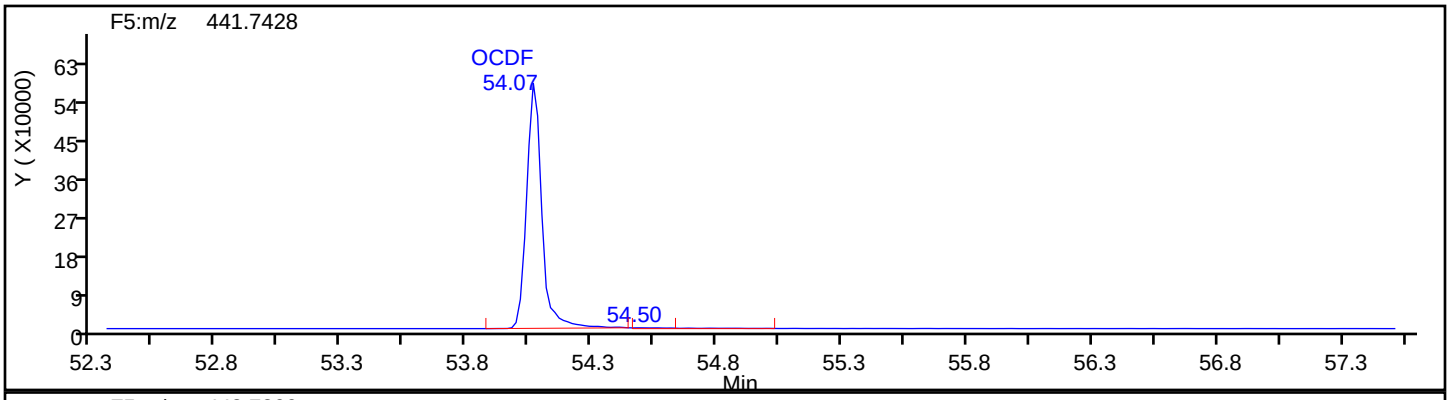
Report Date: 29-Jan-2019 10:59:29 Chrom Revision: 2.3 28-Jan-2019 09:43:36

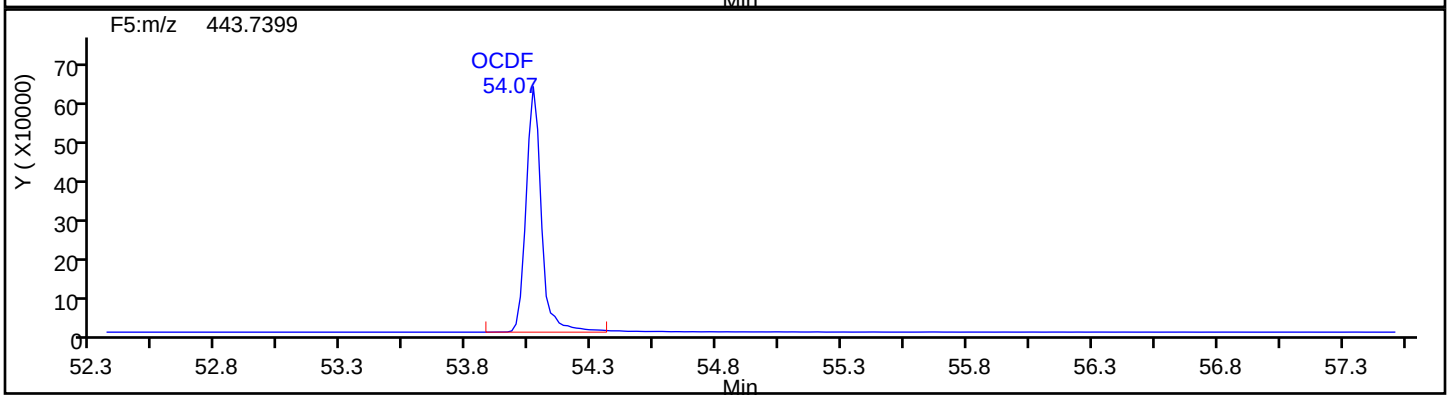
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d

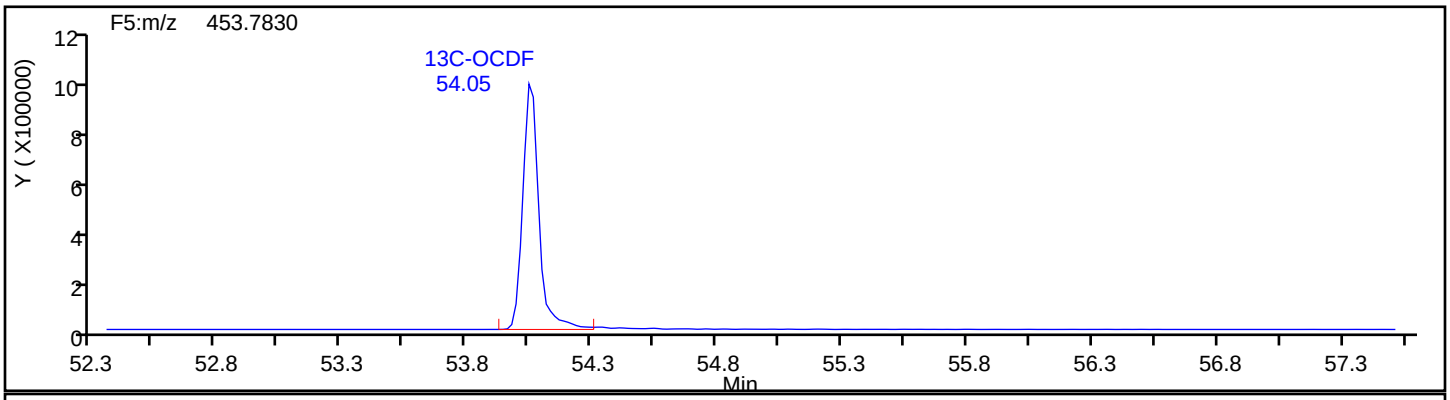
| | | | |
|---|---|---|---|
| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

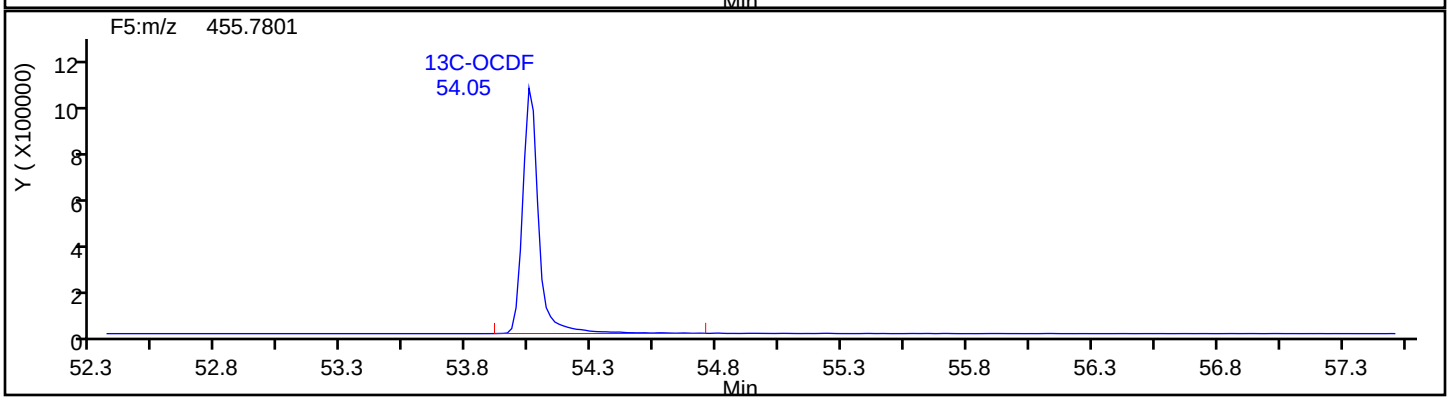
OCDF




OCDF Standards



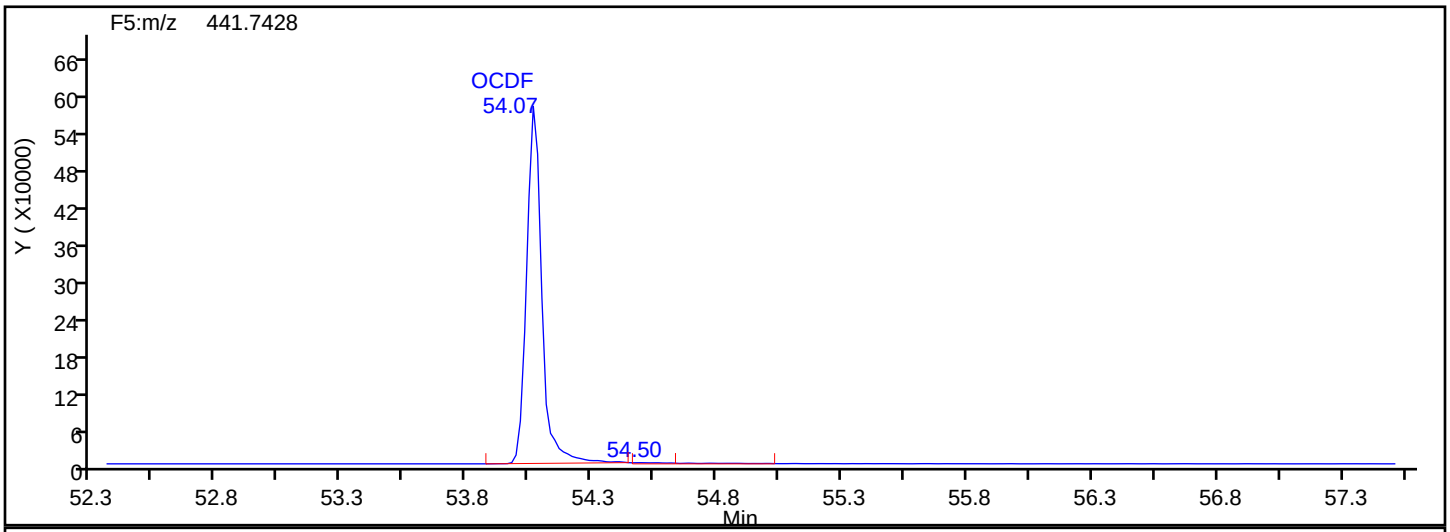
Report Date: 29-Jan-2019 10:59:29 Chrom Revision: 2.3 28-Jan-2019 09:43:36

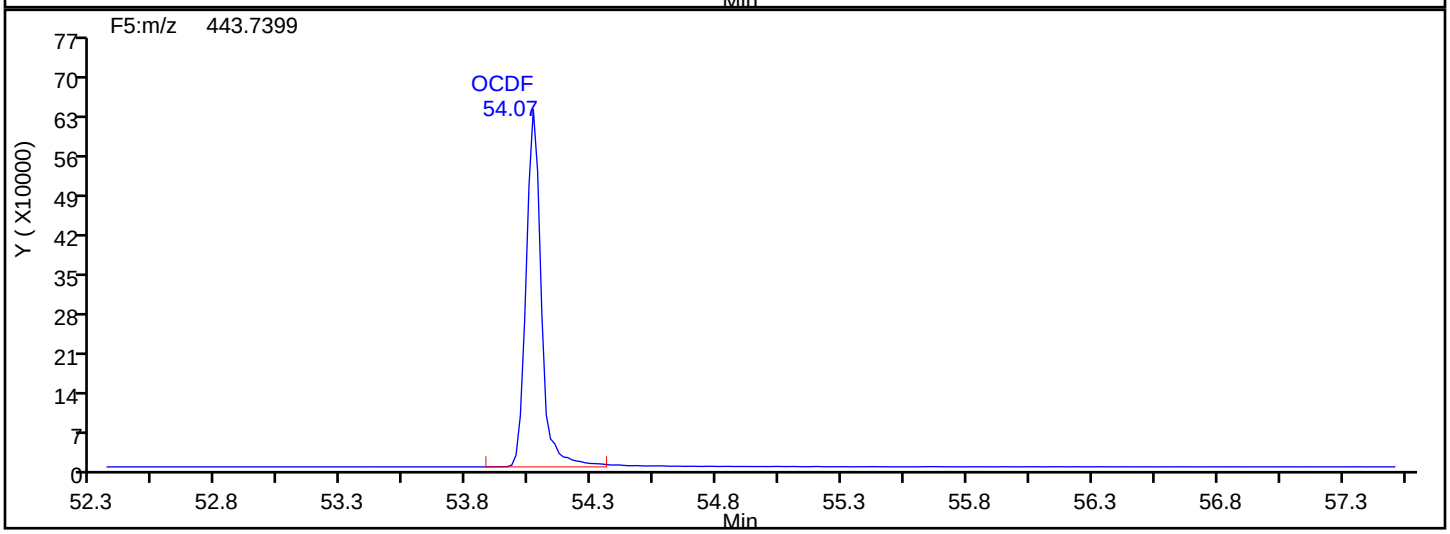
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d

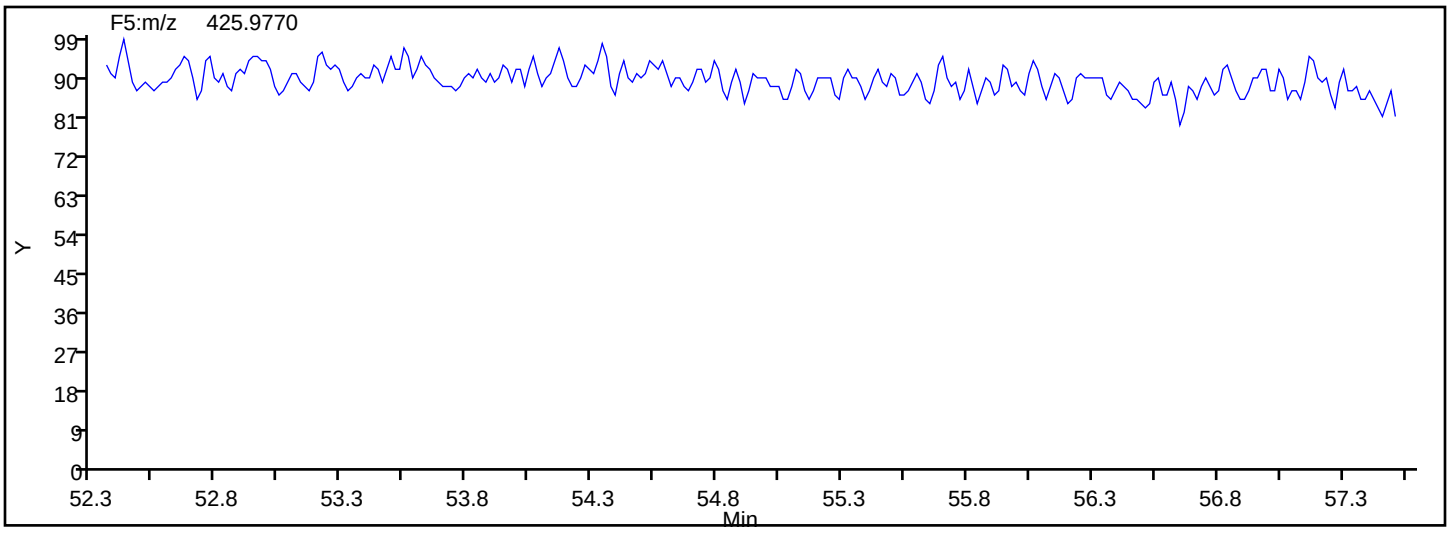
| | | | |
|---|---|---|---|
| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Lock Mass



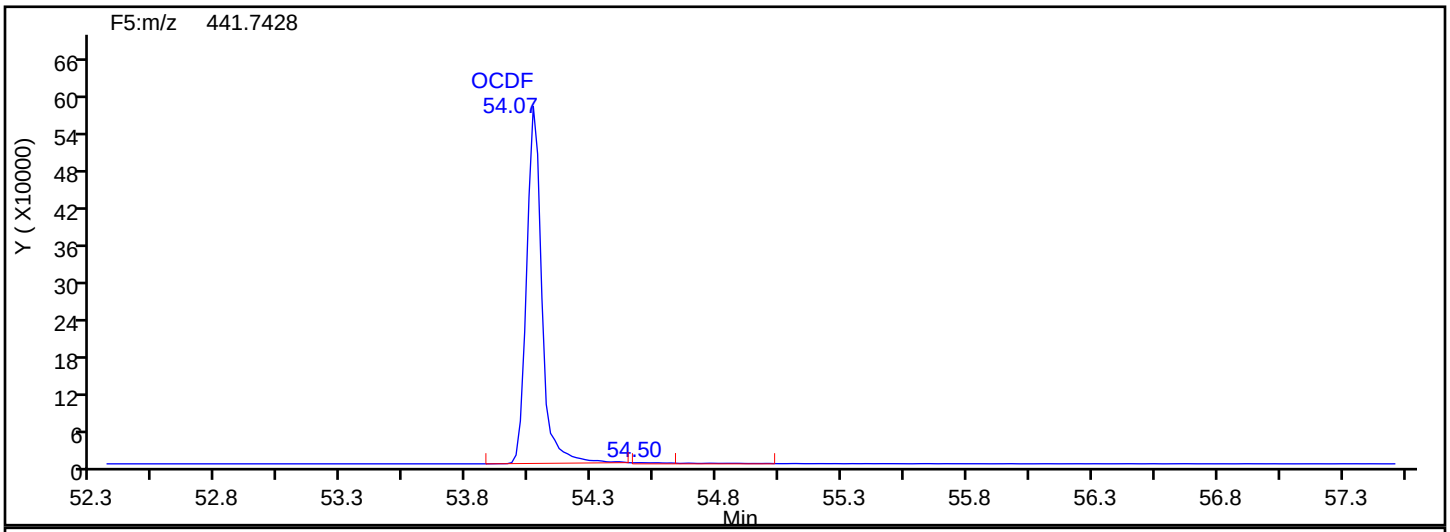
Report Date: 29-Jan-2019 10:59:29 Chrom Revision: 2.3 28-Jan-2019 09:43:36

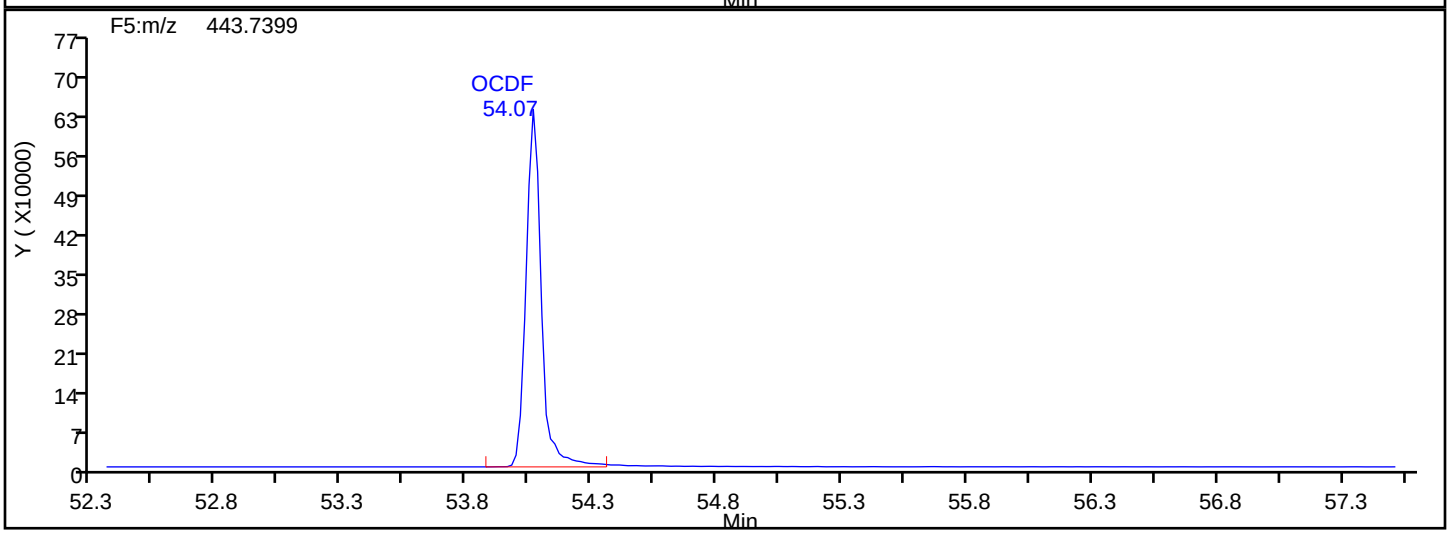
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190129-10667.b\d3190129s2.d

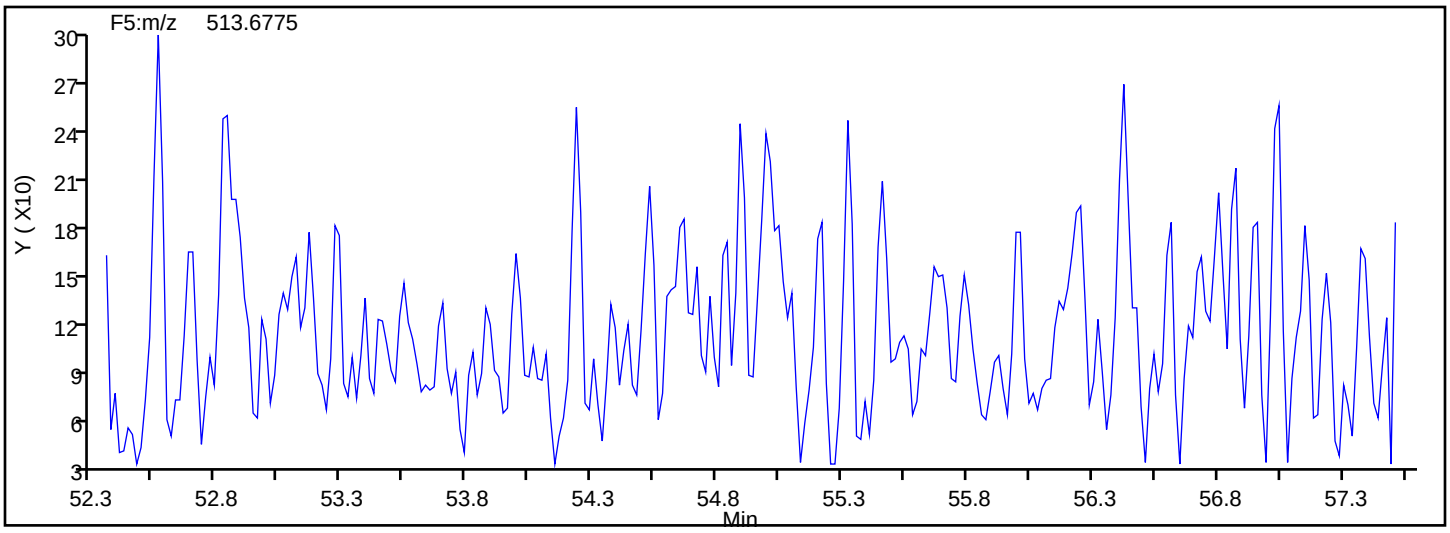
| | | | |
|---|---|---|---|
| Injection Date: | 29-Jan-2019 09:51:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27242 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Interference Mass



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516w1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 16-May-2014 10:23:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:83 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Feb-2017 12:19:14 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK012

First Level Reviewer: gilmorem Date: 01-Feb-2017 12:19:14

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 31:52 | 1589129 | 0.78 | 1.1733 | 9.827 | 9.827 | 0.0525 | 0.0525 | | |
| A Non-2,3,7,8-sub-TCDD | 30:20 | 4299654 | 0.80 | 0.0000 | | | | | | |
| S Total TCDD | | | | | 9.827 | 9.827 | 0.0525 | 0.0525 | | |
| 2,3,7,8-TCDF | 29:47 | 2357482 | 0.78 | 1.0881 | 9.693 | 9.693 | 0.0581 | 0.0581 | | |
| A Non-2,3,7,8-sub-TCDF | 28:61 | 41764 | 0.80 | 0.0000 | | | | | | |
| S Total TCDF | | | | | 9.693 | 9.693 | 0.0581 | 0.0581 | | |
| 1,2,3,7,8-PeCDD | 41:01 | 5982819 | 1.58 | 1.0434 | 50.2 | 50.2 | 0.1352 | 0.1352 | | |
| A Non-2,3,7,8-sub-PeCDD | 39:56 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDD | | | | | 50.2 | 50.2 | 0.1352 | 0.1352 | | |
| 1,2,3,7,8-PeCDF | 39:18 | 10286787 | 1.60 | 1.1898 | 49.3 | 49.3 | 0.2156 | 0.2156 | | |
| 2,3,4,7,8-PeCDF | 40:30 | 9924708 | 1.58 | 1.1095 | 49.7 | 49.7 | 0.2037 | 0.2037 | | |
| A Non-2,3,7,8-sub-PeCDF | 38:38 | | | | | | 0.0 | 0.0 | | |
| S Total PeCDF | | | | | 99.0 | 99.0 | 0.2097 | 0.2097 | | |
| 1,2,3,4,7,8-HxCDD | 45:15 | 7476089 | 1.26 | 1.1409 | 50.4 | 50.4 | 0.2657 | 0.2657 | | |
| 1,2,3,6,7,8-HxCDD | 45:22 | 7598331 | 1.25 | 1.1481 | 49.5 | 49.5 | 0.2727 | 0.2727 | | |
| 1,2,3,7,8,9-HxCDD | 45:46 | 8317943 | 1.24 | 1.2212 | 51.7 | 51.7 | 0.2523 | 0.2523 | | |
| A Non-2,3,7,8-sub-HxCDD | 44:42 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDD | | | | | 151.6 | 151.6 | 0.2636 | 0.2636 | | |
| 1,2,3,4,7,8-HxCDF | 44:12 | 12537626 | 1.24 | 1.3629 | 49.0 | 49.0 | 0.2654 | 0.2654 | | |
| 1,2,3,6,7,8-HxCDF | 44:20 | 13426640 | 1.24 | 1.2762 | 48.9 | 48.9 | 0.2599 | 0.2599 | | |
| 2,3,4,6,7,8-HxCDF | 45:04 | 12110442 | 1.25 | 1.2654 | 48.2 | 48.2 | 0.2974 | 0.2974 | | |
| 1,2,3,7,8,9-HxCDF | 46:02 | 10527214 | 1.25 | 1.2573 | 47.6 | 47.6 | 0.3663 | 0.3663 | | |
| A Non-2,3,7,8-sub-HxCDF | 44:34 | | | | | | 0.0 | 0.0 | | |
| S Total HxCDF | | | | | 193.7 | 193.7 | 0.2972 | 0.2972 | | |
| 1,2,3,4,6,7,8-HpCDD | 50:11 | 6801187 | 1.06 | 1.1204 | 48.9 | 48.9 | 0.1169 | 0.1169 | | |
| A Non-2,3,7,8-sub-HpCDD | 49:35 | | | | | | 0.0 | 0.0 | | |
| S Total HpCDD | | | | | 48.9 | 48.9 | 0.1169 | 0.1169 | | |
| 1,2,3,4,6,7,8-HpCDF | 48:28 | 11064927 | 1.04 | 1.4984 | 48.4 | 48.4 | 0.2343 | 0.2343 | | |
| 1,2,3,4,7,8,9-HpCDF | 50:49 | 9279563 | 1.05 | 1.3807 | 49.9 | 49.9 | 0.3032 | 0.3032 | | |
| A Non-2,3,7,8-sub-HpCDF | 49:39 | | | | | | 0.0 | 0.0 | | |

Report Date: 01-Feb-2017 12:19:16 Chrom Revision: 2.2 30-Jan-2017 14:50:44
Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516w1.d

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| S Total HpCDF | | | | | 98.3 | 98.3 | 0.2688 | 0.2688 | | |
| OCDD | 54:18 | 12317564 | 0.91 | 1.2073 | 102.2 | 102.2 | 0.1313 | 0.1313 | | |
| OCDF | 54:27 | 16322450 | 0.91 | 1.1162 | 98.1 | 98.1 | 0.1132 | 0.1132 | | |
| D 13C-2,3,7,8-TCDD | 31:50 | 13782525 | 0.80 | 1.0709 | 101.6 | 101.6 | 0.2722 | 0.2722 | 102 | |
| D 13C-2,3,7,8-TCDF | 29:45 | 22350977 | 0.78 | 1.7545 | 100.6 | 100.6 | 0.1848 | 0.1848 | 101 | |
| D 13C-1,2,3,7,8-PeCDD | 40:60 | 11420019 | 1.63 | 0.8743 | 103.2 | 103.2 | 0.3838 | 0.3838 | 103 | |
| D 13C-1,2,3,7,8-PeCDF | 39:17 | 17536794 | 1.60 | 1.3704 | 101.1 | 101.1 | 0.1989 | 0.1989 | 101 | |
| D 13C-2,3,4,7,8-PeCDF | 40:29 | 18008915 | 1.61 | 1.3837 | 102.8 | 102.8 | 0.1970 | 0.1970 | 103 | |
| D 13C-1,2,3,4,7,8-HxCDD | 45:14 | 12997422 | 1.27 | 0.8772 | 99.2 | 99.2 | 0.2024 | 0.2024 | 99.22 | |
| D 13C-1,2,3,6,7,8-HxCDD | 45:21 | 13368313 | 1.27 | 0.9171 | 97.6 | 97.6 | 0.1936 | 0.1936 | 97.61 | |
| D 13C-1,2,3,4,7,8-HxCDF | 44:11 | 18777500 | 0.52 | 1.1892 | 105.7 | 105.7 | 0.1461 | 0.1461 | 106 | |
| D 13C-1,2,3,6,7,8-HxCDF | 44:19 | 21493519 | 0.53 | 1.4625 | 98.4 | 98.4 | 0.1188 | 0.1188 | 98.42 | |
| D 13C-2,3,4,6,7,8-HxCDF | 45:03 | 19873130 | 0.53 | 1.3197 | 100.8 | 100.8 | 0.1317 | 0.1317 | 101 | |
| D 13C-1,2,3,7,8,9-HxCDF | 46:01 | 17573709 | 0.54 | 1.2001 | 98.1 | 98.1 | 0.1448 | 0.1448 | 98.06 | |
| D 13C-1,2,3,4,6,7,8-HpCDD | 50:09 | 12409981 | 1.07 | 0.8155 | 101.9 | 101.9 | 0.3650 | 0.3650 | 102 | |
| D 13C-1,2,3,4,6,7,8-HpCDF | 48:27 | 15245672 | 0.46 | 1.0496 | 97.3 | 97.3 | 0.1531 | 0.1531 | 97.26 | |
| D 13C-1,2,3,4,7,8,9-HpCDF | 50:48 | 13475063 | 0.45 | 0.8947 | 100.9 | 100.9 | 0.1796 | 0.1796 | 101 | |
| D 13C-OCDD | 54:17 | 19967001 | 0.92 | 0.7044 | 189.8 | 189.8 | 0.0935 | 0.0935 | 94.91 | |
| D 13C-OCDF | 54:26 | 29828160 | 0.89 | 1.0615 | 188.2 | 188.2 | 0.1211 | 0.1211 | 94.09 | |
| $ 37Cl4-2,3,7,8-TCDD | 31:53 | 1540857 | | 1.2266 | 9.922 | 9.922 | 0.0141 | 0.0141 | 99.22 | |
| * 13C-1,2,3,4-TCDD | 31:18 | 12661775 | 0.79 | 9.1E+04 | 100.0 | 100.0 | | | | |
| * 13C-1,2,3,7,8,9-HxCDD | 45:45 | 14933512 | 1.23 | 1E+05 | 100.0 | 100.0 | | | | |
| 1,3,6,8-TCDF | 23:12 | 2705807 | 0.78 | | | | | | | |
| 1,3,6,8-TCDD | 25:43 | 1493428 | 0.79 | | | | | | | |
| 1,2,8,9-TCDF | 34:49 | 2207414 | 0.79 | | | | | | | |
| 1,2,8,9-TCDD | 34:56 | 1027901 | 1.53 | | | | | | | R |
| 1,3,4,6,8-PeCDF | 35:30 | 9418858 | 1.58 | | | | | | | |
| 1,2,4,7,9-PeCDD | 38:12 | 5769231 | 1.58 | | | | | | | |
| 1,2,3,8,9-PeCDD | 41:40 | 6403188 | 1.58 | | | | | | | |
| 1,2,3,8,9-PeCDF | 41:47 | 9220677 | 1.58 | | | | | | | |
| 1,2,3,4,6,8-HxCDF | 42:58 | 11593665 | 1.24 | | | | | | | |
| 1,2,4,6,7,9-HxCDD | 43:38 | 8590777 | 1.29 | | | | | | | |
| 1,2,3,4,8,9-HxCDF | 46:10 | 10545581 | 1.26 | | | | | | | |
| 1,2,3,4,6,7,9-HpCDD | 48:59 | 7139183 | 1.04 | | | | | | | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

## Reagents:

61WDML3OP_00001 Amount Added: 20.00 Units: uL

Report Date: 01-Feb-2017 12:19:16 Chrom Revision: 2.2 30-Jan-2017 14:50:44

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516w1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 16-May-2014 10:23:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: WO=4104:83 Meth=F8o Dil=1
Misc. Info.: Inst=d2a/1182082 Batch=20140516i Ccal=D3140515S2
Operator ID: DavidsonM Instrument ID: D2A

Method: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Feb-2017 12:19:14 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: XAWRK012

First Level Reviewer: gilmorem Date: 01-Feb-2017 12:19:14

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | |
| 319.8965 | 31:52 | 31:52 | 0 | 1.001 | 696529 | 69222 | 209 | 522 | 331 | | |
| 321.8936 | 31:53 | 31:52 | 1 | 1.002 | 892600 | 89318 | 140 | 350 | 638 | 0.78(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | |
| 319.8965 | 31:21 | 30:20 | 61 | | 634630 | 64877 | 209 | 522 | 310 | | |
| 321.8936 | 31:21 | 30:20 | 61 | | 795249 | 85115 | 140 | 350 | 608 | 0.80(0.65-0.89) | |
| 319.8965 | 31:35 | 30:20 | 75 | | 596138 | 66085 | 209 | 522 | 316 | | |
| 321.8936 | 31:35 | 30:20 | 75 | | 756200 | 78976 | 140 | 350 | 564 | 0.79(0.65-0.89) | |
| 319.8965 | 32:23 | 30:20 | 123 | | 679460 | 67333 | 209 | 522 | 322 | | |
| 321.8936 | 32:22 | 30:20 | 122 | | 837977 | 80267 | 140 | 350 | 573 | 0.81(0.65-0.89) | |
| 2,3,7,8-TCDF | | | | | | | | | | | |
| 303.9016 | 29:47 | 29:47 | 0 | 1.001 | 1030383 | 110691 | 179 | 447 | 618 | | |
| 305.8987 | 29:47 | 29:47 | 0 | 1.001 | 1327099 | 145355 | 450 | 1125 | 323 | 0.78(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | |
| 303.9016 | 28:39 | 28:61 | -21 | | 18518 | 2522 | 179 | 447 | 14 | | |
| 305.8987 | 28:40 | 28:61 | -20 | | 23246 | 3134 | 450 | 1125 | 7 | 0.80(0.65-0.89) | |
| 1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 355.8546 | 41:01 | 41:01 | 0 | 1.000 | 3663513 | 865905 | 1136 | 2840 | 762 | | |
| 357.8516 | 41:01 | 41:01 | 0 | 1.000 | 2319306 | 553569 | 374 | 935 | 1480 | 1.58(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | |
| 355.8546 | 39:56 | | | | | | 1136 | 2840 | | | |
| 357.8516 | 39:56 | | | | | | 374 | 935 | | | |
| 1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 39:18 | 39:18 | 0 | 1.000 | 6334583 | 1305396 | 2242 | 5605 | 582 | | |
| 341.8567 | 39:18 | 39:18 | 0 | 1.000 | 3952204 | 823049 | 1407 | 3517 | 585 | 1.60(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 40:30 | 40:30 | 0 | 1.000 | 6077933 | 1398614 | 2242 | 5605 | 624 | | |
| 341.8567 | 40:30 | 40:30 | 0 | 1.000 | 3846775 | 876157 | 1407 | 3517 | 623 | 1.58(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | |
| 339.8597 | 38:38 | | | | | | 2242 | 5605 | | | |
| 341.8567 | 38:38 | | | | | | 1407 | 3517 | | | |
| 1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:15 | 45:15 | 0 | 1.000 | 4166912 | 1065660 | 2295 | 5737 | 464 | | |
| 391.8127 | 45:15 | 45:15 | 0 | 1.000 | 3309177 | 841026 | 1727 | 4317 | 487 | 1.26(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:22 | 45:22 | 0 | 1.000 | 4226872 | 1011650 | 2295 | 5737 | 441 | | |
| 391.8127 | 45:22 | 45:22 | 0 | 1.000 | 3371459 | 826469 | 1727 | 4317 | 479 | 1.25(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:46 | 45:46 | 0 | 1.012 | 4607847 | 1053576 | 2295 | 5737 | 459 | | |
| 391.8127 | 45:46 | 45:46 | 0 | 1.012 | 3710096 | 840399 | 1727 | 4317 | 487 | 1.24(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | |
| 389.8158 | 44:42 | | | | | | 2295 | 5737 | | | |
| 391.8127 | 44:42 | | | | | | 1727 | 4317 | | | |
| 1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:12 | 44:12 | 0 | 1.000 | 6951531 | 1877297 | 4021 | 10052 | 467 | | |
| 375.8178 | 44:12 | 44:12 | 0 | 1.000 | 5586095 | 1516685 | 3318 | 8295 | 457 | 1.24(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:20 | 44:20 | 0 | 1.000 | 7444736 | 1903851 | 4021 | 10052 | 473 | | |
| 375.8178 | 44:20 | 44:20 | 0 | 1.000 | 5981904 | 1556381 | 3318 | 8295 | 469 | 1.24(1.05-1.43) | |
| 2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 45:04 | 45:04 | 0 | 1.000 | 6729390 | 1682827 | 4021 | 10052 | 419 | | |
| 375.8178 | 45:04 | 45:04 | 0 | 1.000 | 5381052 | 1311981 | 3318 | 8295 | 395 | 1.25(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 46:02 | 46:02 | 0 | 1.000 | 5854129 | 1415565 | 4021 | 10052 | 352 | | |
| 375.8178 | 46:02 | 46:02 | 0 | 1.000 | 4673085 | 1123767 | 3318 | 8295 | 339 | 1.25(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:34 | | | | | | 4021 | 10052 | | | |
| 375.8178 | 44:34 | | | | | | 3318 | 8295 | | | |
| 1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 423.7767 | 50:11 | 50:11 | 0 | 1.001 | 3502420 | 651977 | 546 | 1365 | 1194 | | |
| 425.7737 | 50:10 | 50:11 | -1 | 1.000 | 3298767 | 623072 | 664 | 1660 | 938 | 1.06(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | |
| 423.7767 | 49:35 | | | | | | 546 | 1365 | | | |
| 425.7737 | 49:35 | | | | | | 664 | 1660 | | | |
| 1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 407.7817 | 48:28 | 48:28 | 0 | 1.000 | 5628277 | 1194618 | 2211 | 5527 | 540 | | |
| 409.7788 | 48:28 | 48:28 | 0 | 1.000 | 5436650 | 1152269 | 2265 | 5662 | 509 | 1.04(0.88-1.20) | |
| 1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 407.7817 | 50:49 | 50:49 | 0 | 1.000 | 4761486 | 943596 | 2211 | 5527 | 427 | | |
| 409.7788 | 50:49 | 50:49 | 0 | 1.000 | 4518077 | 912841 | 2265 | 5662 | 403 | 1.05(0.88-1.20) | |

| Signal | RT (min.) | Adj RT (min.) | Δ Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | |
| 407.7817 | 49:39 | | | | | | 2211 | 5527 | | | |
| 409.7788 | 49:39 | | | | | | 2265 | 5662 | | | |
| OCDD | | | | | | | | | | | |
| 457.7377 | 54:18 | 54:18 | 0 | 1.000 | 5864993 | 1424854 | 961 | 2402 | 1483 | | |
| 459.7348 | 54:18 | 54:18 | 0 | 1.000 | 6452571 | 1540991 | 550 | 1375 | 2802 | 0.91(0.76-1.02) | |
| OCDF | | | | | | | | | | | |
| 441.7428 | 54:27 | 54:27 | 0 | 1.000 | 7783500 | 1914344 | 949 | 2372 | 2017 | | |
| 443.7399 | 54:27 | 54:27 | 0 | 1.000 | 8538950 | 2069182 | 921 | 2302 | 2247 | 0.91(0.76-1.02) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 31:50 | 31:50 | 0 | 1.017 | 6142060 | 623396 | 1089 | 2722 | 572 | | |
| 333.9338 | 31:49 | 31:50 | -1 | 1.016 | 7640465 | 793194 | 501 | 1252 | 1583 | 0.80(0.65-0.89) | |
| 13C-2,3,7,8-TCDF | | | | | | | | | | | |
| 315.9419 | 29:45 | 29:45 | 0 | 0.951 | 9828273 | 1091149 | 1288 | 3220 | 847 | | |
| 317.9389 | 29:45 | 29:45 | 0 | 0.951 | 12522704 | 1394107 | 480 | 1200 | 2904 | 0.78(0.65-0.89) | |
| 13C-1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 367.8949 | 40:60 | 40:60 | 0 | 1.310 | 7072990 | 1653783 | 1563 | 3907 | 1058 | | |
| 369.8919 | 40:60 | 40:60 | 0 | 1.310 | 4347029 | 1022227 | 267 | 667 | 3829 | 1.63(1.32-1.78) | |
| 13C-1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 39:17 | 39:17 | 0 | 1.255 | 10799529 | 2182297 | 1003 | 2507 | 2176 | | |
| 353.8970 | 39:17 | 39:17 | 0 | 1.255 | 6737265 | 1373259 | 484 | 1210 | 2837 | 1.60(1.32-1.78) | |
| 13C-2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 40:29 | 40:29 | 0 | 1.294 | 11096035 | 2464519 | 1003 | 2507 | 2457 | | |
| 353.8970 | 40:29 | 40:29 | 0 | 1.294 | 6912880 | 1570847 | 484 | 1210 | 3246 | 1.61(1.32-1.78) | |
| 13C-1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:14 | 45:14 | 0 | 0.989 | 7273389 | 1861481 | 749 | 1872 | 2485 | | |
| 403.8529 | 45:14 | 45:14 | 0 | 0.989 | 5724033 | 1455179 | 1658 | 4145 | 878 | 1.27(1.05-1.43) | |
| 13C-1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:21 | 45:21 | 0 | 0.991 | 7479523 | 1801159 | 749 | 1872 | 2405 | | |
| 403.8529 | 45:21 | 45:21 | 0 | 0.991 | 5888790 | 1410042 | 1658 | 4145 | 850 | 1.27(1.05-1.43) | |
| 13C-1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44:11 | 44:11 | 0 | 0.966 | 6451490 | 1760136 | 773 | 1932 | 2277 | | |
| 385.8610 | 44:11 | 44:11 | 0 | 0.966 | 12326010 | 3312655 | 1583 | 3957 | 2093 | 0.52(0.43-0.59) | |
| 13C-1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44:19 | 44:19 | 0 | 0.969 | 7484164 | 1929971 | 773 | 1932 | 2497 | | |
| 385.8610 | 44:19 | 44:19 | 0 | 0.969 | 14009355 | 3601488 | 1583 | 3957 | 2275 | 0.53(0.43-0.59) | |
| 13C-2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 45:03 | 45:03 | 0 | 0.985 | 6852361 | 1683655 | 773 | 1932 | 2178 | | |
| 385.8610 | 45:03 | 45:03 | 0 | 0.985 | 13020769 | 3192337 | 1583 | 3957 | 2017 | 0.53(0.43-0.59) | |
| 13C-1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 383.8639 | 46:01 | 46:01 | 0 | 1.006 | 6155940 | 1404414 | 773 | 1932 | 1817 | | |
| 385.8610 | 46:01 | 46:01 | 0 | 1.006 | 11417769 | 2578908 | 1583 | 3957 | 1629 | 0.54(0.43-0.59) | |
| 13C-1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 435.8169 | 50:09 | 50:09 | 0 | 1.096 | 6418552 | 1192690 | 2111 | 5277 | 565 | | |
| 437.8140 | 50:09 | 50:09 | 0 | 1.096 | 5991429 | 1116969 | 1925 | 4812 | 580 | 1.07(0.88-1.20) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 417.8250 | 48:27 | 48:27 | 0 | 1.059 | 4814800 | 1019155 | 755 | 1887 | 1350 | | |
| 419.8220 | 48:27 | 48:27 | 0 | 1.059 | 10430872 | 2168312 | 1424 | 3560 | 1523 | 0.46(0.51-0.37) | |
| 13C-1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 417.8250 | 50:48 | 50:48 | 0 | 1.110 | 4198433 | 838216 | 755 | 1887 | 1110 | | |
| 419.8220 | 50:48 | 50:48 | 0 | 1.110 | 9276630 | 1834729 | 1424 | 3560 | 1288 | 0.45(0.37-0.51) | |
| 13C-OCDD | | | | | | | | | | | |
| 469.7780 | 54:17 | 54:17 | 0 | 1.187 | 9561386 | 2241485 | 518 | 1295 | 4327 | | |
| 471.7750 | 54:17 | 54:17 | 0 | 1.187 | 10405615 | 2525718 | 375 | 937 | 6735 | 0.92(0.76-1.02) | |
| 13C-OCDF | | | | | | | | | | | |
| 453.7830 | 54:26 | 54:26 | 0 | 1.190 | 14032219 | 3509504 | 579 | 1447 | 6061 | | |
| 455.7801 | 54:26 | 54:26 | 0 | 1.190 | 15795941 | 3888947 | 1164 | 2910 | 3341 | 0.89(0.76-1.02) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31:53 | 31:53 | 0 | 1.019 | 1540857 | 163270 | 94 | 235 | 1737 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 31:18 | 31:18 | 0 | | 5600787 | 604972 | 1089 | 2722 | 556 | | |
| 333.9338 | 31:18 | 31:18 | 0 | | 7060988 | 758389 | 501 | 1252 | 1514 | 0.79(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:45 | 45:45 | 0 | | 8233327 | 1900497 | 749 | 1872 | 2537 | | |
| 403.8529 | 45:45 | 45:45 | 0 | | 6700185 | 1489143 | 1658 | 4145 | 898 | 1.23(1.05-1.43) | |
| 1,3,6,8-TCDF | | | | | | | | | | | |
| 303.9016 | 23:12 | 23:12 | 0 | | 1188062 | 179703 | 179 | 447 | 1004 | | |
| 305.8987 | 23:12 | 23:12 | 0 | | 1517745 | 224499 | 450 | 1125 | 499 | 0.78(0.65-0.89) | |
| 1,3,6,8-TCDD | | | | | | | | | | | |
| 319.8965 | 25:43 | 25:43 | 0 | | 659431 | 89773 | 209 | 522 | 430 | | |
| 321.8936 | 25:43 | 25:43 | 0 | | 833997 | 110819 | 140 | 350 | 792 | 0.79(0.65-0.89) | |
| 1,2,8,9-TCDF | | | | | | | | | | | |
| 303.9016 | 34:49 | 34:49 | 0 | | 976870 | 119878 | 179 | 447 | 670 | | |
| 305.8987 | 34:49 | 34:49 | 0 | | 1230544 | 148928 | 450 | 1125 | 331 | 0.79(0.65-0.89) | |
| 1,2,8,9-TCDD | | | | | | | | | | | R |
| 319.8965 | 34:56 | 34:56 | 0 | | 621667 | 77237 | 209 | 522 | | | |
| 321.8936 | 34:56 | 34:56 | 0 | | 406234 | 99648 | 140 | 350 | | 1.53(0.65-0.89) | |
| 1,3,4,6,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 35:30 | 35:30 | 0 | | 5766695 | 802508 | 2242 | 5605 | 358 | | |
| 341.8567 | 35:30 | 35:30 | 0 | | 3652163 | 508637 | 1407 | 3517 | 362 | 1.58(1.32-1.78) | |
| 1,2,4,7,9-PeCDD | | | | | | | | | | | |
| 355.8546 | 38:12 | 38:12 | 0 | | 3532025 | 602440 | 1136 | 2840 | 530 | | |
| 357.8516 | 38:12 | 38:12 | 0 | | 2237206 | 374750 | 374 | 935 | 1002 | 1.58(1.32-1.78) | |
| 1,2,3,8,9-PeCDD | | | | | | | | | | | |
| 355.8546 | 41:40 | 41:40 | 0 | | 3922341 | 906446 | 1136 | 2840 | 798 | | |
| 357.8516 | 41:40 | 41:40 | 0 | | 2480847 | 587482 | 374 | 935 | 1571 | 1.58(1.32-1.78) | |
| 1,2,3,8,9-PeCDF | | | | | | | | | | | |
| 339.8597 | 41:47 | 41:47 | 0 | | 5640415 | 1328106 | 2242 | 5605 | 592 | | |
| 341.8567 | 41:47 | 41:47 | 0 | | 3580262 | 862011 | 1407 | 3517 | 613 | 1.58(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 42:58 | 42:58 | 0 | | 6408064 | 1762377 | 4021 | 10052 | 438 | | |
| 375.8178 | 42:58 | 42:58 | 0 | | 5185601 | 1395659 | 3318 | 8295 | 421 | 1.24(1.05-1.43) | |
| 1,2,4,6,7,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 43:38 | 43:38 | 0 | | 4834597 | 1263198 | 2295 | 5737 | 550 | | |
| 391.8127 | 43:38 | 43:38 | 0 | | 3756180 | 1000999 | 1727 | 4317 | 580 | 1.29(1.05-1.43) | |
| 1,2,3,4,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 46:10 | 46:10 | 0 | | 5877002 | 1308455 | 4021 | 10052 | 325 | | |
| 375.8178 | 46:10 | 46:10 | 0 | | 4668579 | 1034589 | 3318 | 8295 | 312 | 1.26(1.05-1.43) | |
| 1,2,3,4,6,7,9-HpCDD | | | | | | | | | | | |
| 423.7767 | 48:59 | 48:59 | 0 | | 3636651 | 724215 | 546 | 1365 | 1326 | | |
| 425.7737 | 48:59 | 48:59 | 0 | | 3502532 | 696931 | 664 | 1660 | 1050 | 1.04(0.88-1.20) | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

## Reagents:

61WDML3OP_00001 Amount Added: 20.00 Units: uL

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516w1.d
Lims ID: WDM
Client ID:
Inject. Date: 16-May-2014 10:23:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 30.308

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 319.8965 Area | 319.8965 Height | 321.8936 Area | 321.8936 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 31:21 | 634630 | 64877 | 795249 | 85115 | | 0.80 | |
| 31:35 | 596138 | 66085 | 756200 | 78976 | | 0.79 | |
| 32:23 | 679460 | 67333 | 837977 | 80267 | | 0.81 | |
| Signal Totals: | | | | | | | |
| | 1910228 | 198295 | 2389426 | 244358 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 4299654 | 442653 | | | | 0.80 | |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4299654 * 0.0) / (0 * 0.000)

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516w1.d
Lims ID: WDM
Client ID:
Inject. Date: 16-May-2014 10:23:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: D2A Operator: DavidsonM
Lims Batch ID: 7768 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 28.995

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|

Invalid SimRptGroup

Sum the Uncalibrated Results

| RT | 303.9016 Area | 303.9016 Height | 305.8987 Area | 305.8987 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 28:39 | 18518 | 2522 | 23246 | 3134 | | 0.80 | |
| Signal Totals: | | | | | | | |
| | 18518 | 2522 | 23246 | 3134 | | | |

Total Responses:

| | Rx Area | Rx Height | | | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| | 41764 | 5656 | | | | 0.80 | |

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (41764 * 0.0) / (0 * 0.000)

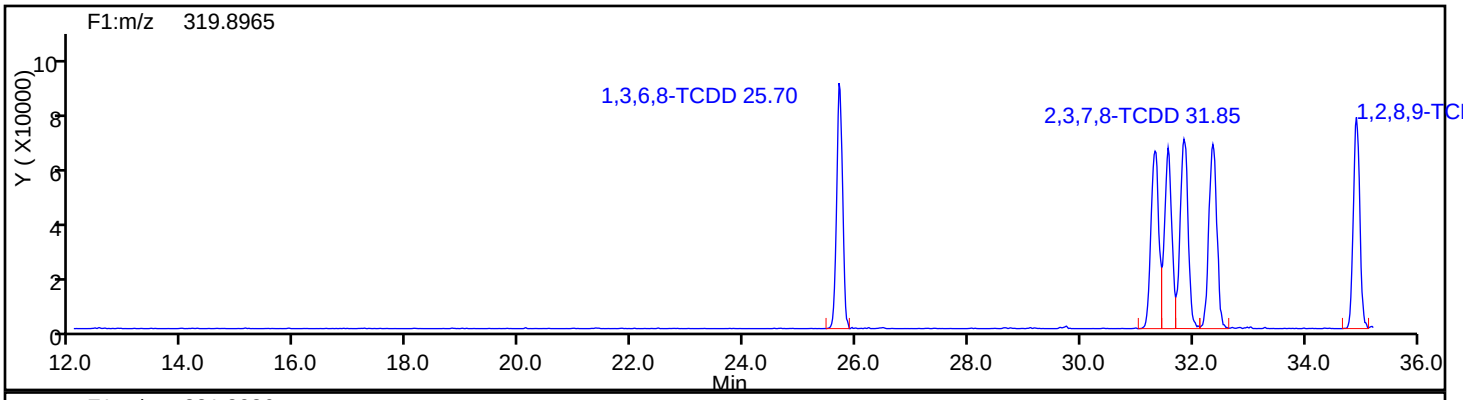
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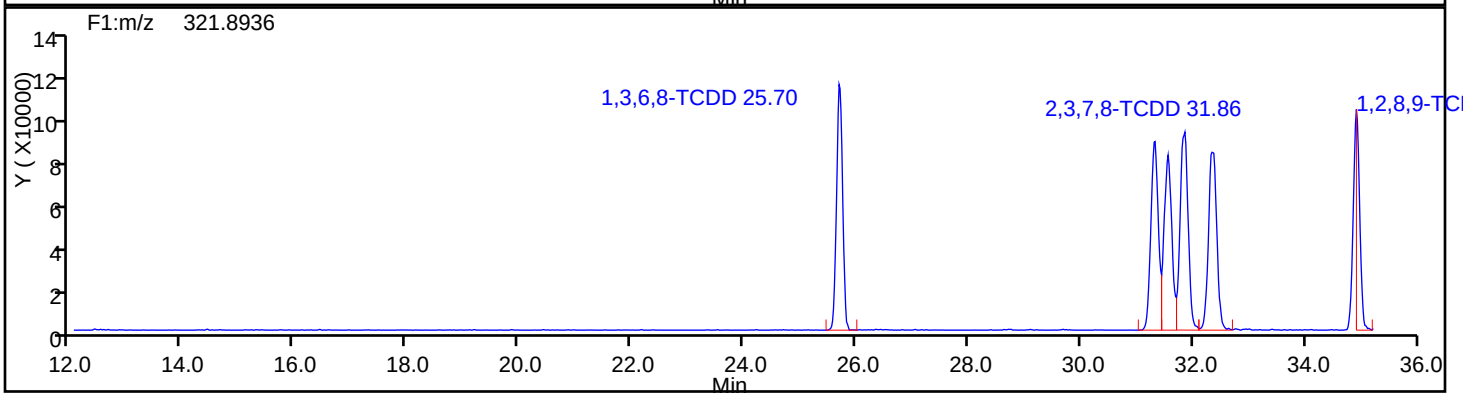
TestAmerica Knoxville

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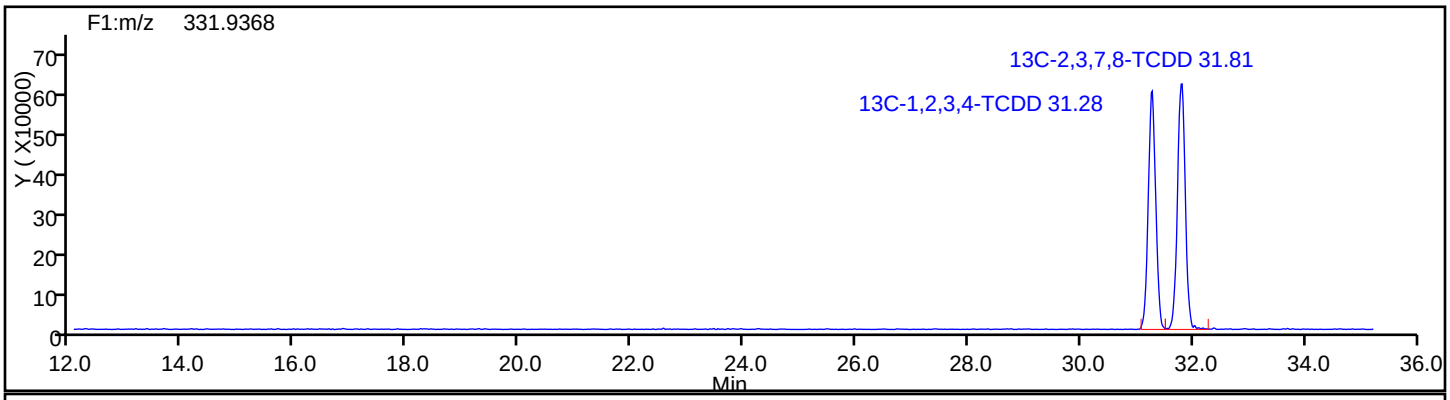
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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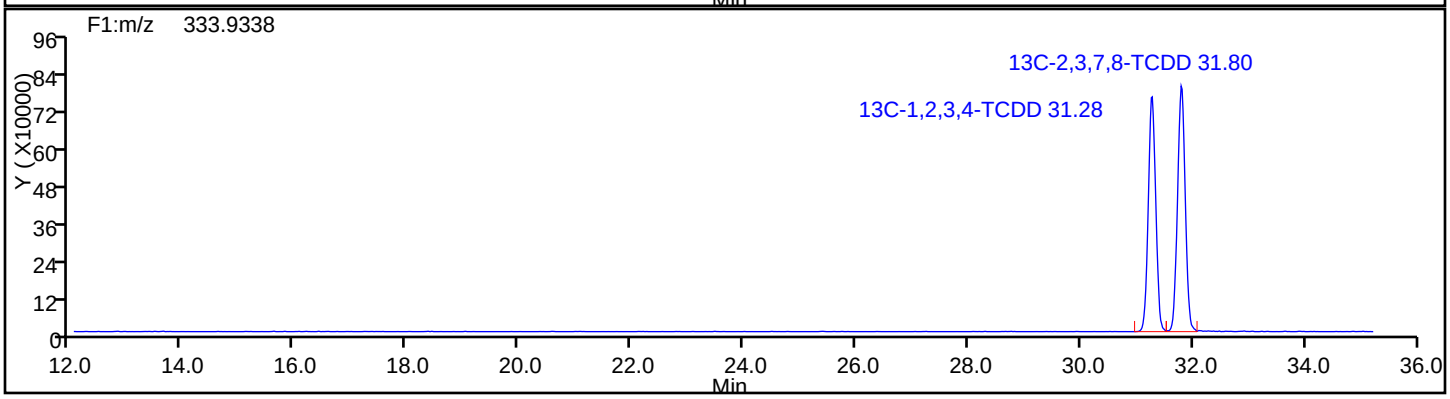
TCDD




TCDD Standards



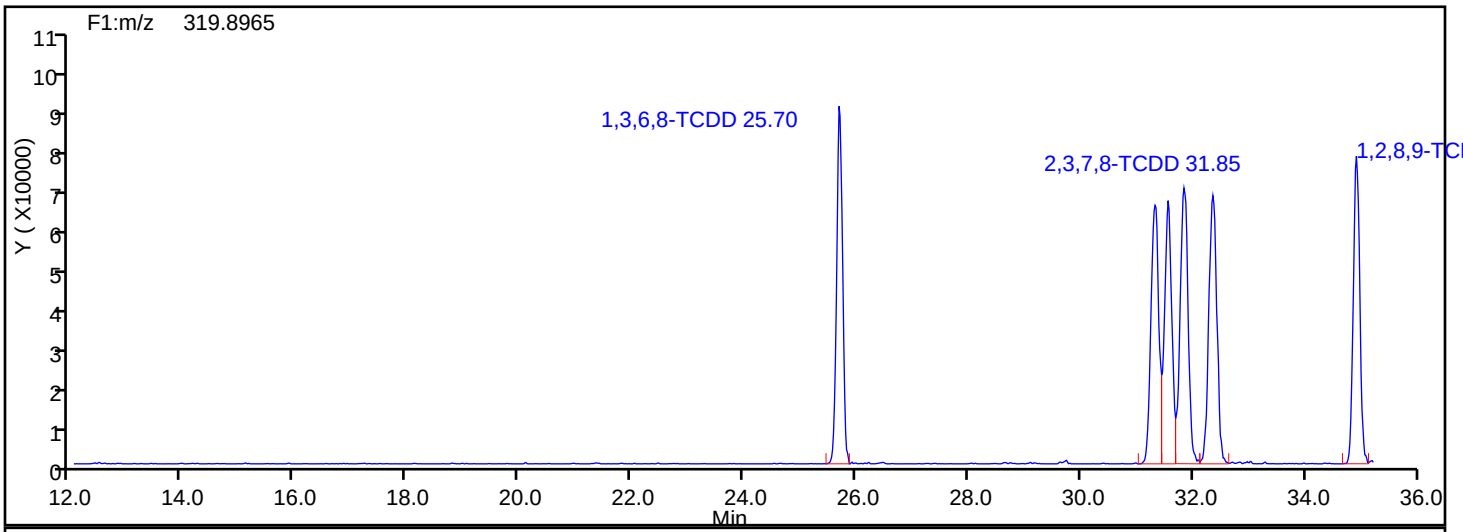
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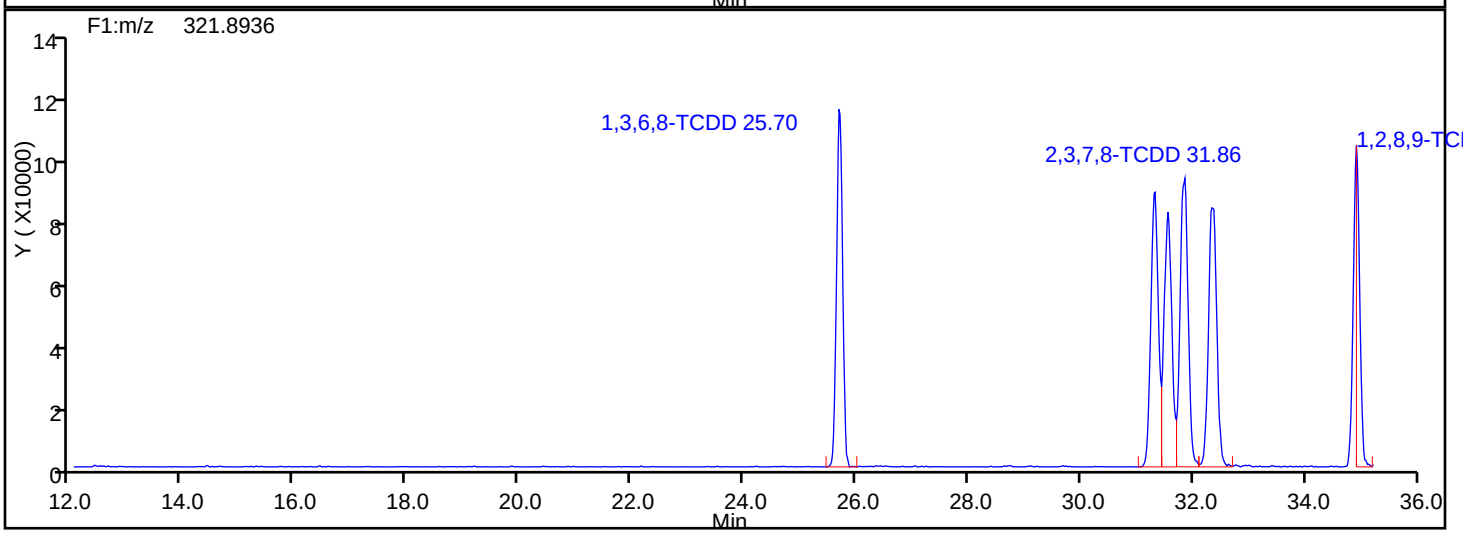
TestAmerica Knoxville

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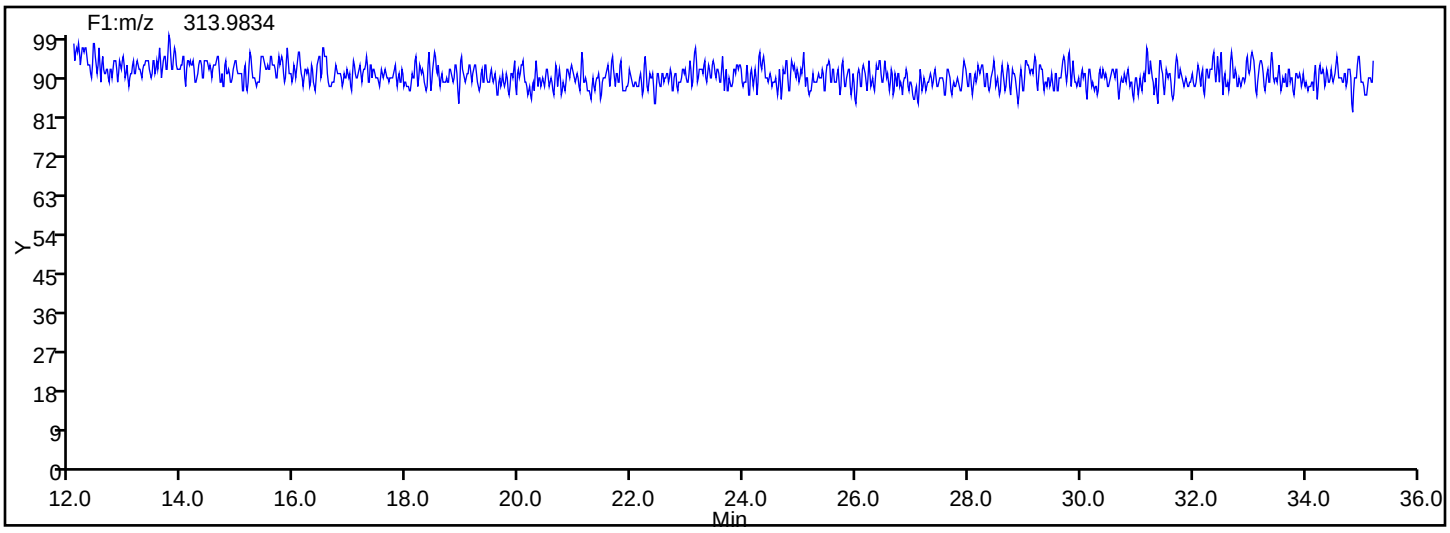
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



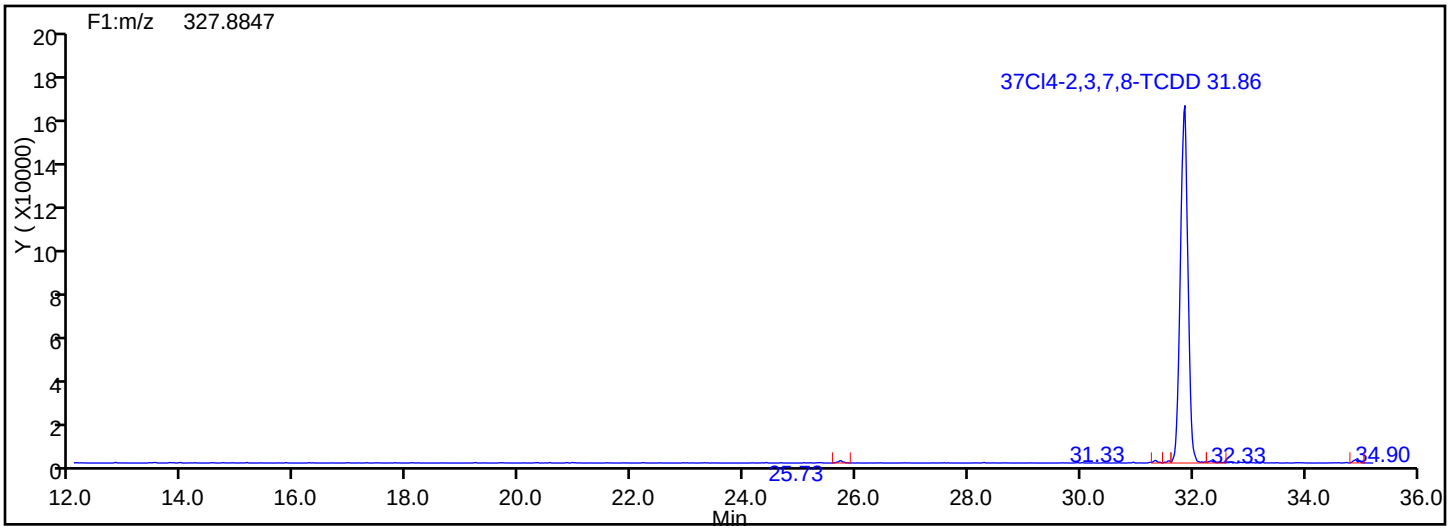
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TestAmerica Knoxville

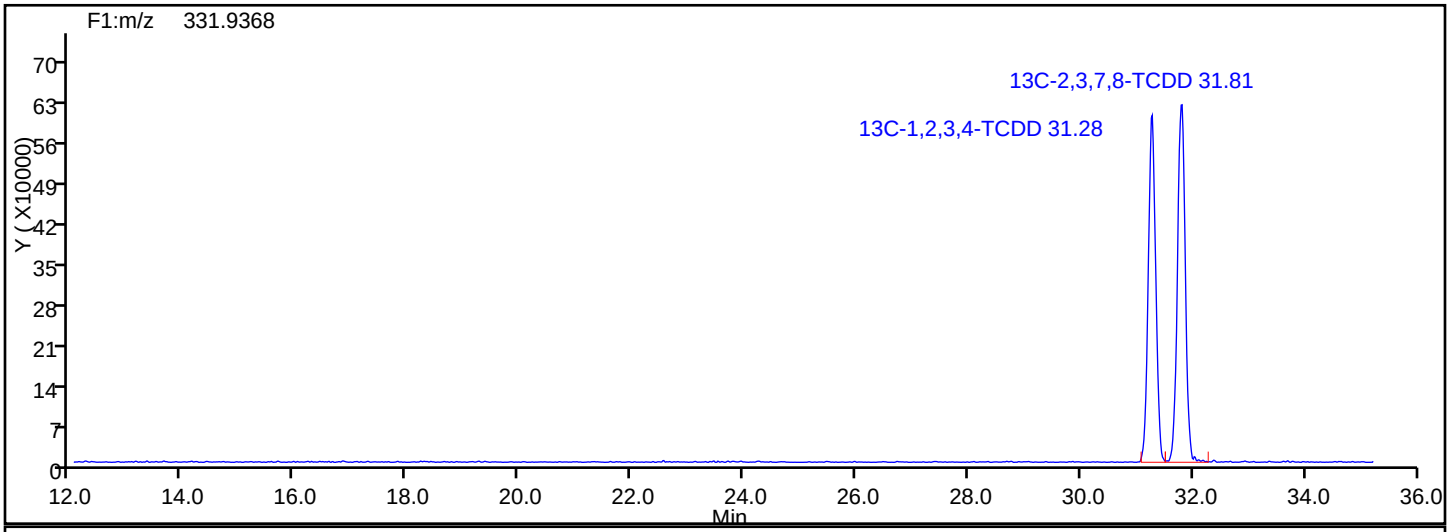
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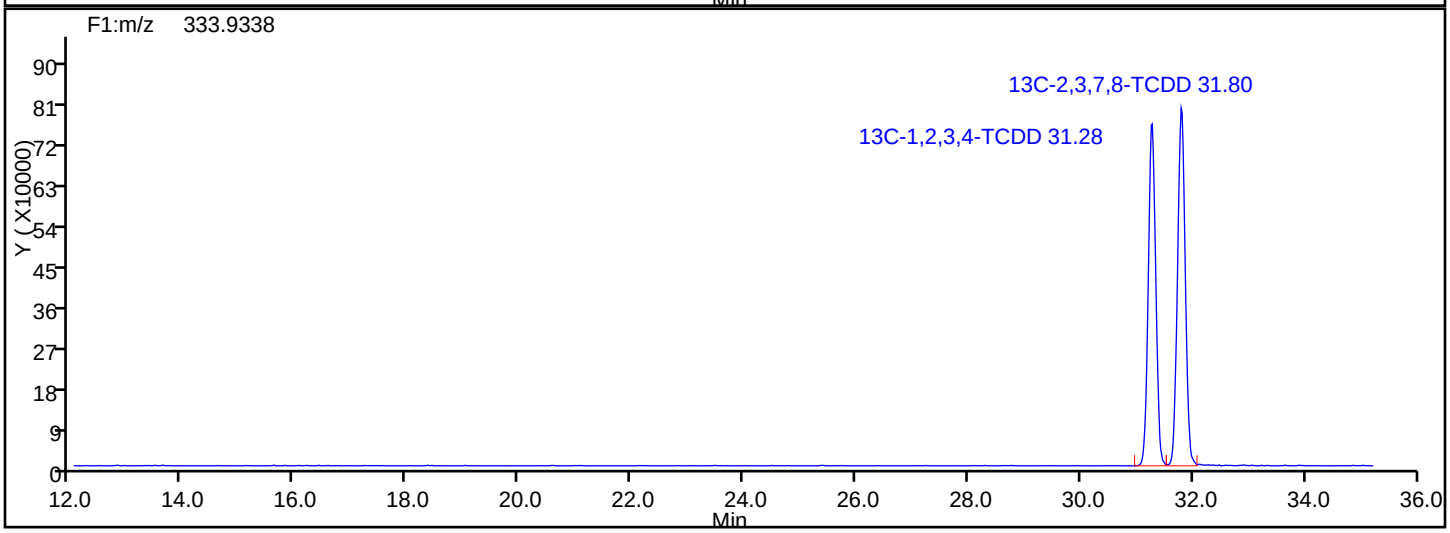
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



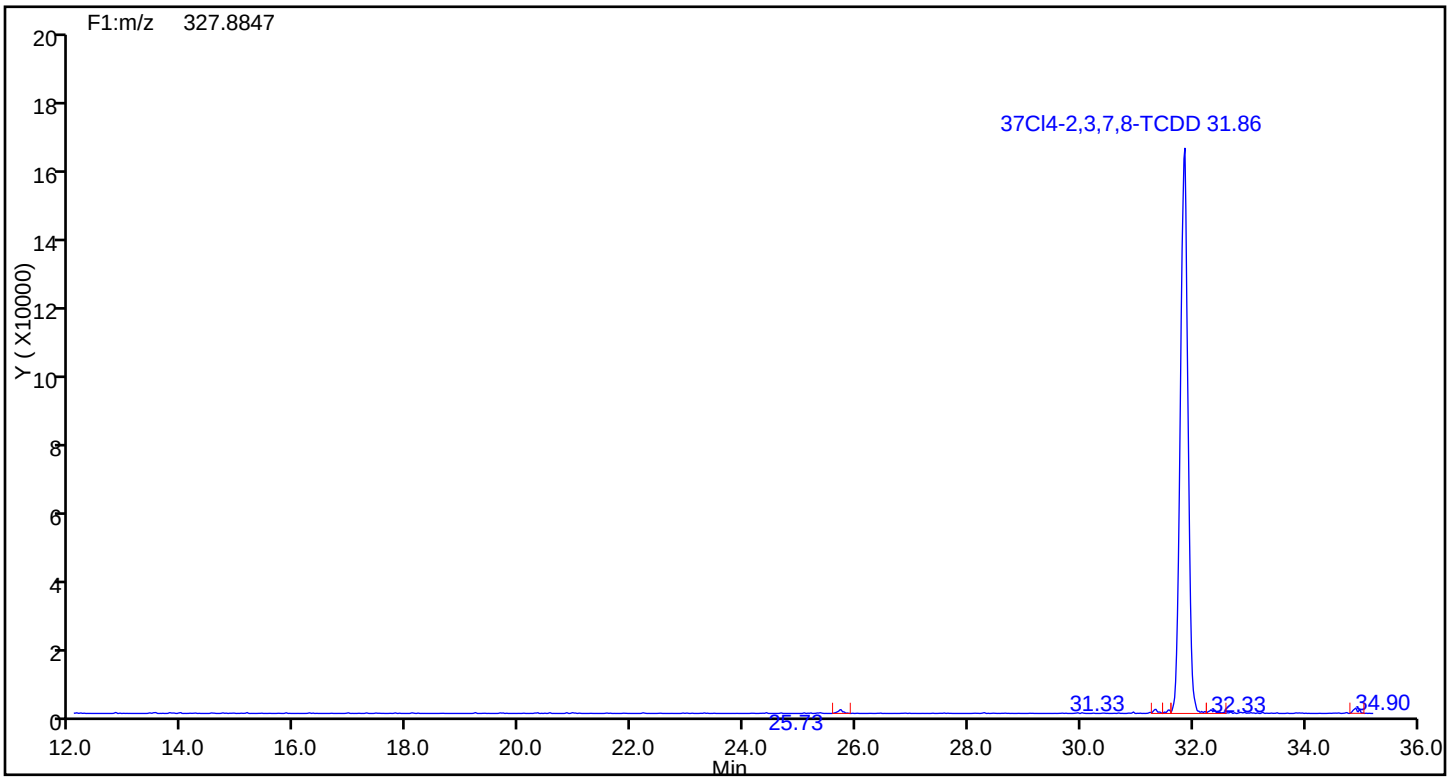
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TestAmerica Knoxville

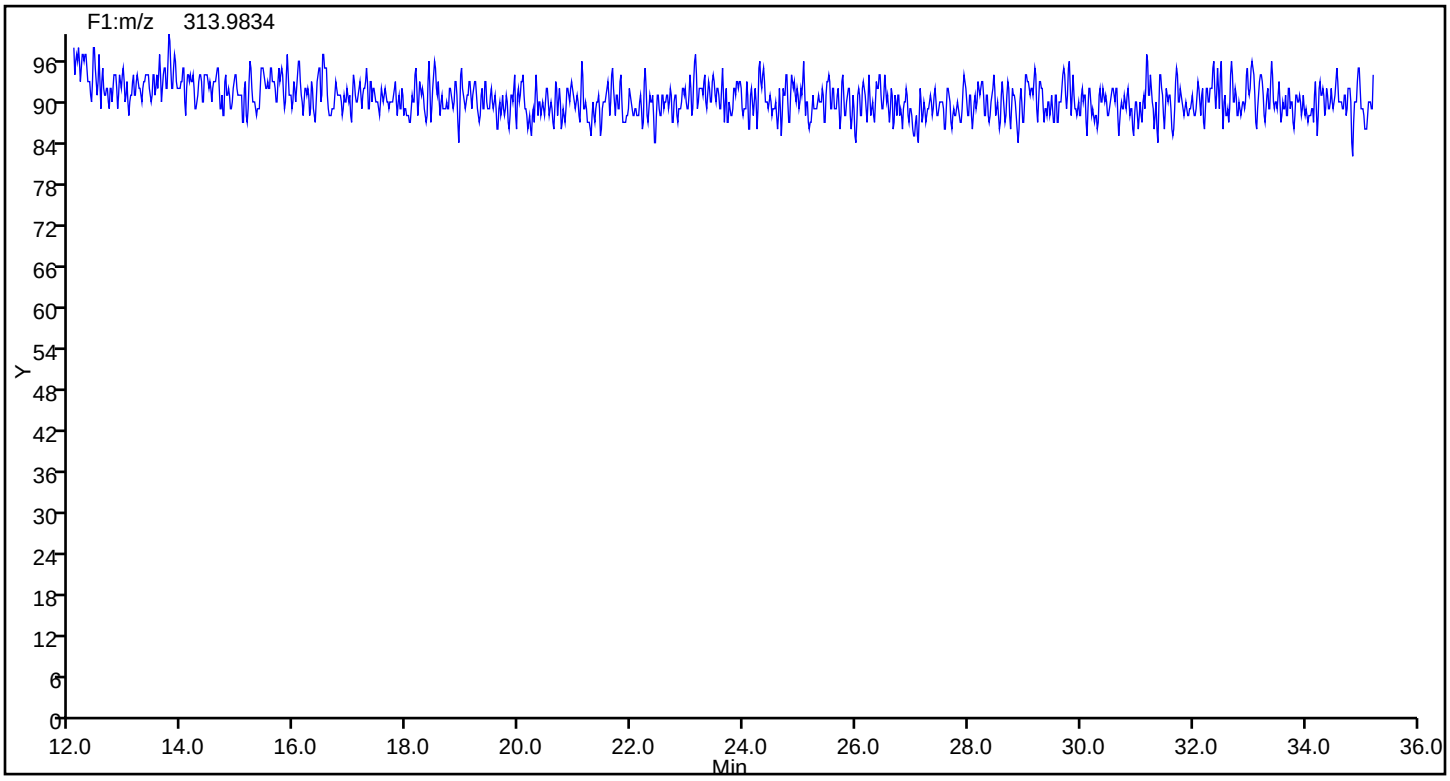
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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37Cl4-TCDD




37Cl4-TCDD Lock Mass



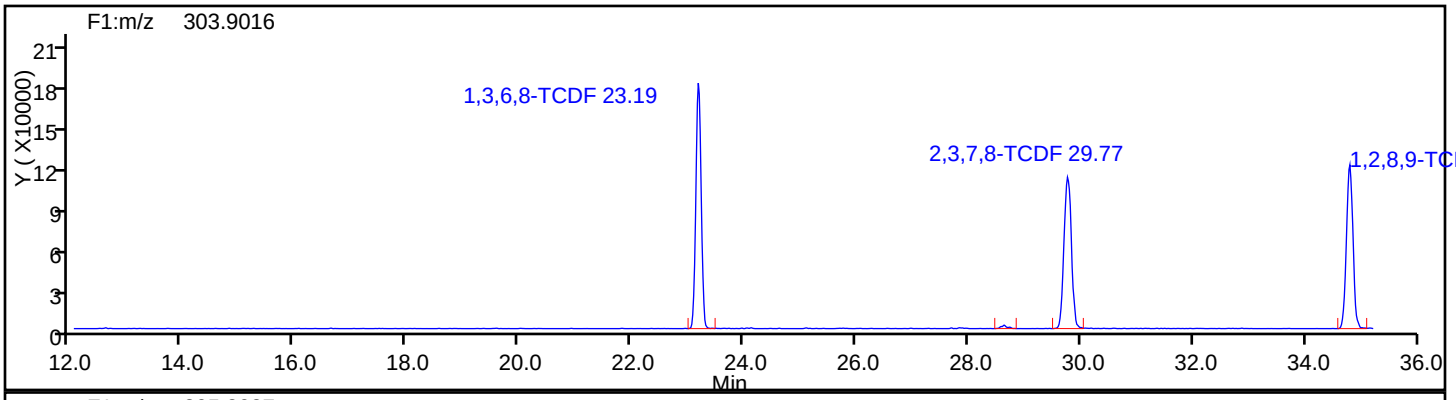
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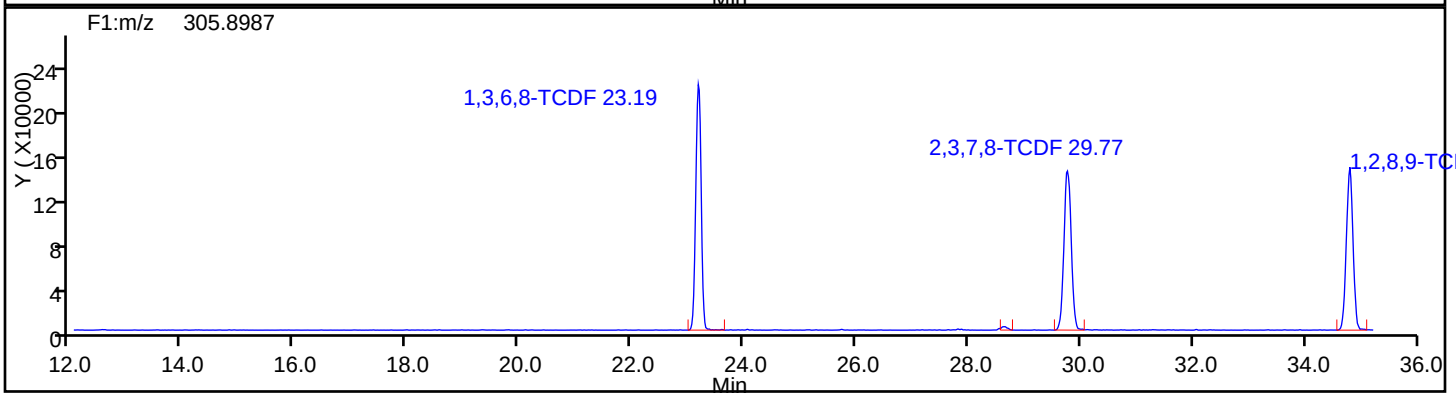
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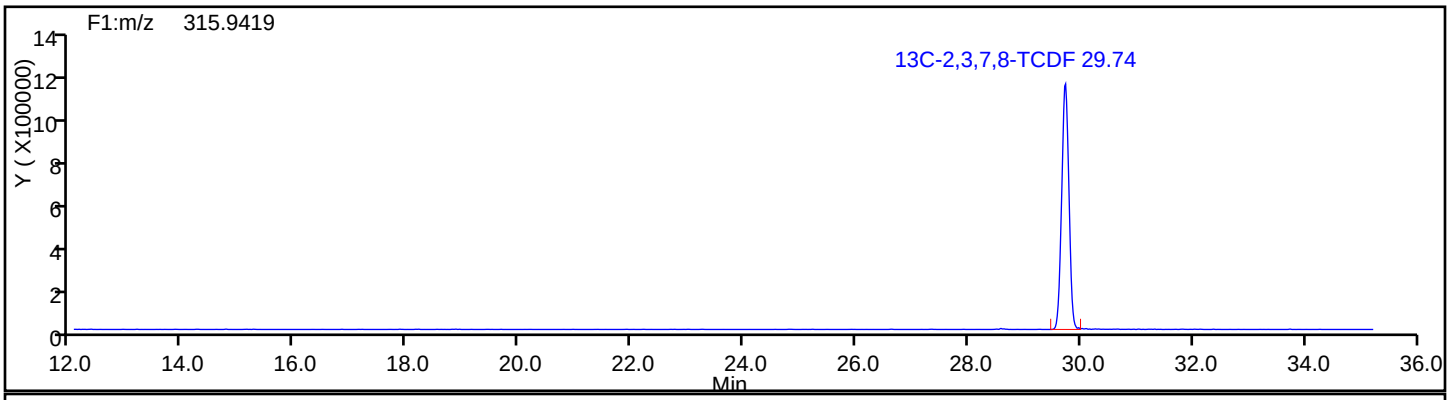
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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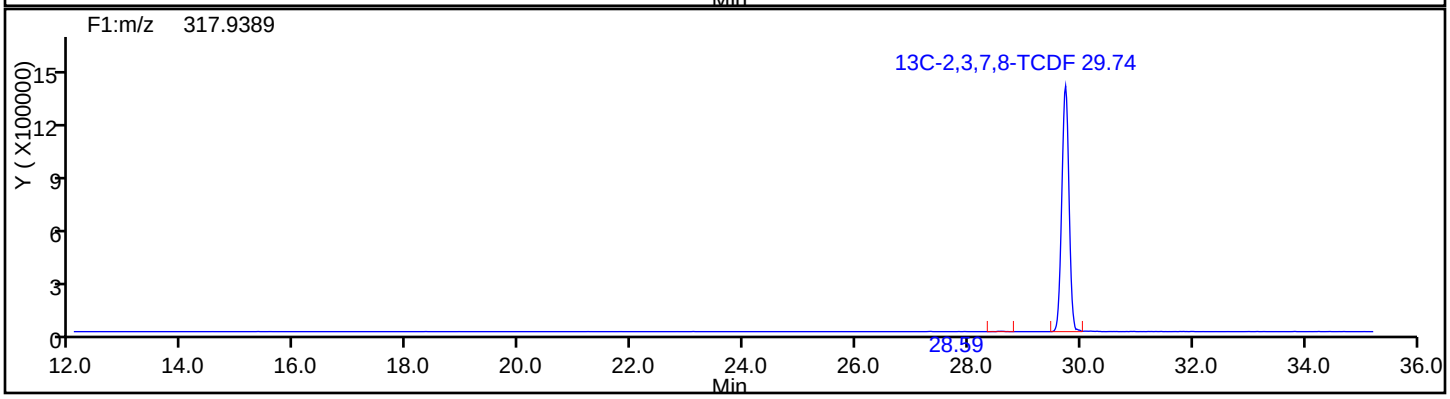
TCDF




TCDF Standards



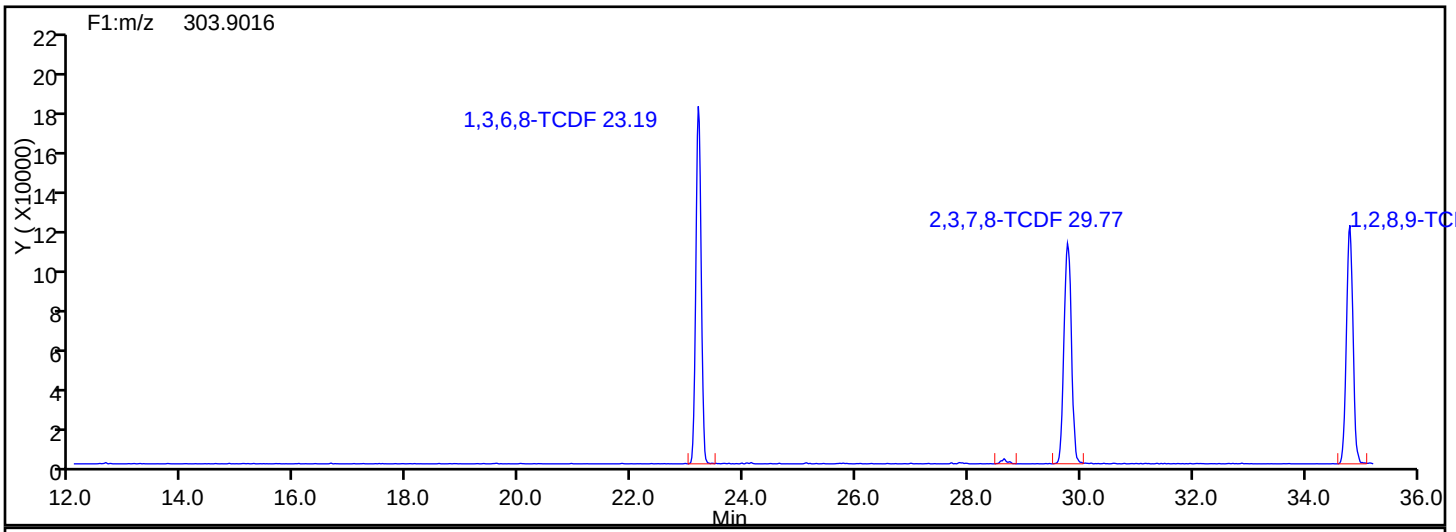
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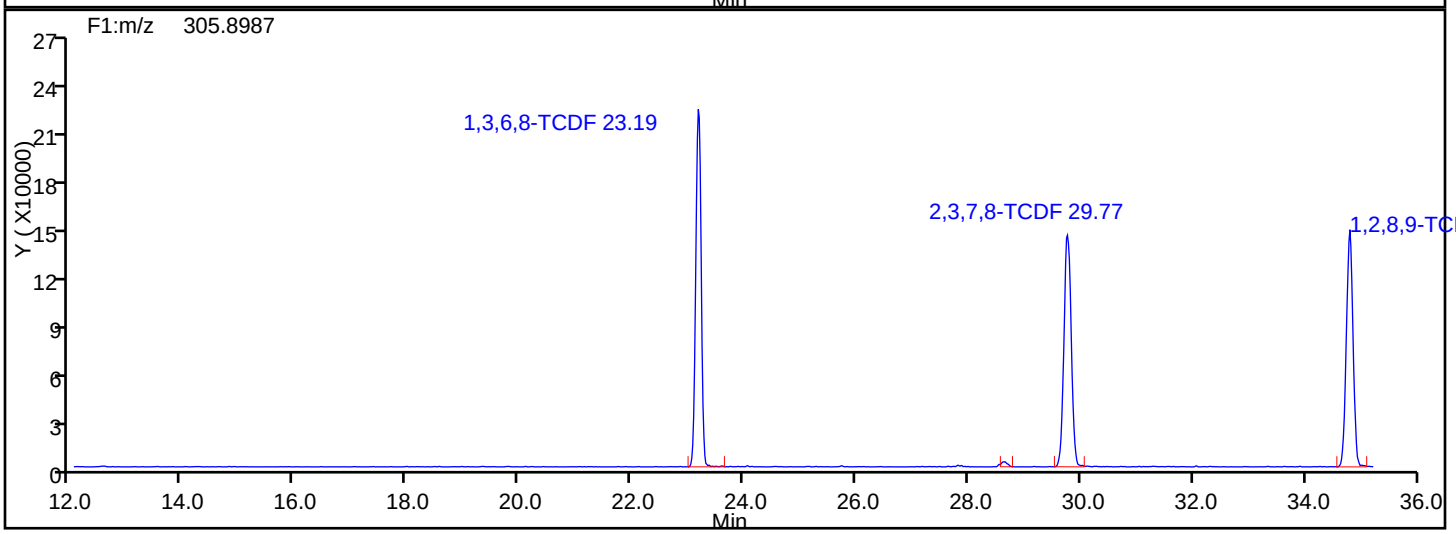
TestAmerica Knoxville

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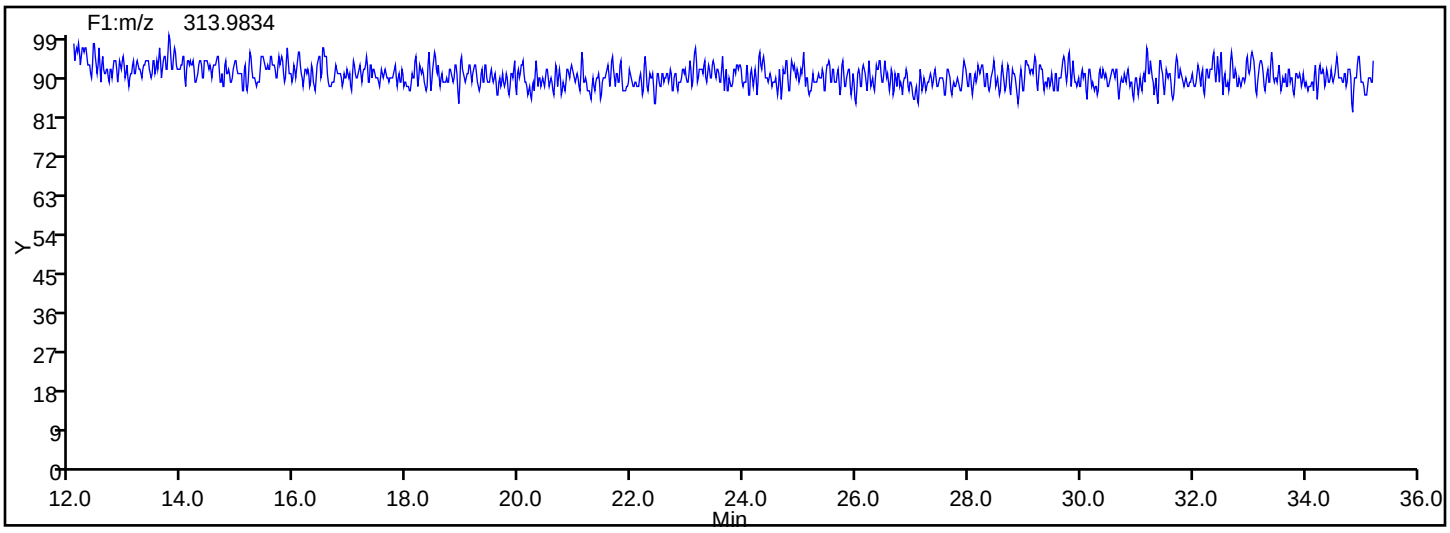
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TCDF




TCDF Lock Mass



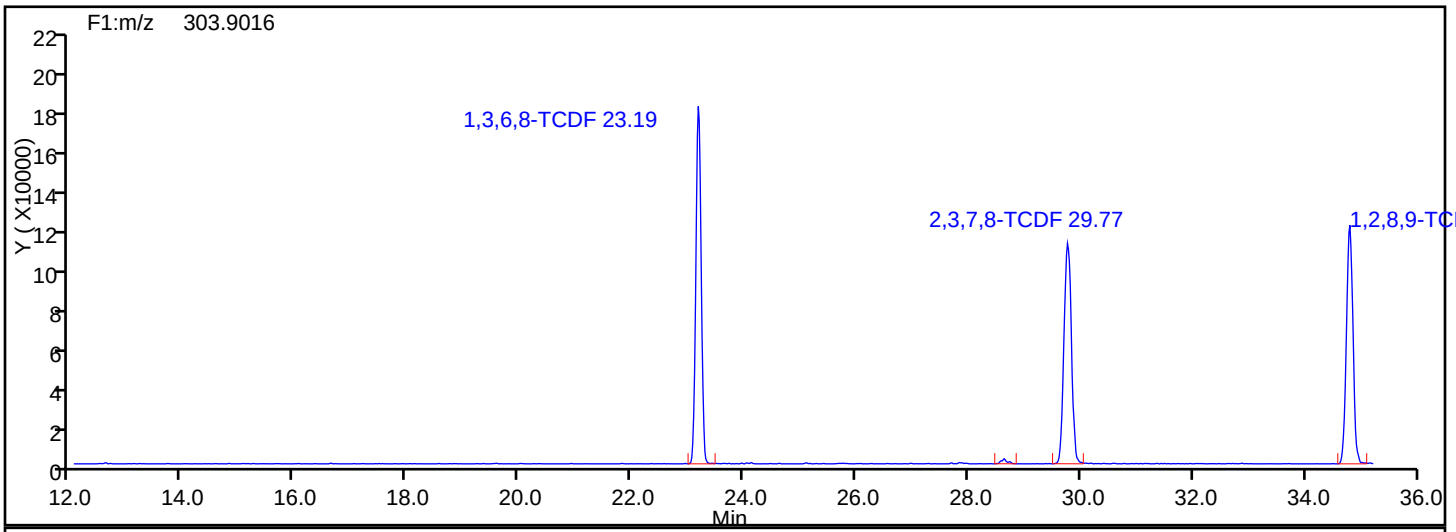
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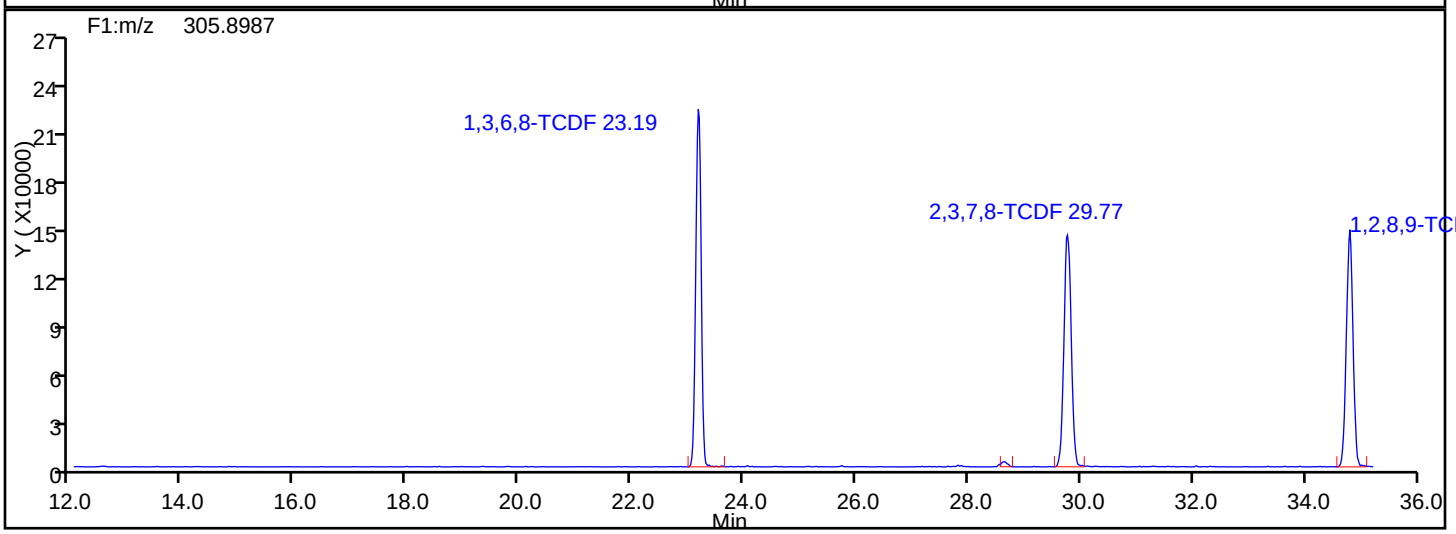
TestAmerica Knoxville

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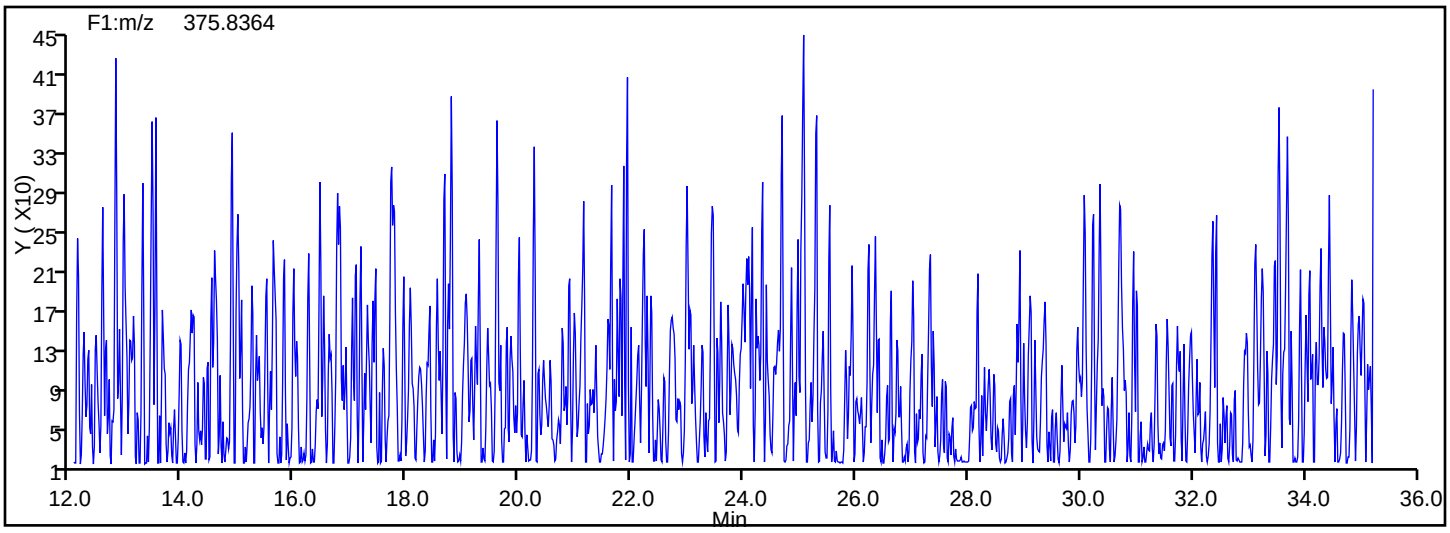
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Column Type: | | Column Dia: | |

TCDF




TCDF Interference Mass



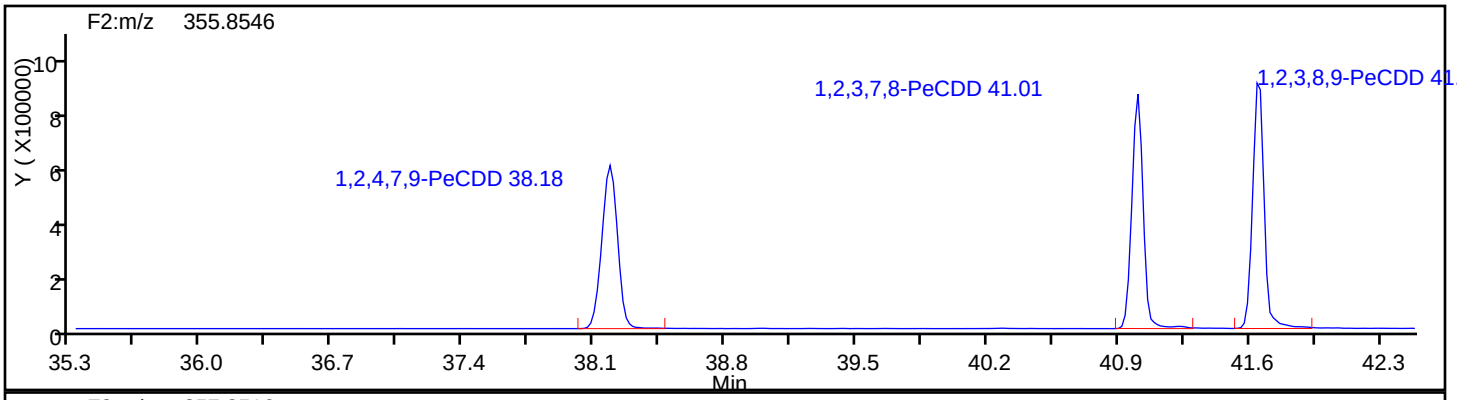
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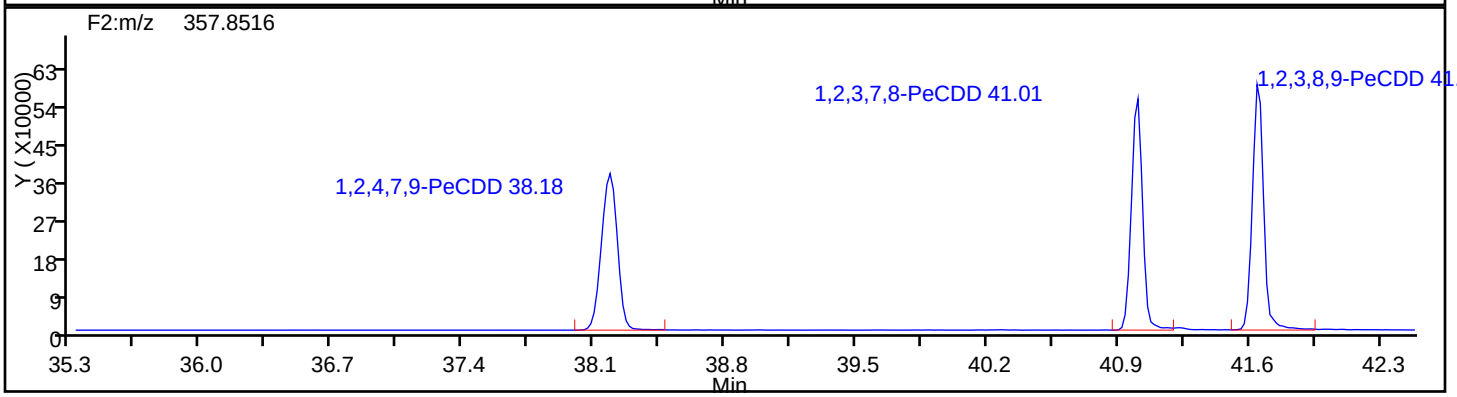
TestAmerica Knoxville

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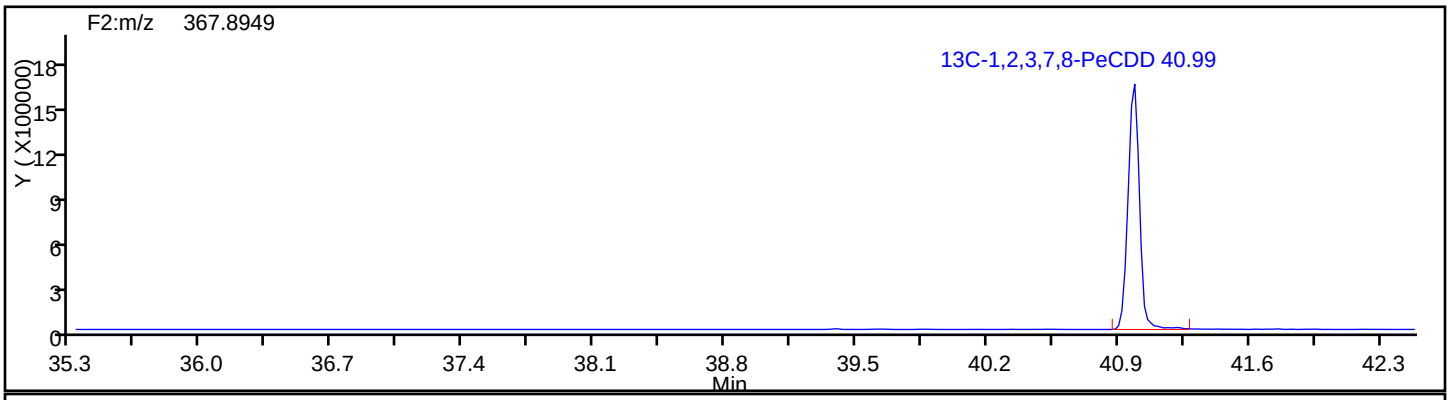
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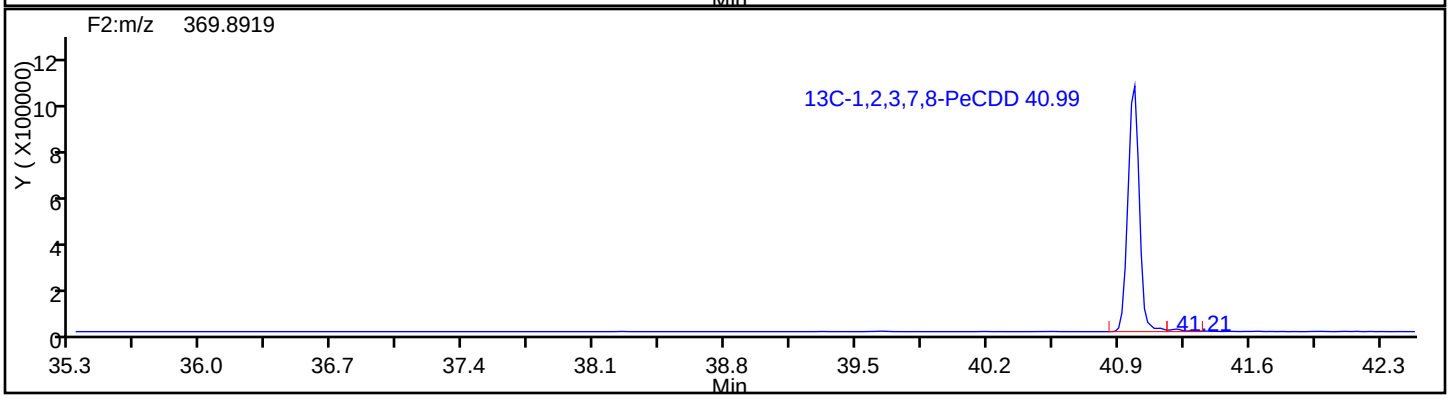
PeCDD




PeCDD Standards



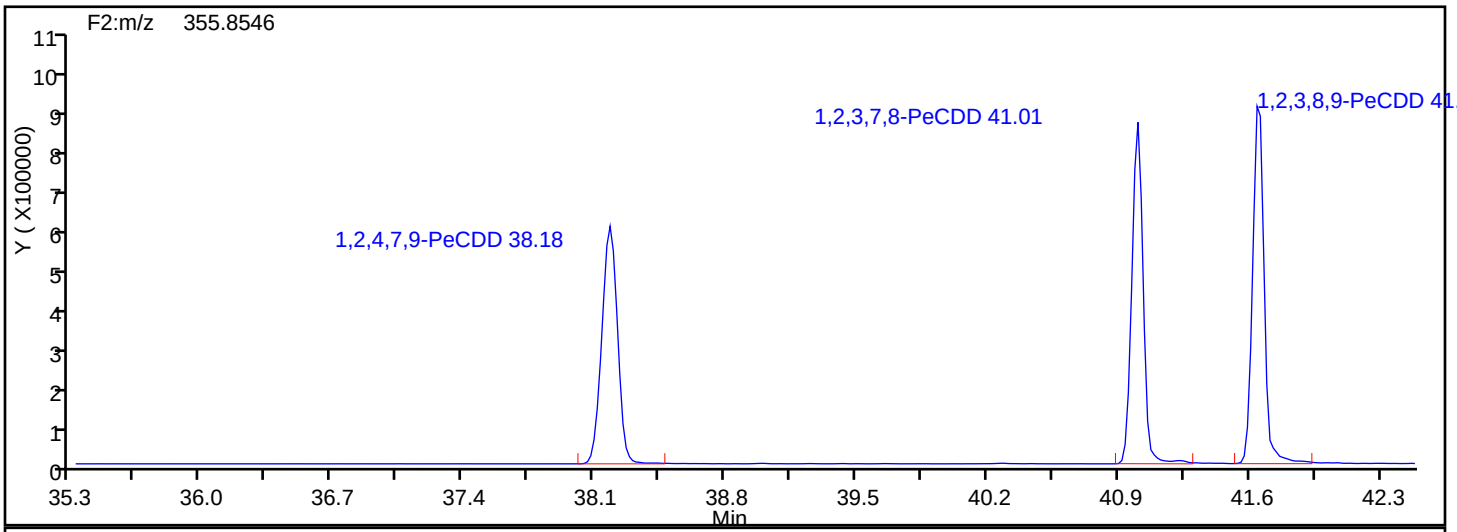
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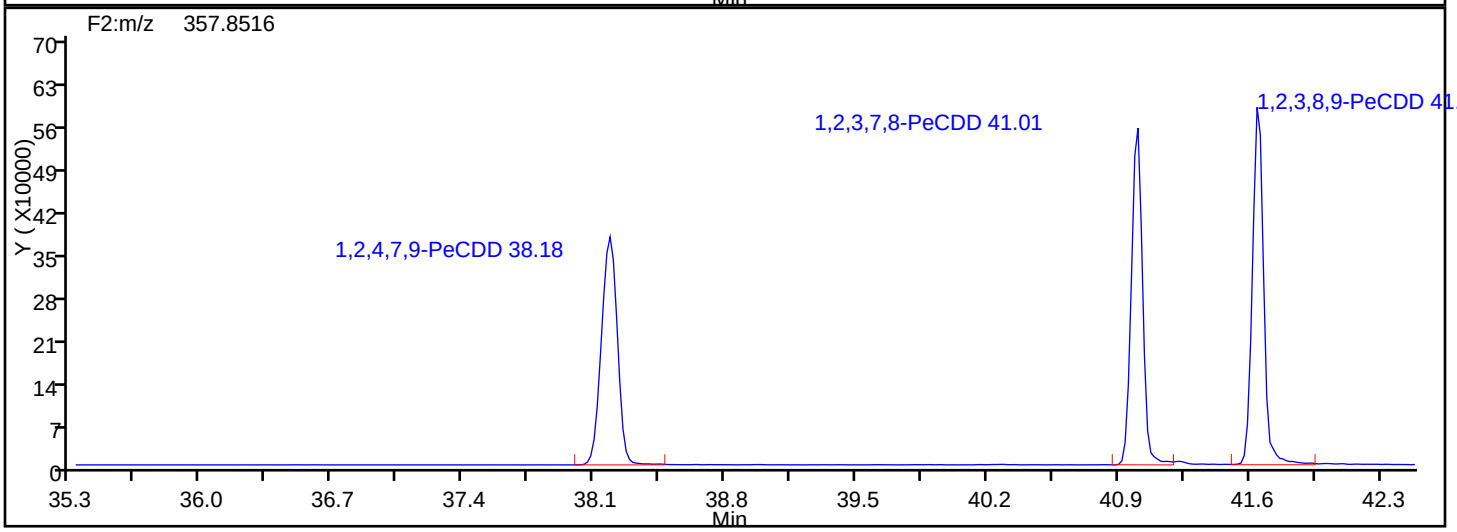
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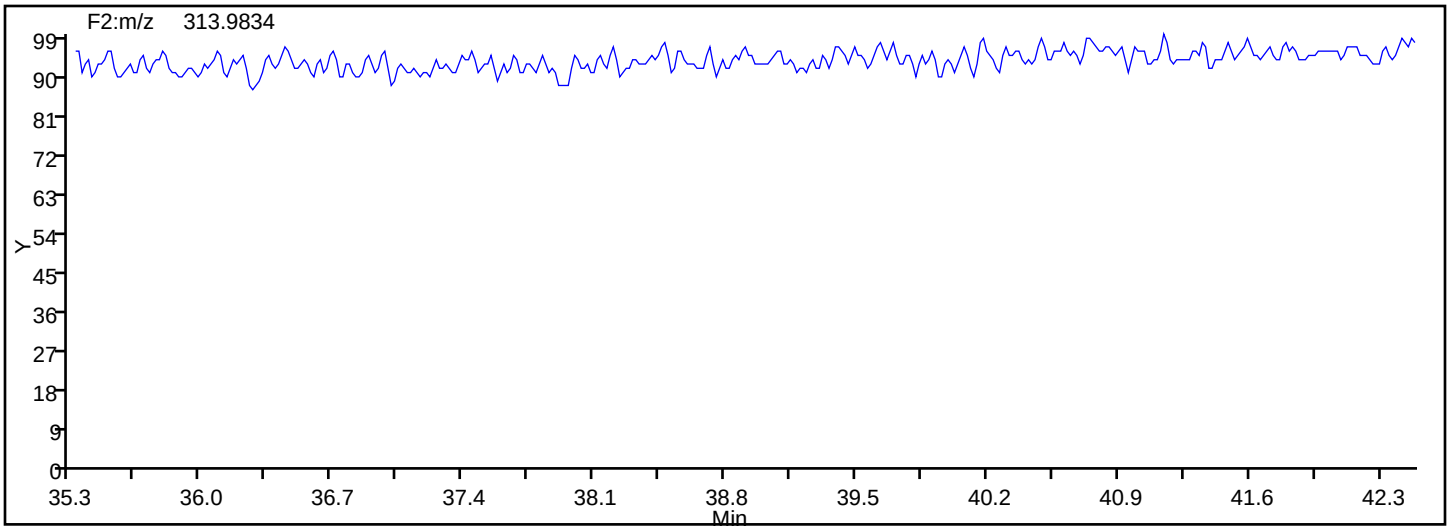
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| Column Type: | | Column Dia: | |

PeCDD




PeCDD Lock Mass



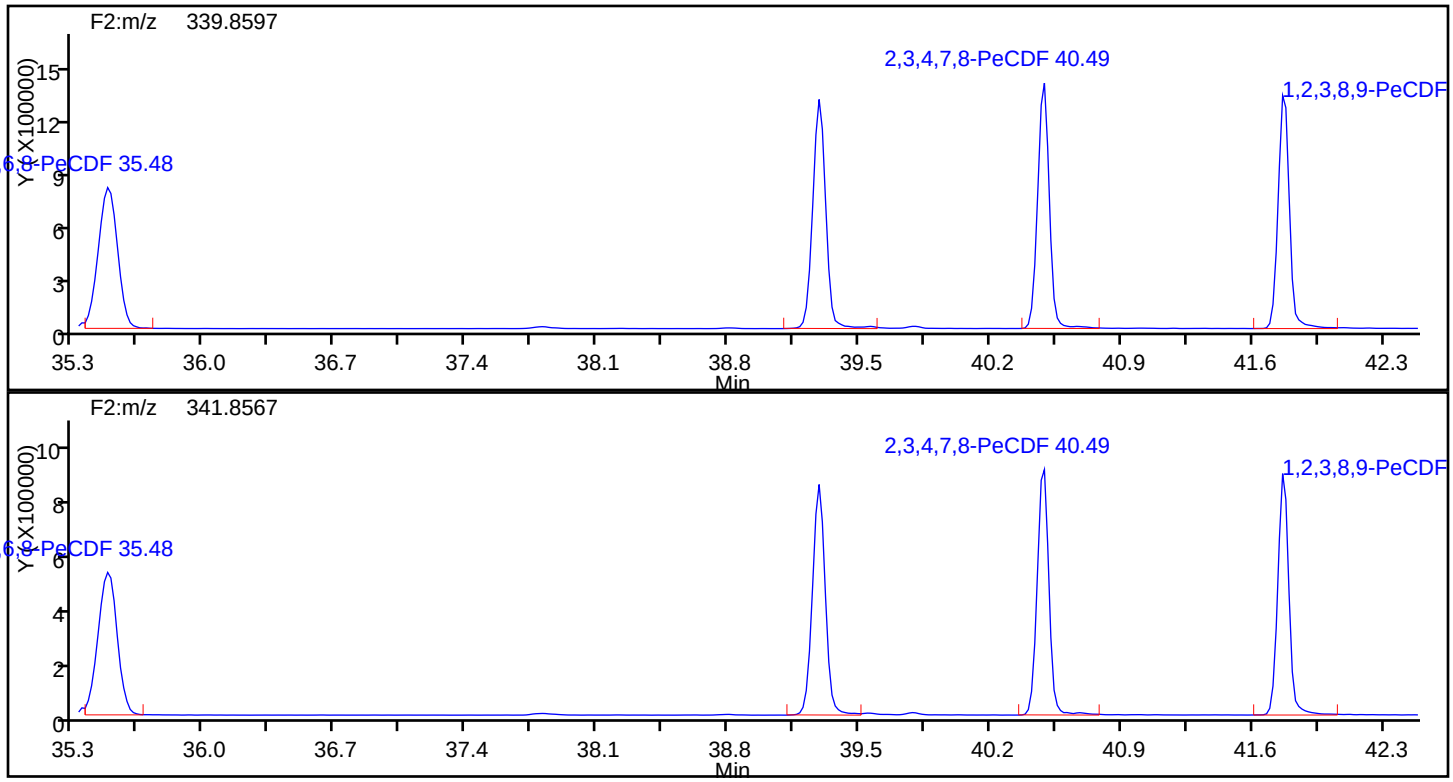
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TestAmerica Knoxville

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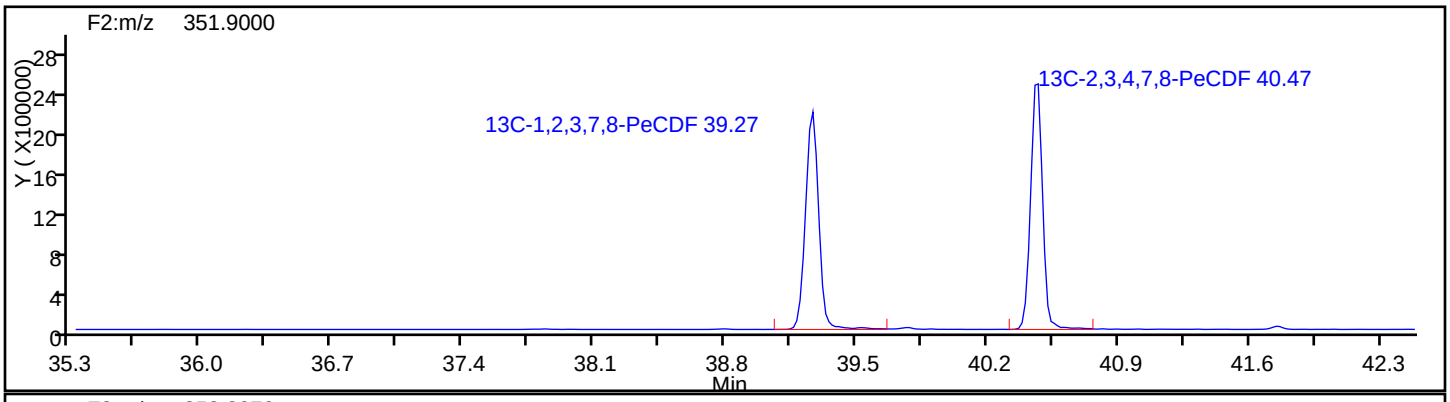
PeCDF

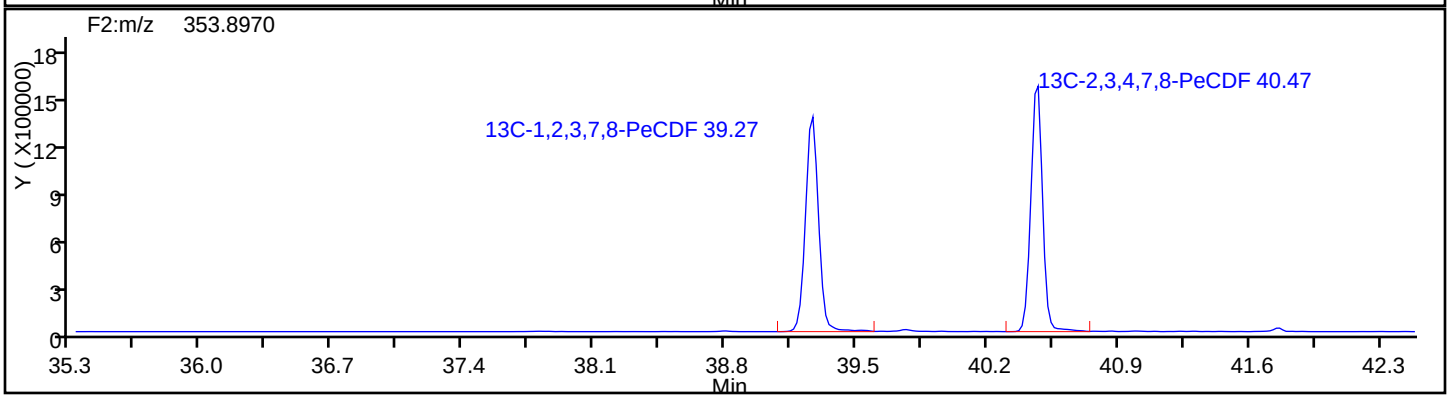






PeCDF Standards



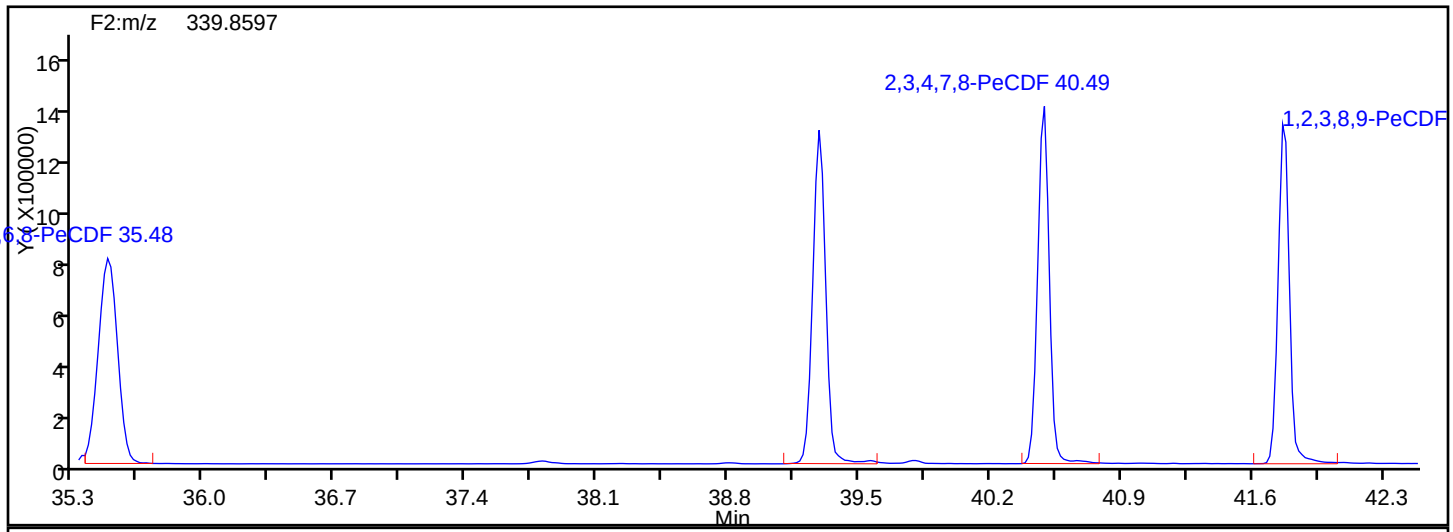
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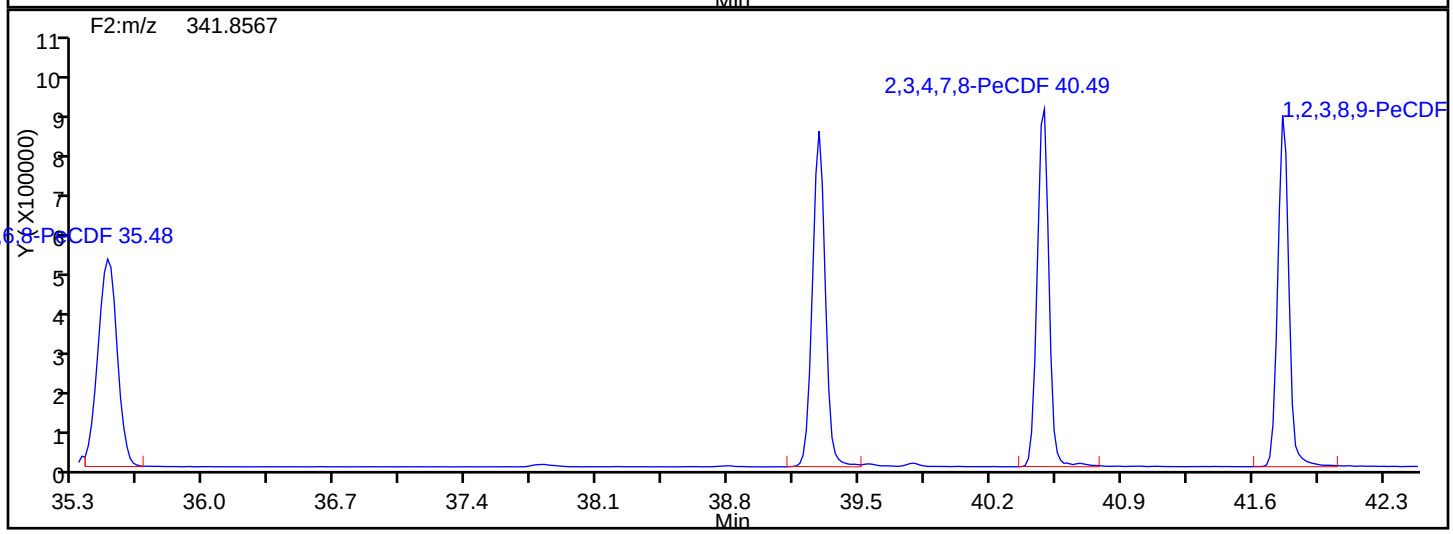
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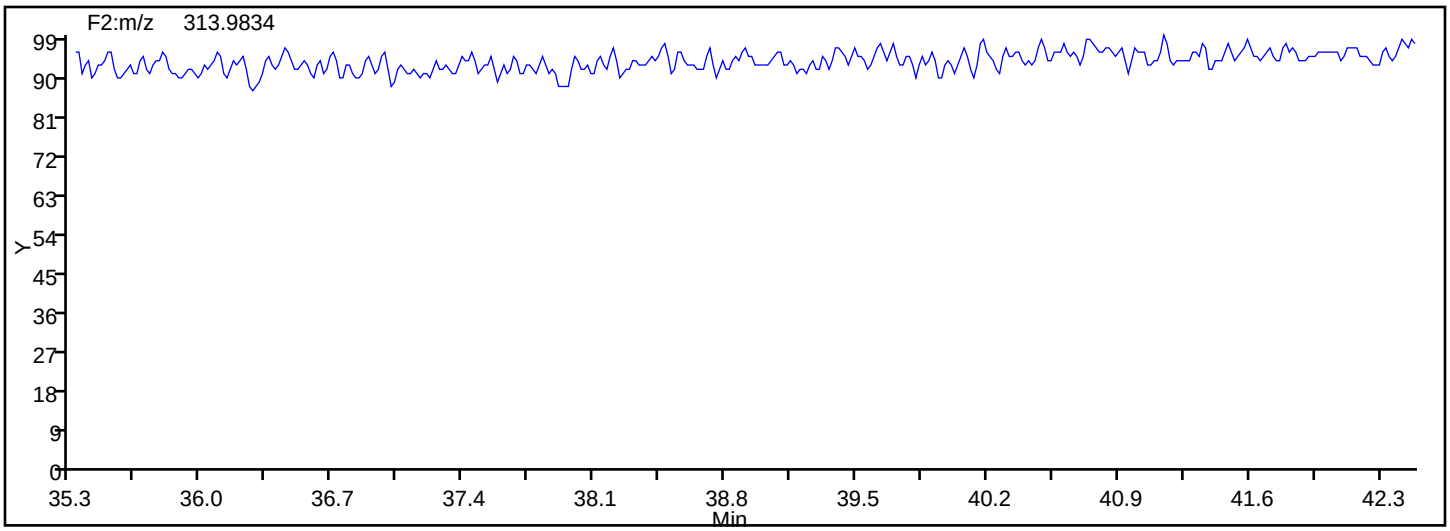
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Worklist#: | 7768 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

PeCDF




PeCDF Lock Mass



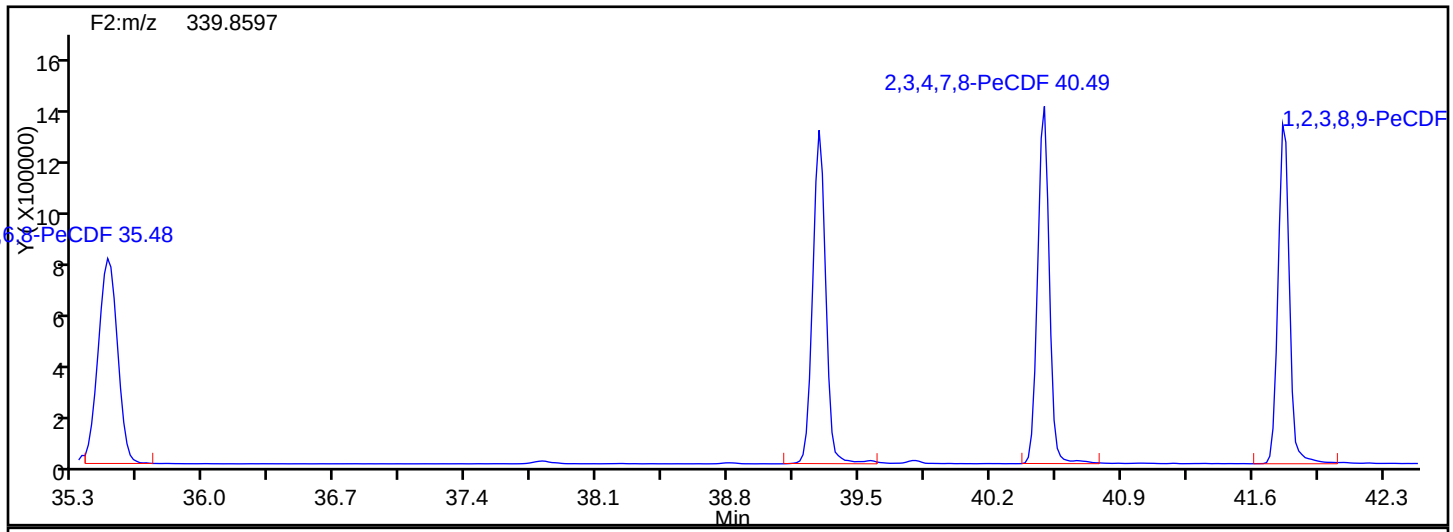
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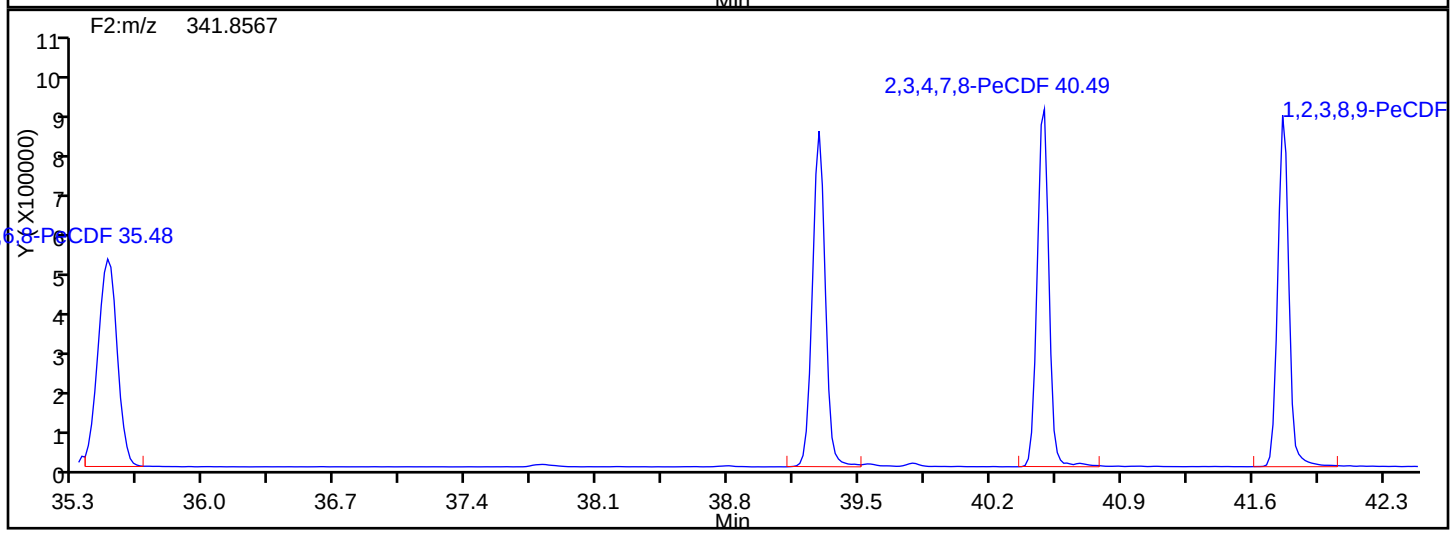
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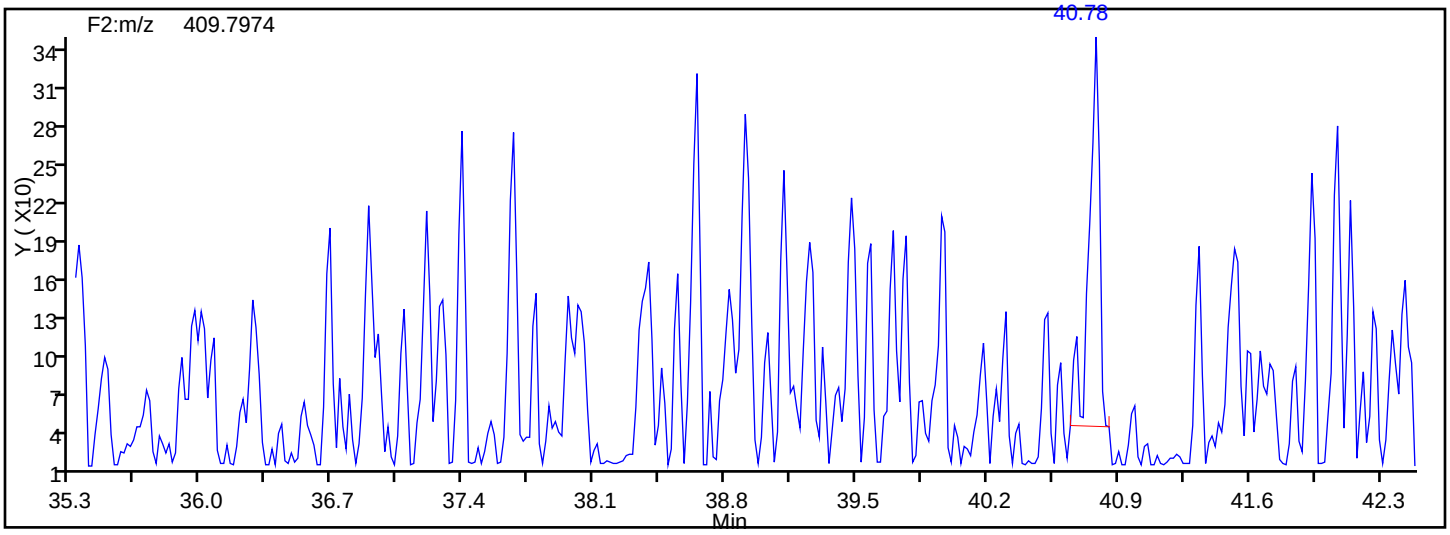
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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PeCDF




PeCDF Interference Mass



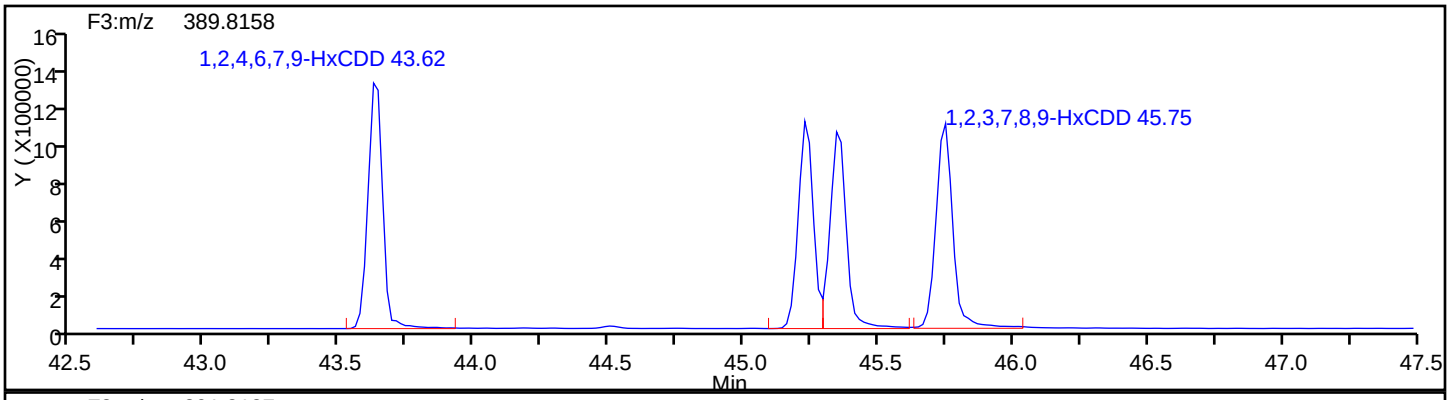
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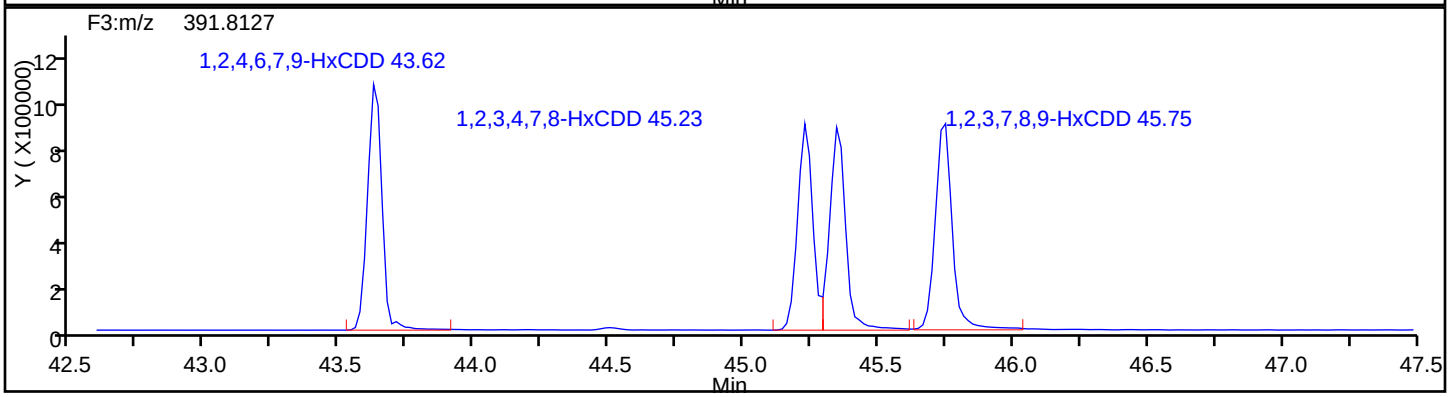
TestAmerica Knoxville

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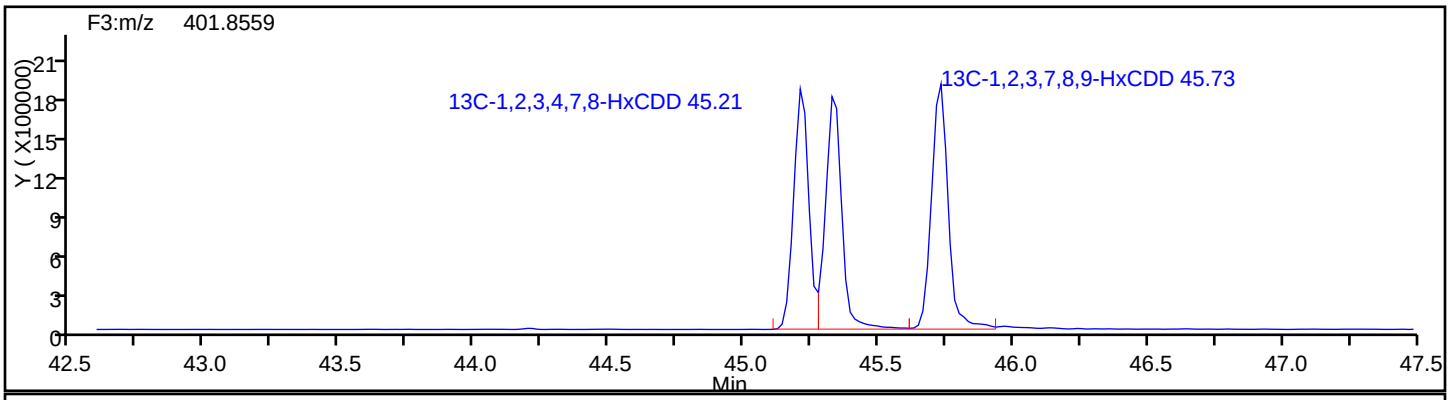
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
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| Column Type: | | Column Dia: | |

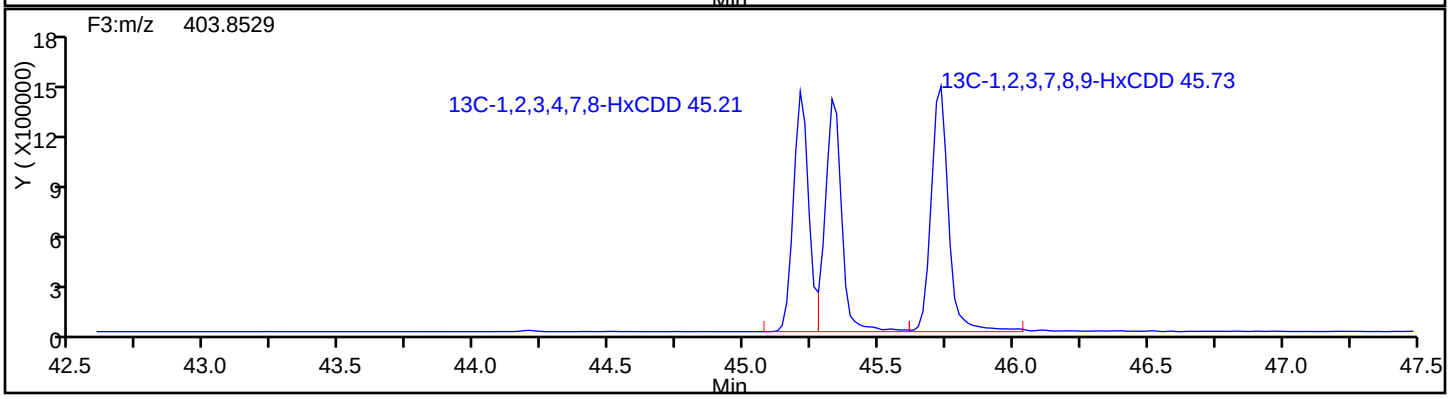
HxCDD




HxCDD Standards



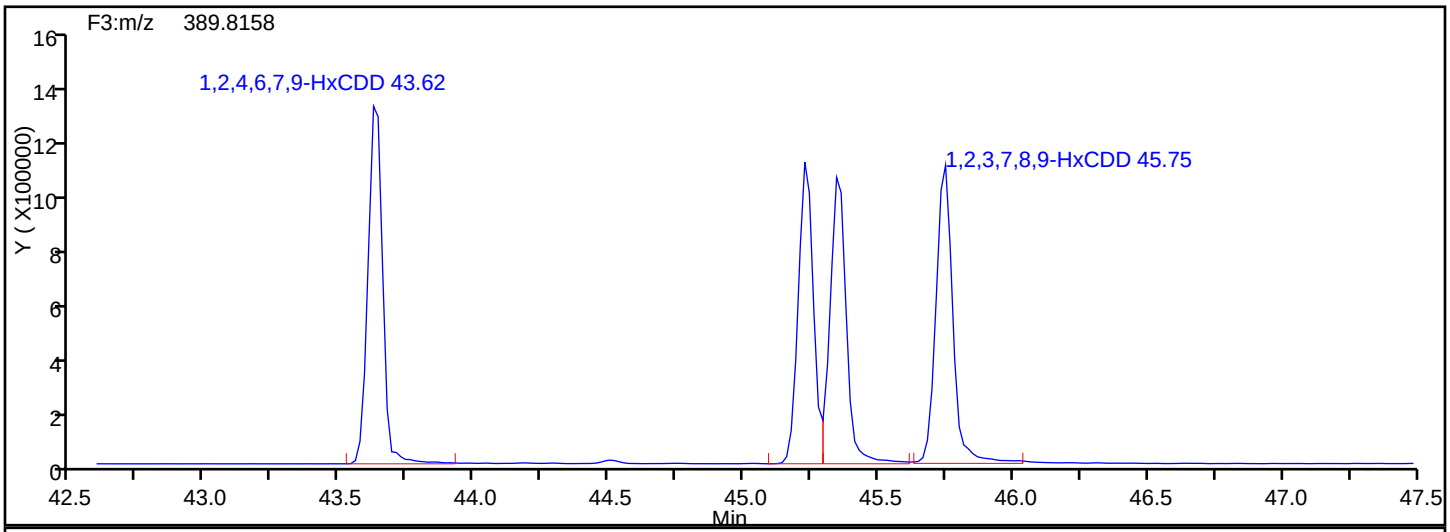
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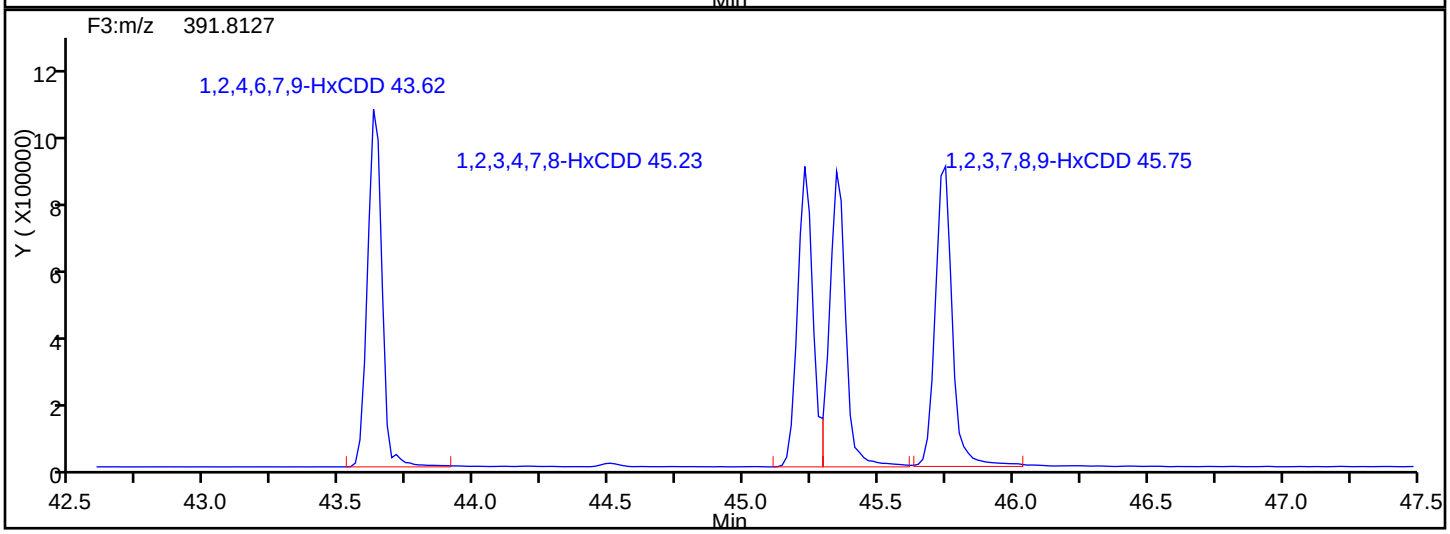
TestAmerica Knoxville

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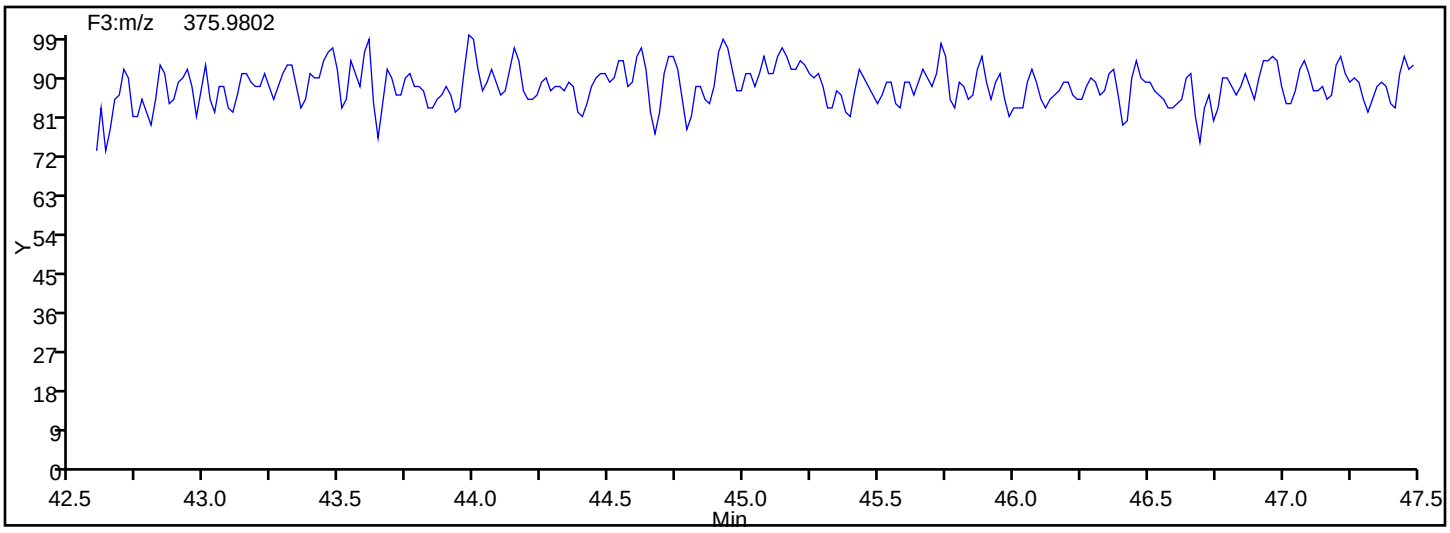
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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HxCDD




HxCDD Lock Mass



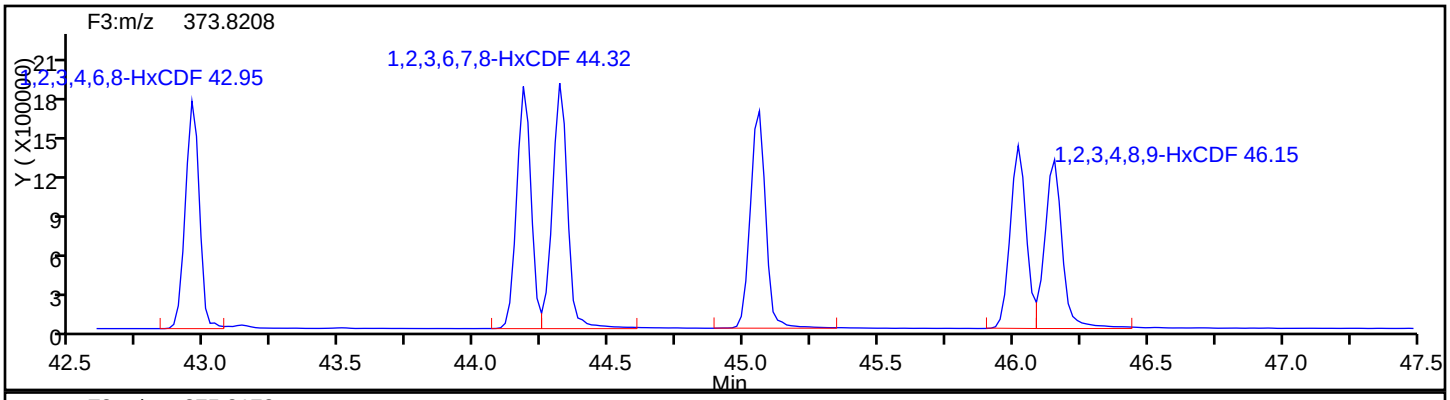
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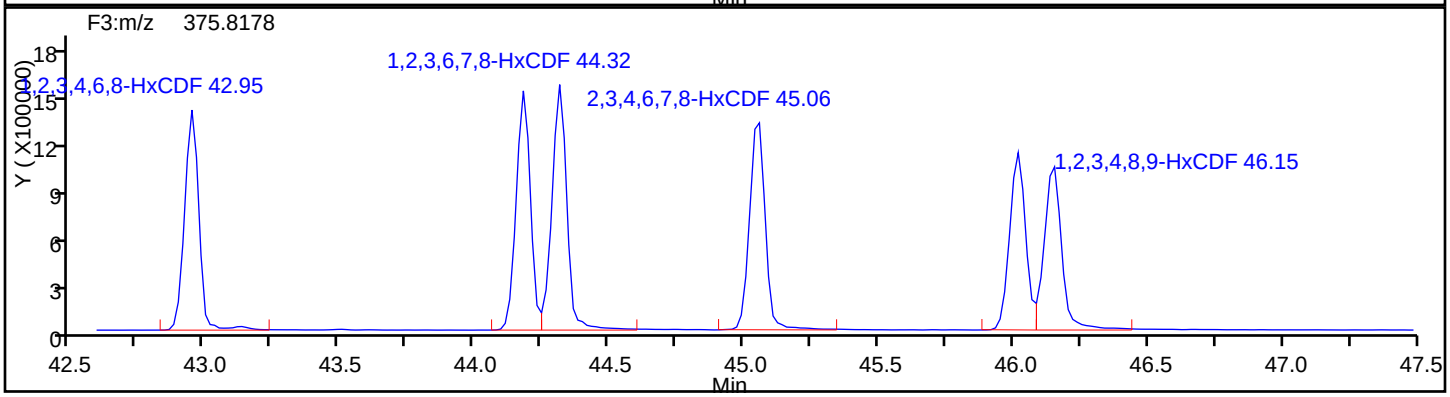
TestAmerica Knoxville

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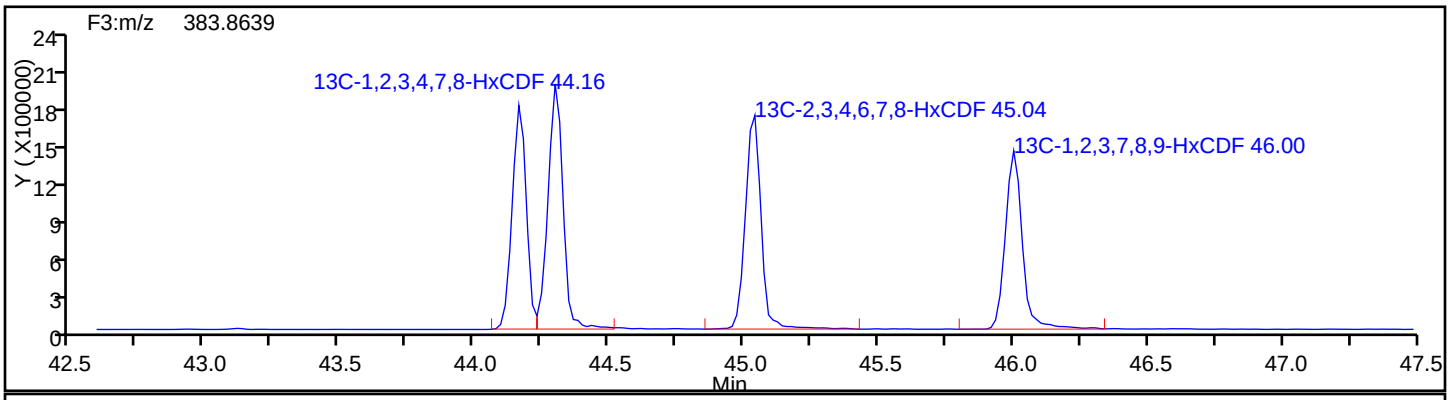
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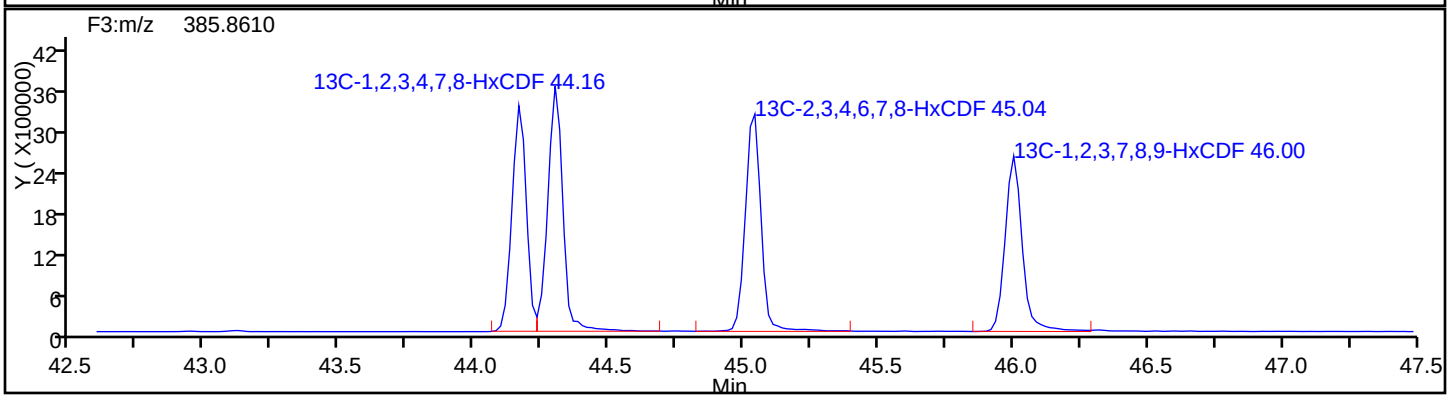
HxCDF




HxCDF Standards



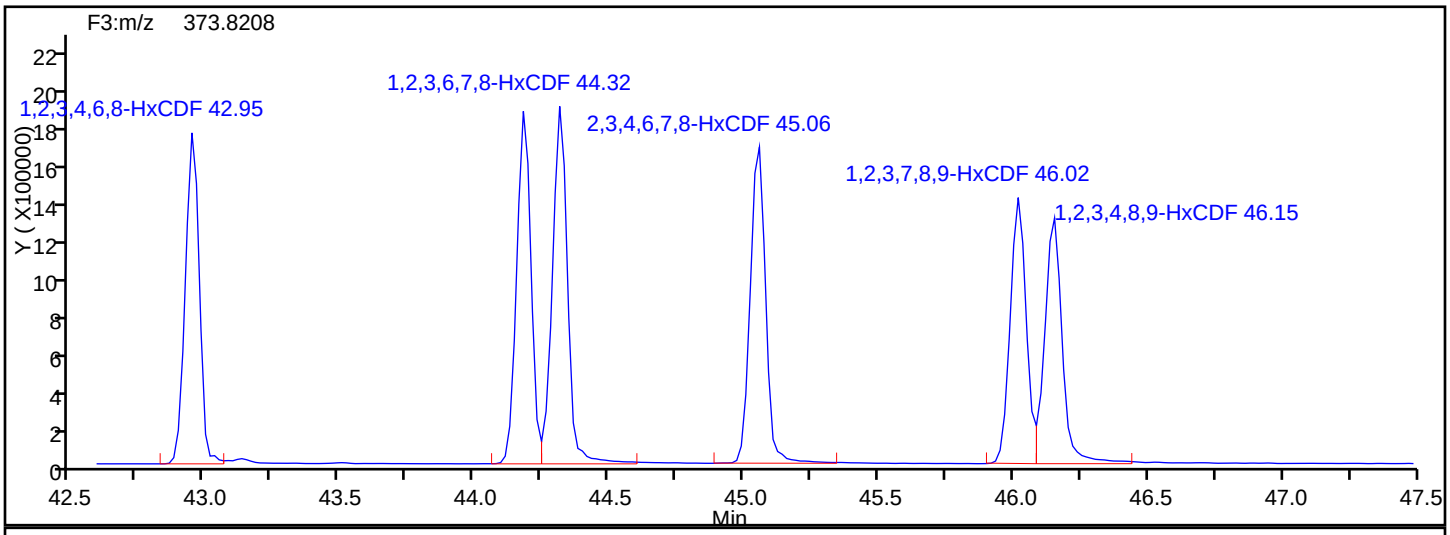
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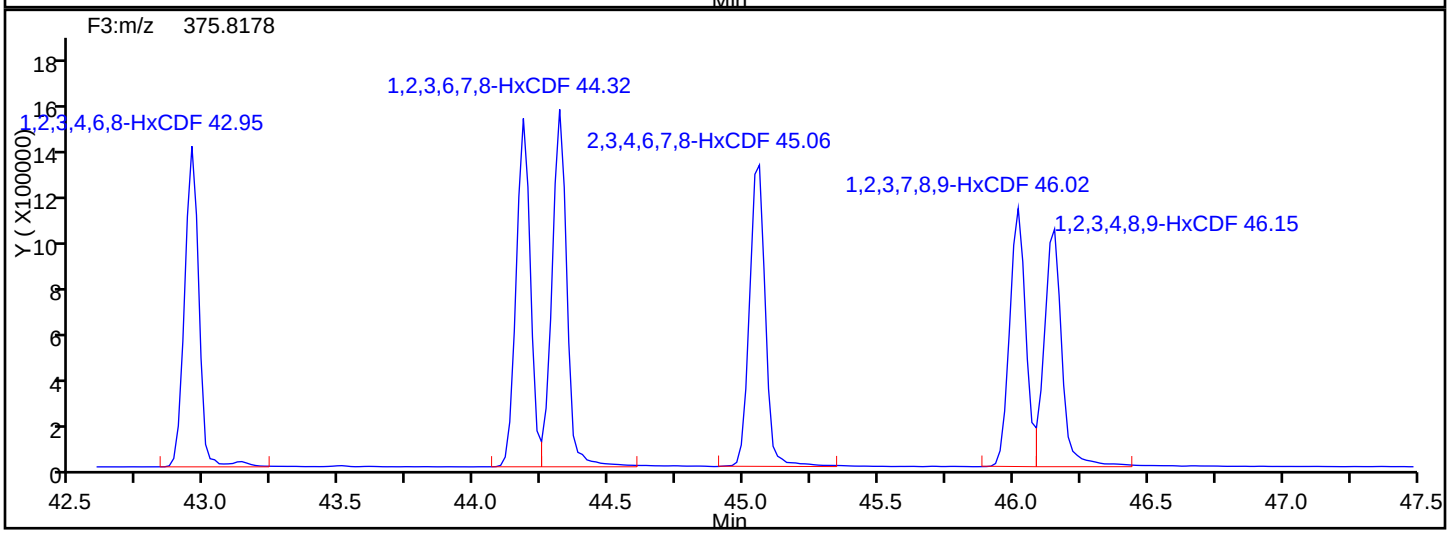
TestAmerica Knoxville

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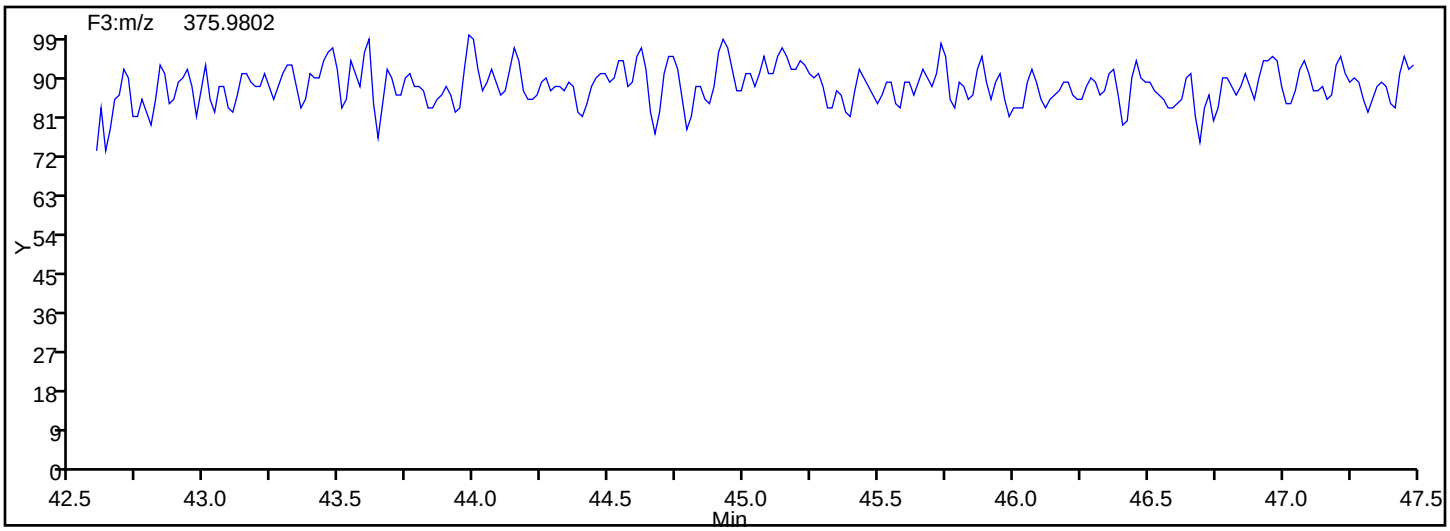
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| Column Type: | | Column Dia: | |

HxCDF




HxCDF Lock Mass



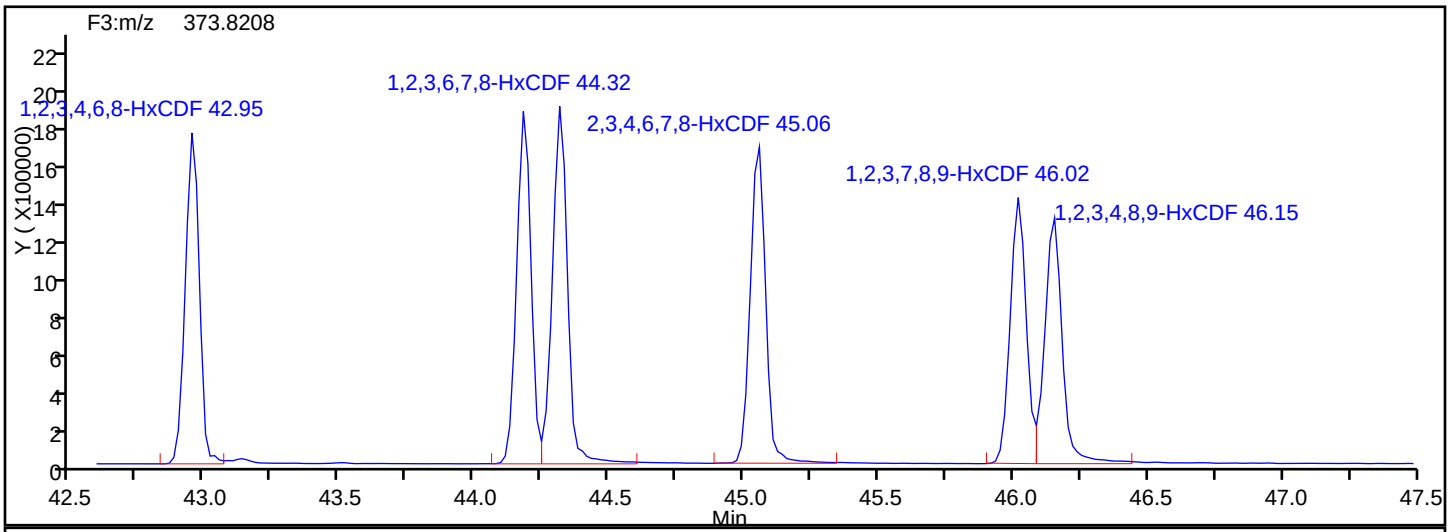
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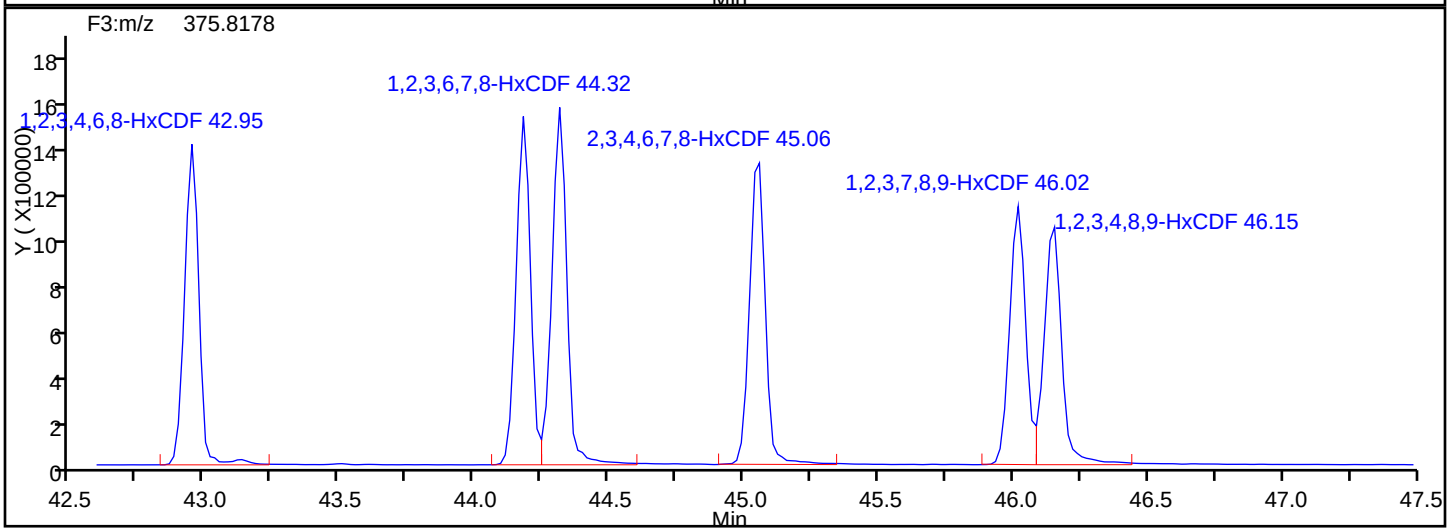
TestAmerica Knoxville

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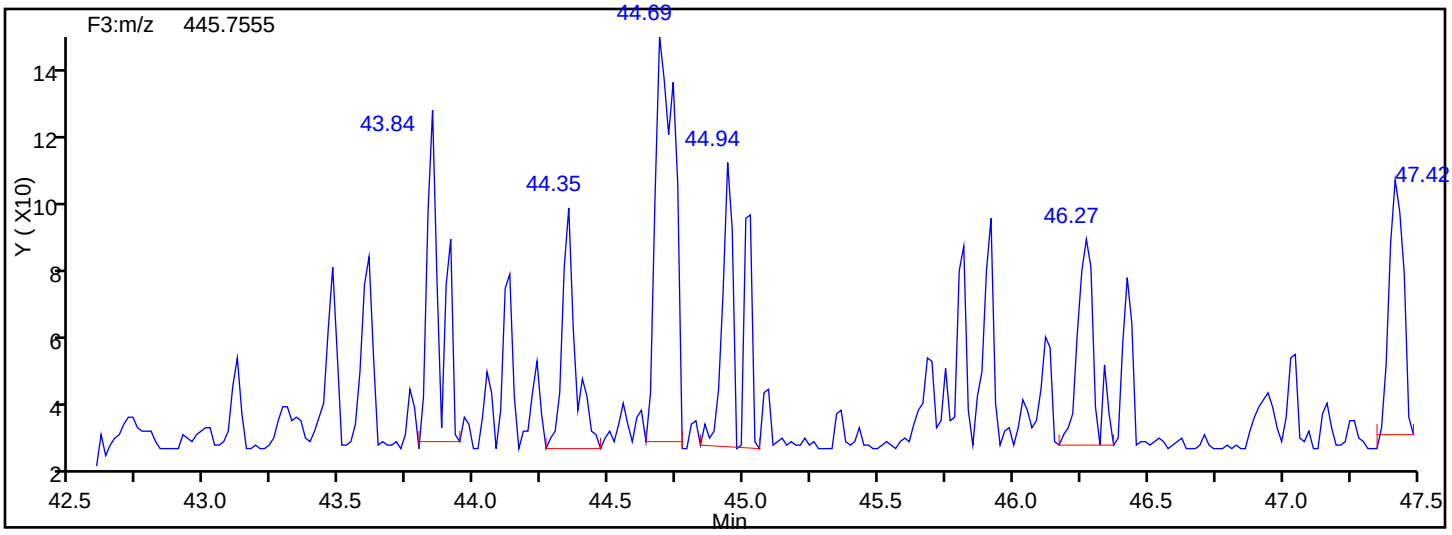
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Worklist#: | 7768 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

HxCDF




HxCDF Interference Mass



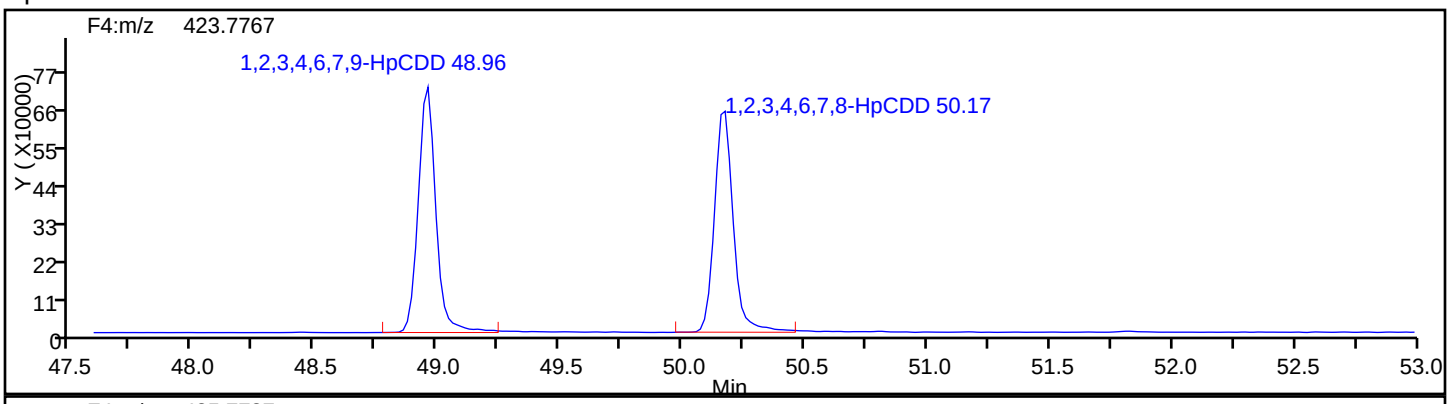
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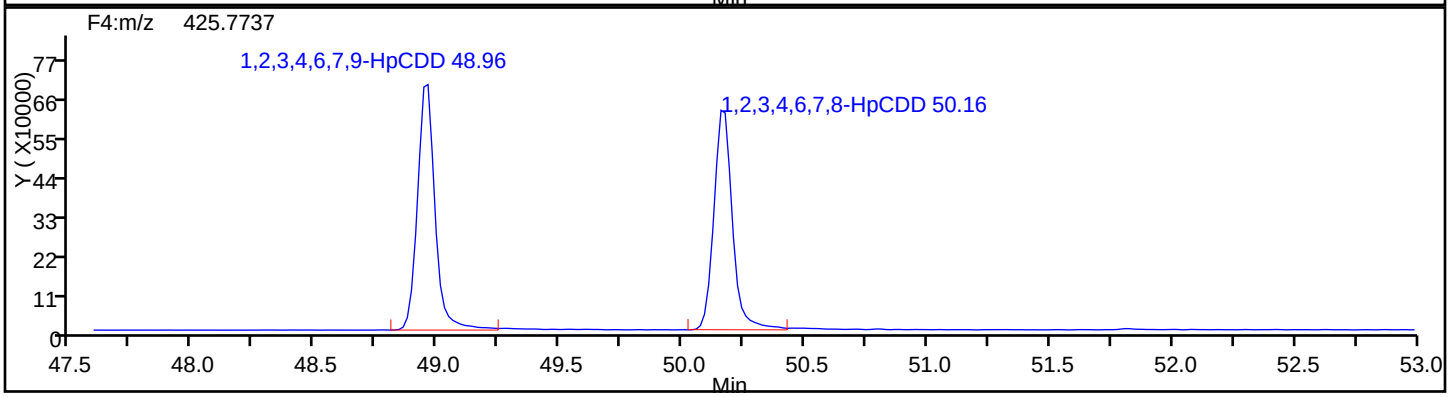
TestAmerica Knoxville

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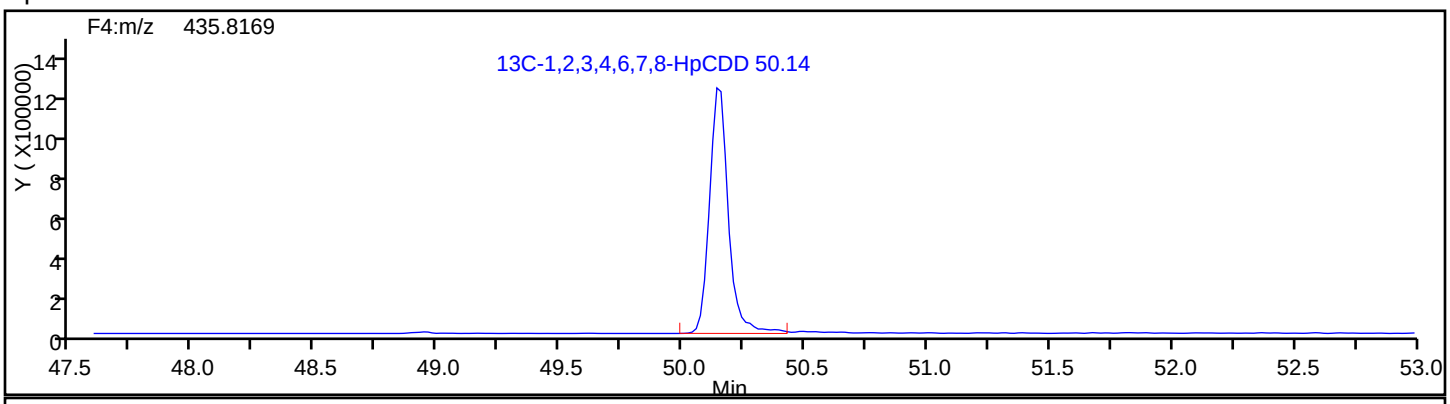
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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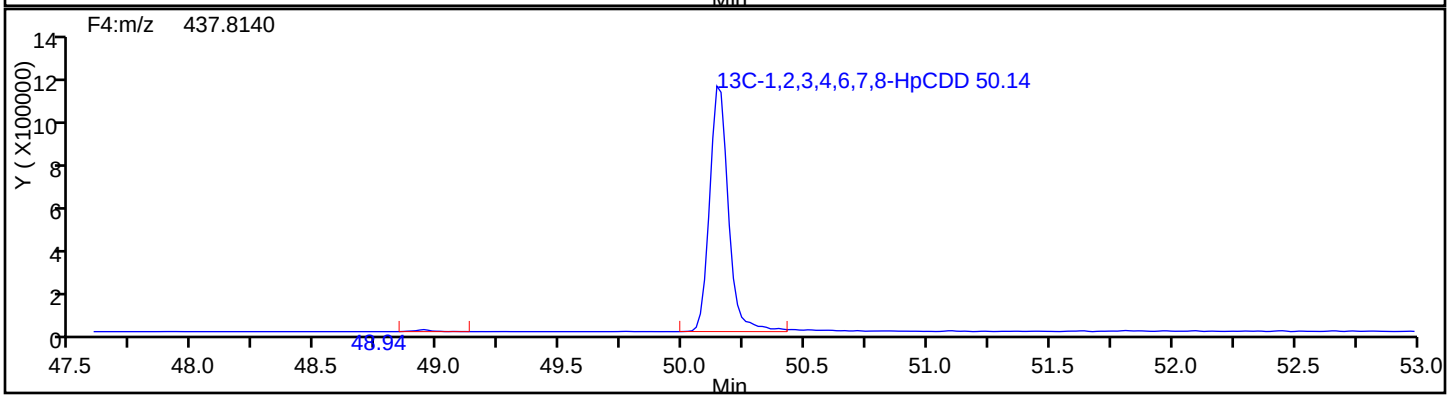
HpCDD




HpCDD Standards



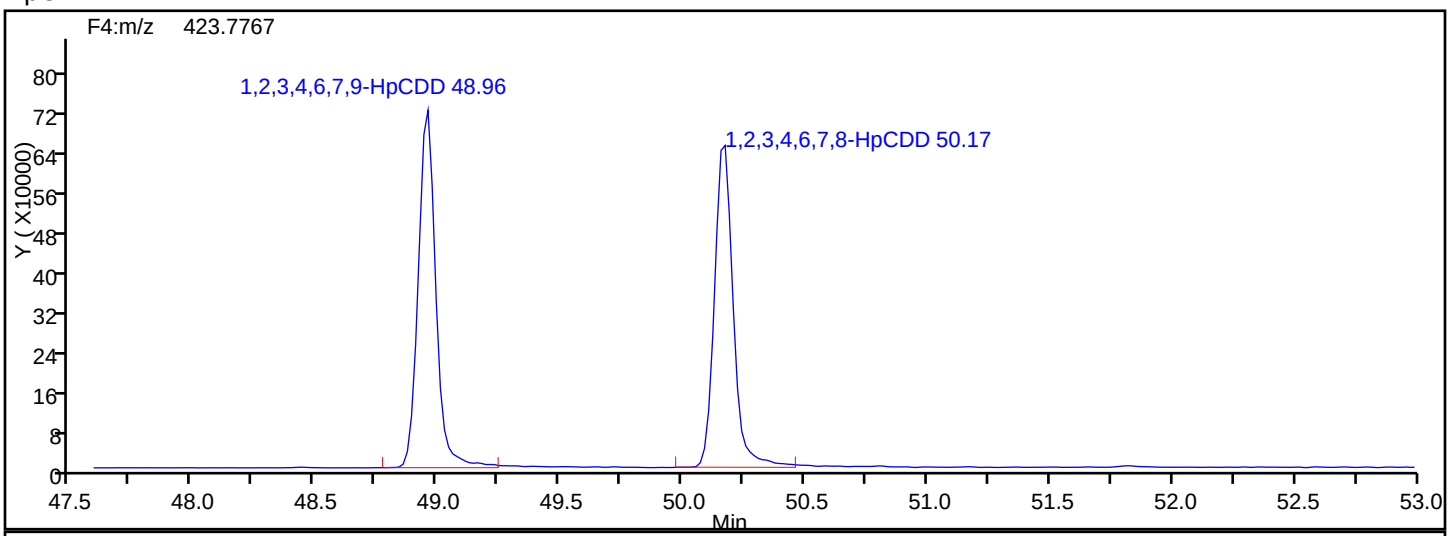
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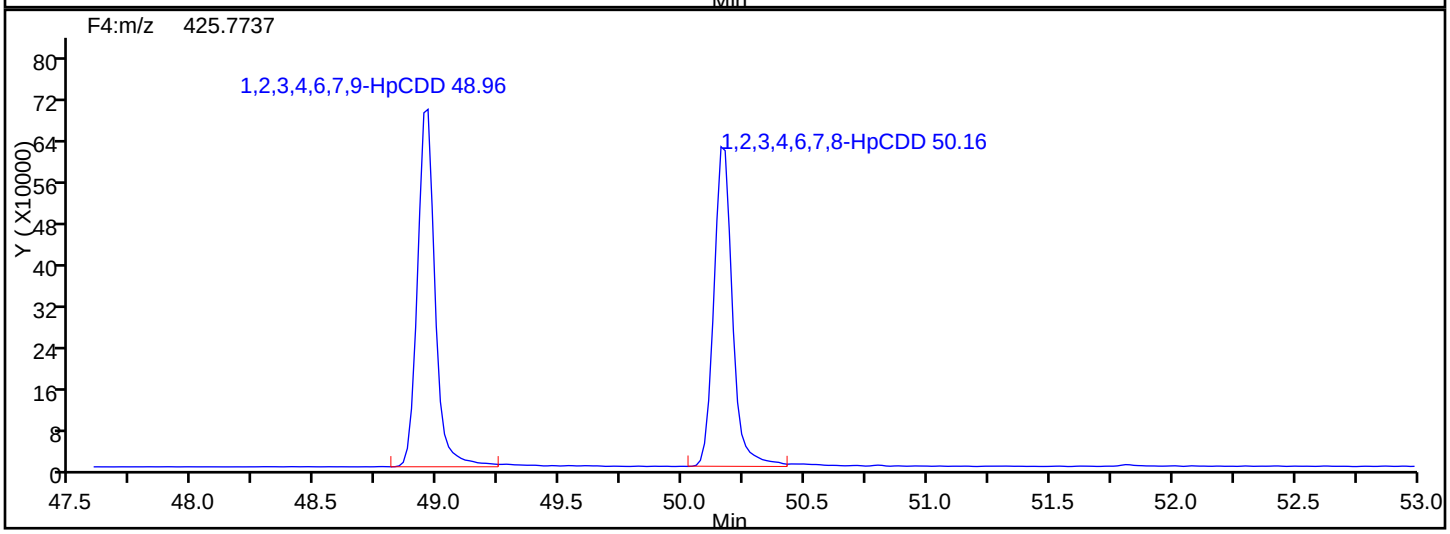
TestAmerica Knoxville

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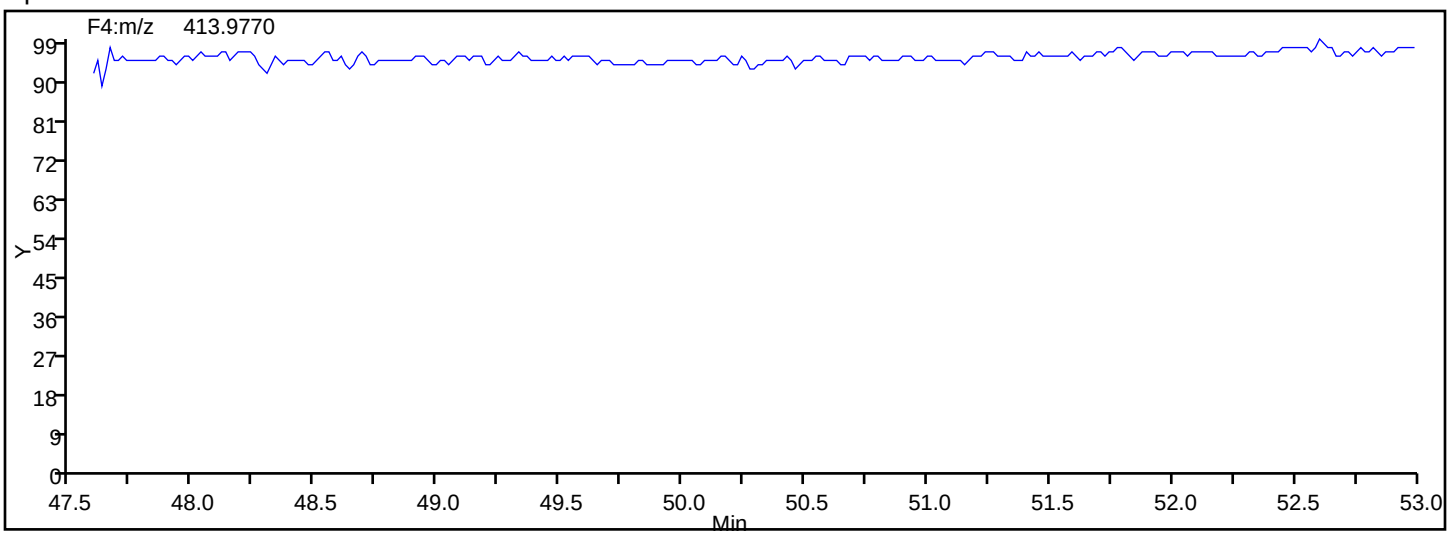
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HpCDD




HpCDD Lock Mass



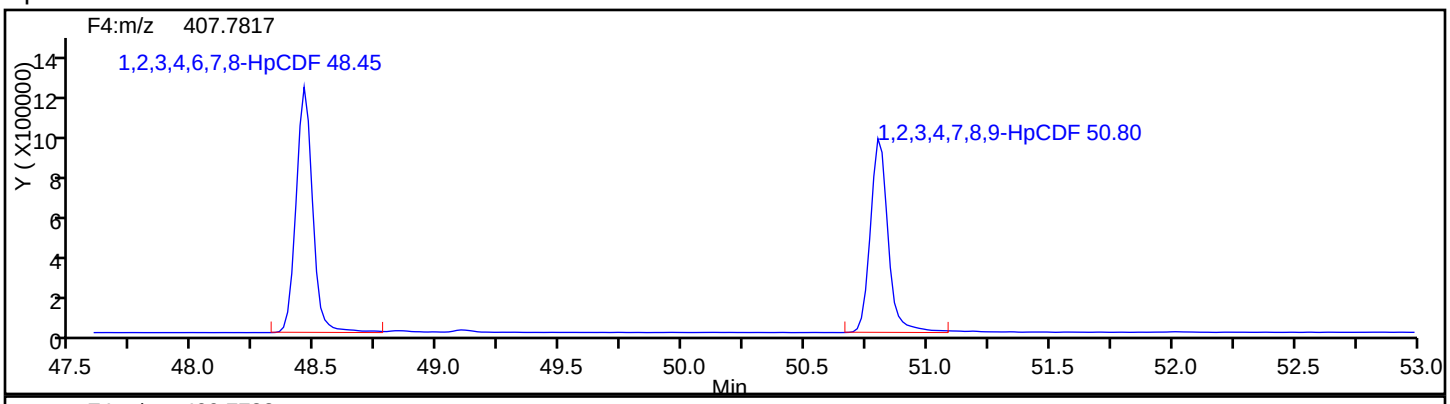
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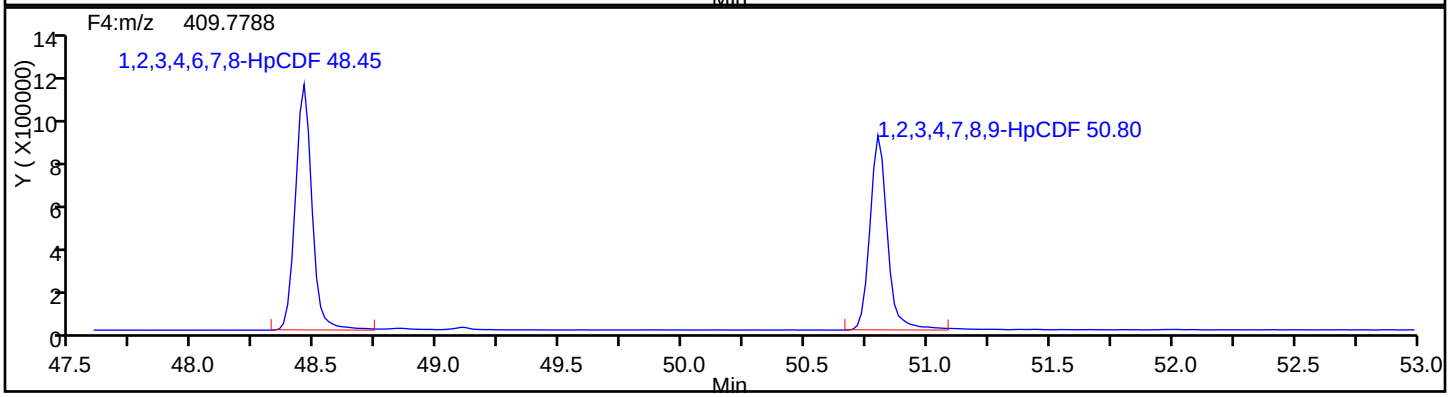
TestAmerica Knoxville

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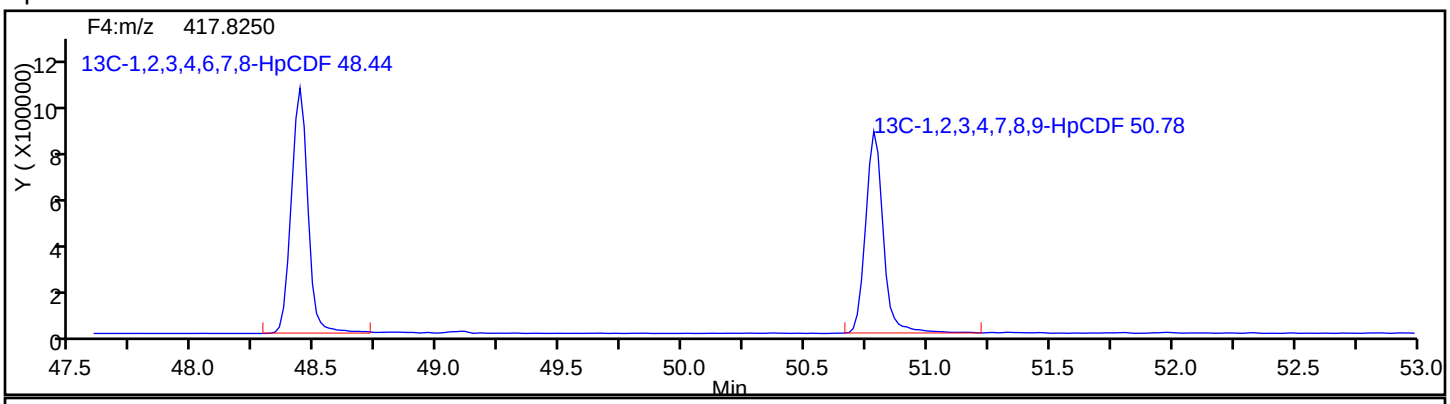
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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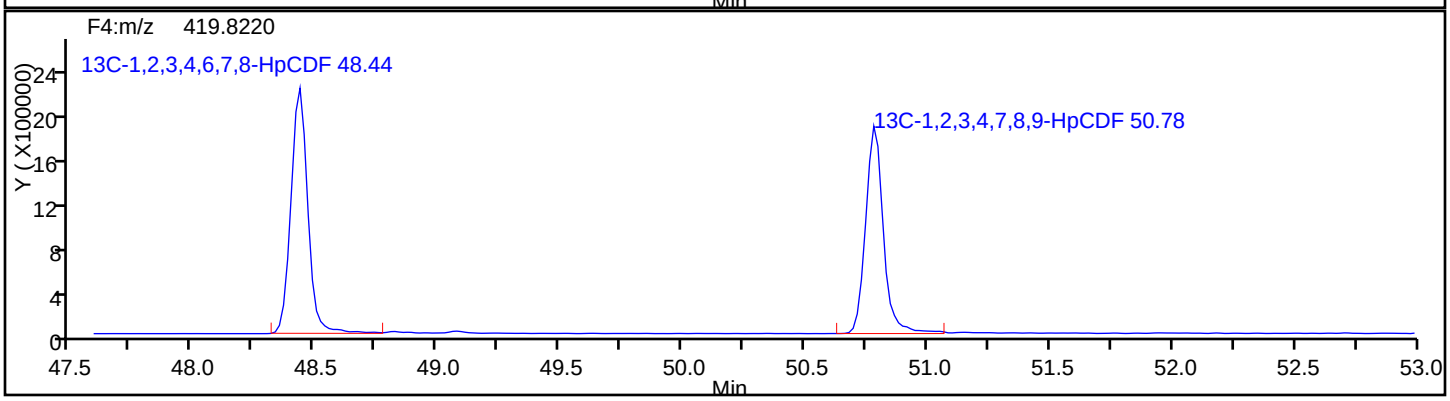
HpCDF




HpCDF Standards



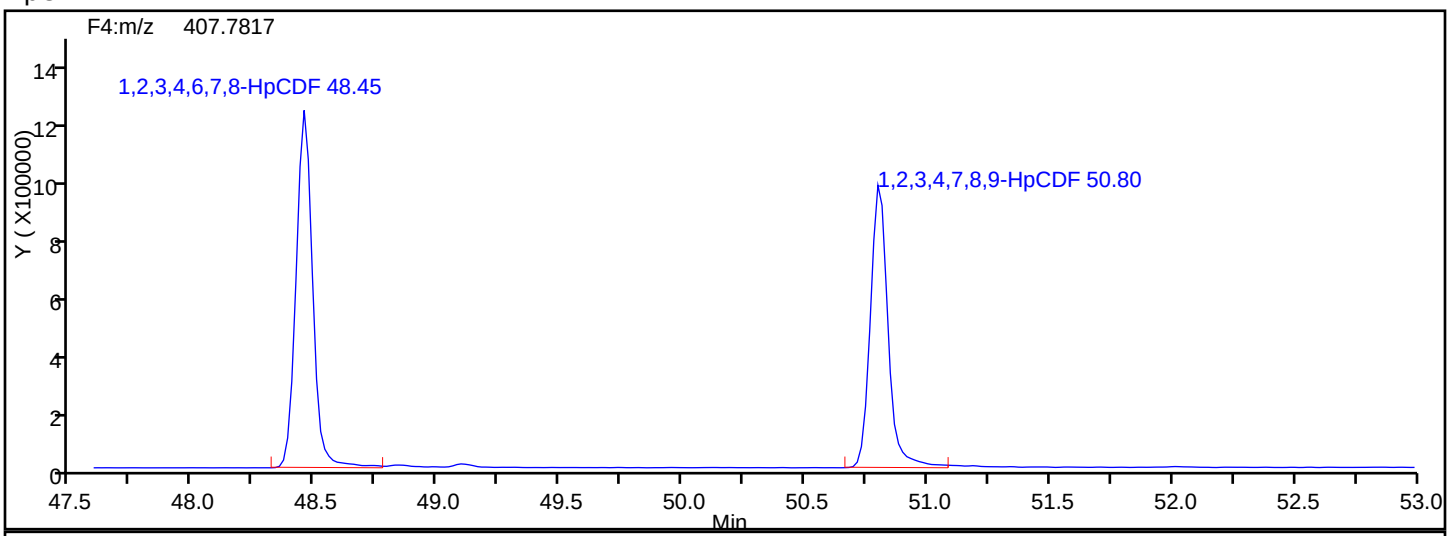
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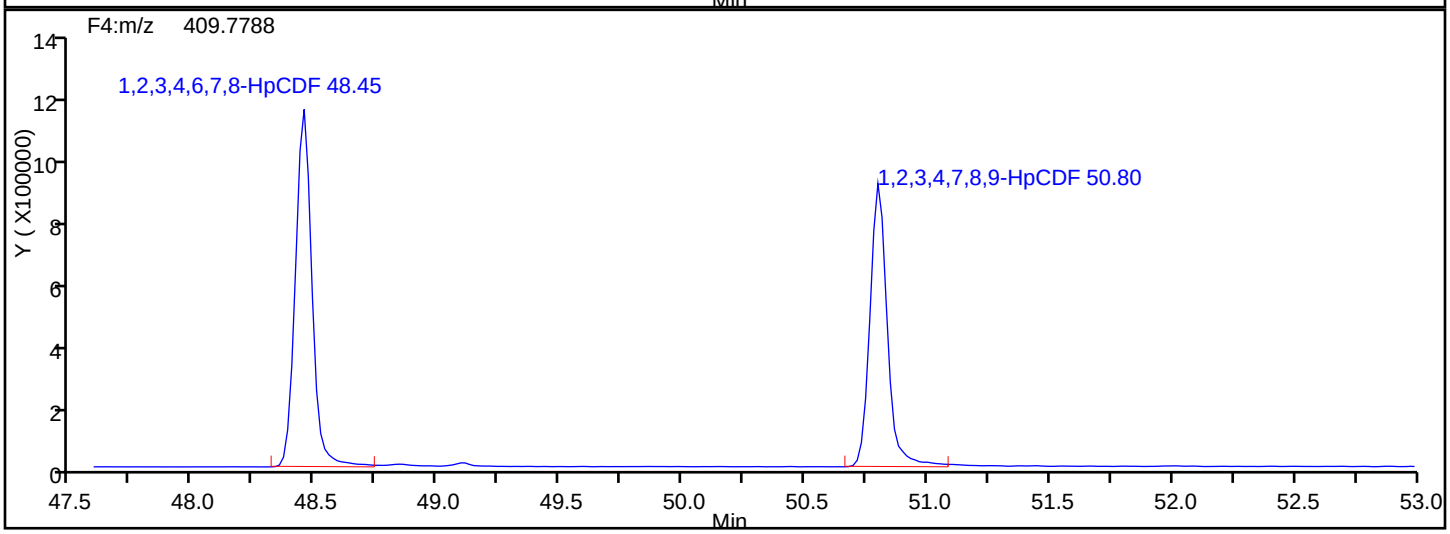
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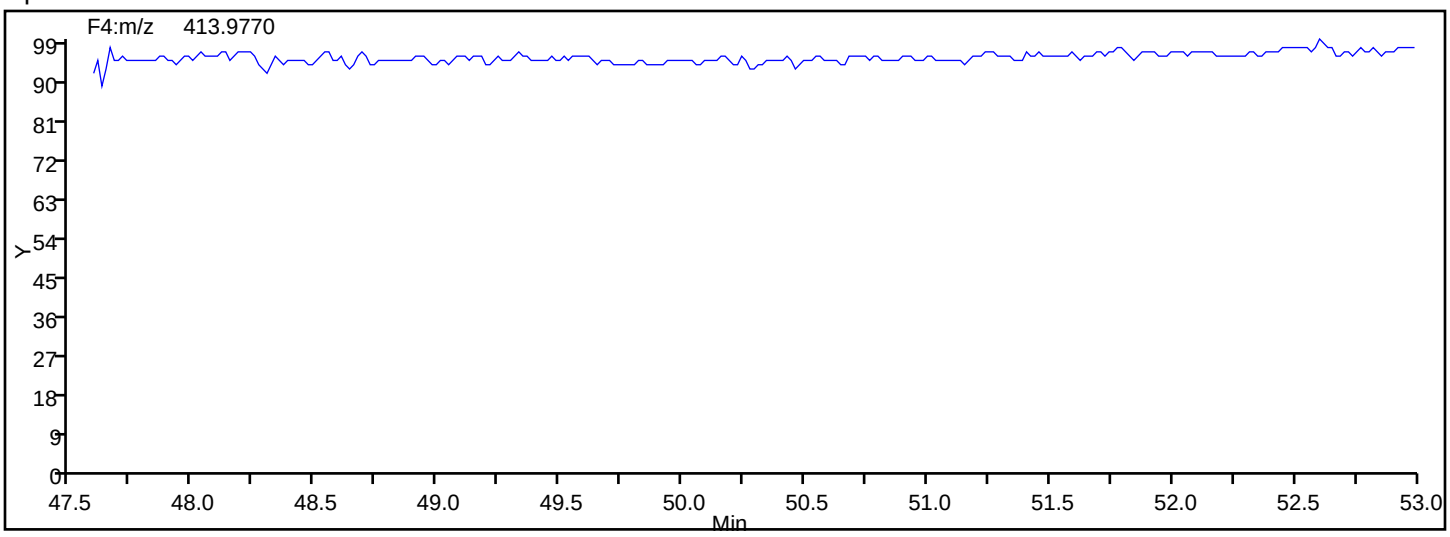
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| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Worklist#: | 7768 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

HpCDF




HpCDF Lock Mass



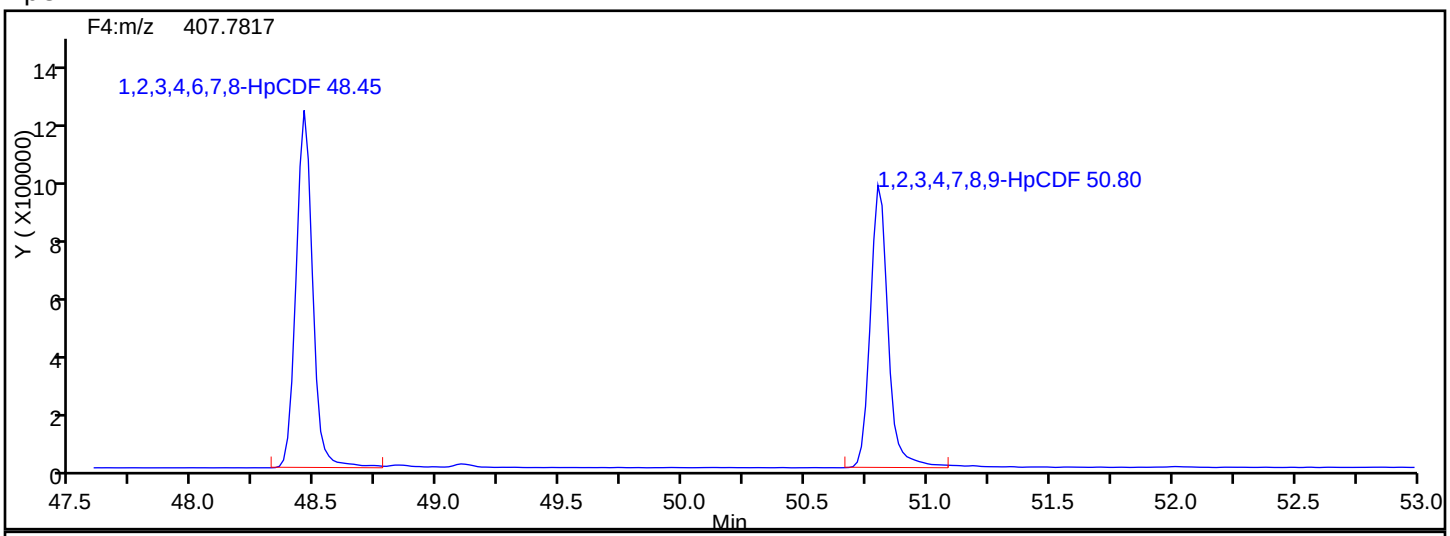
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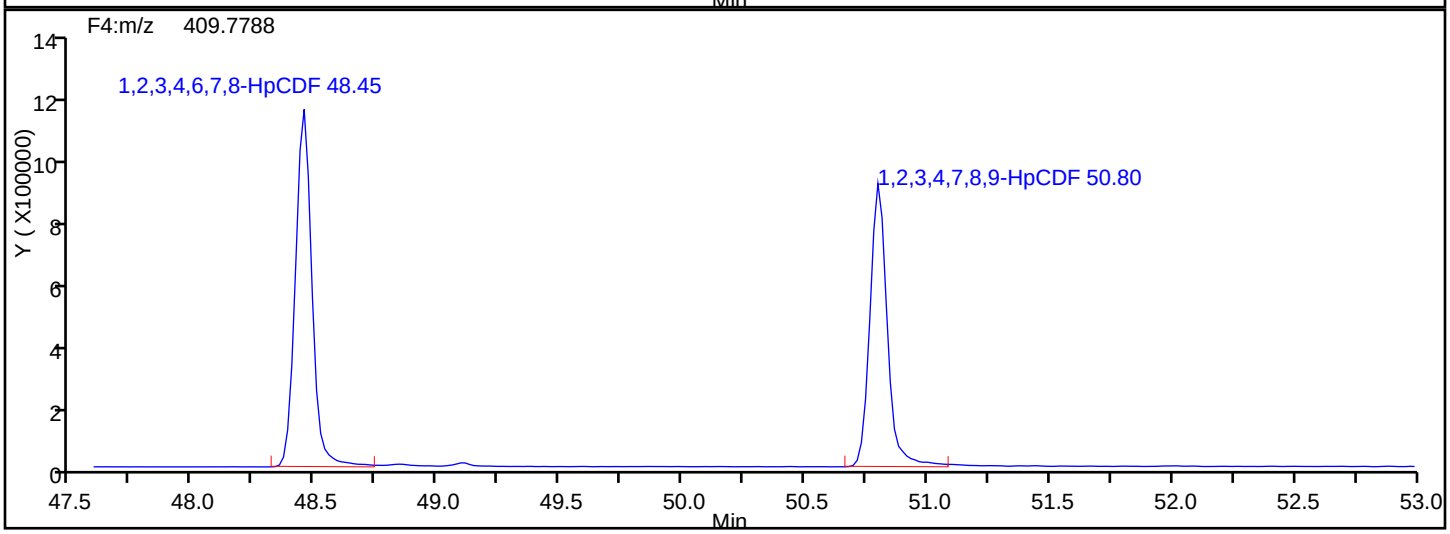
TestAmerica Knoxville

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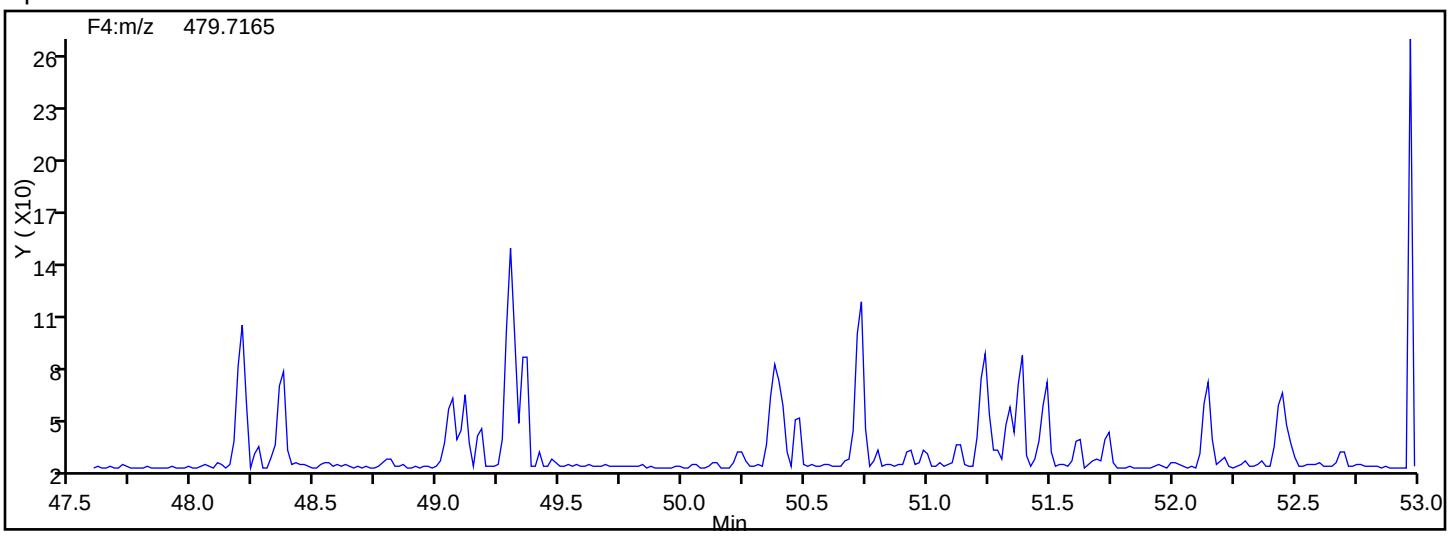
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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| Worklist#: | 7768 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

HpCDF




HpCDF Interference Mass



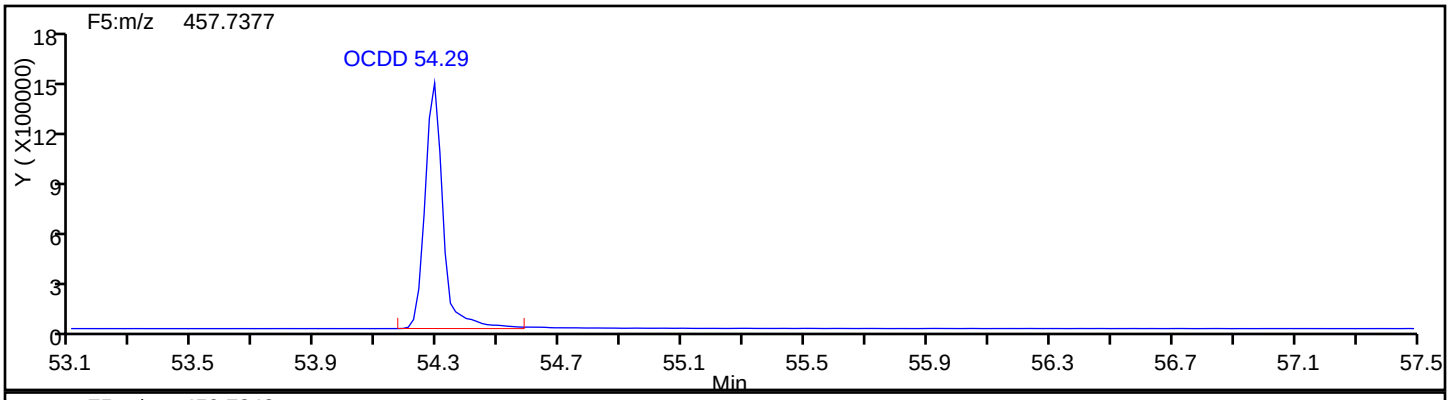
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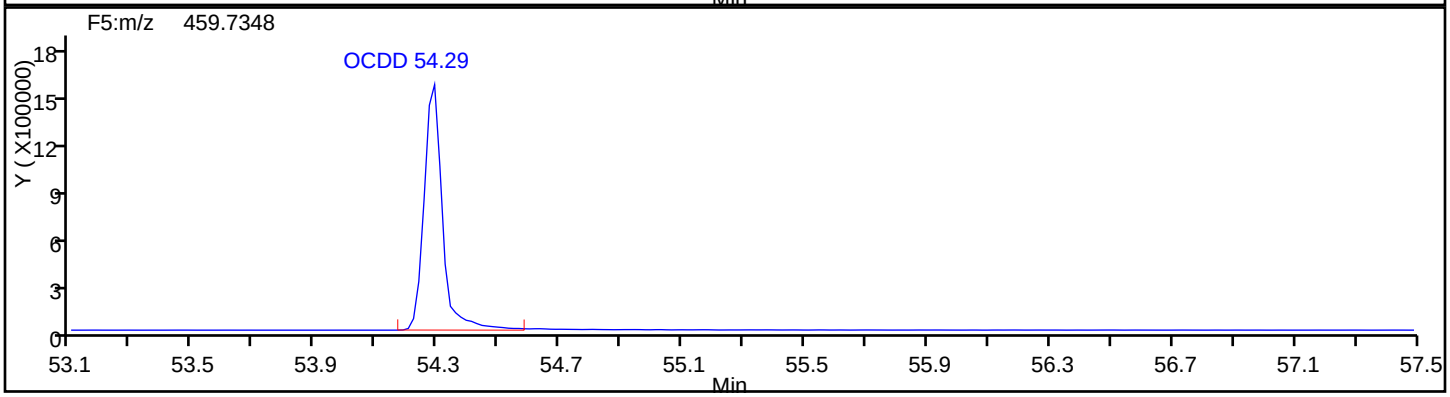
TestAmerica Knoxville

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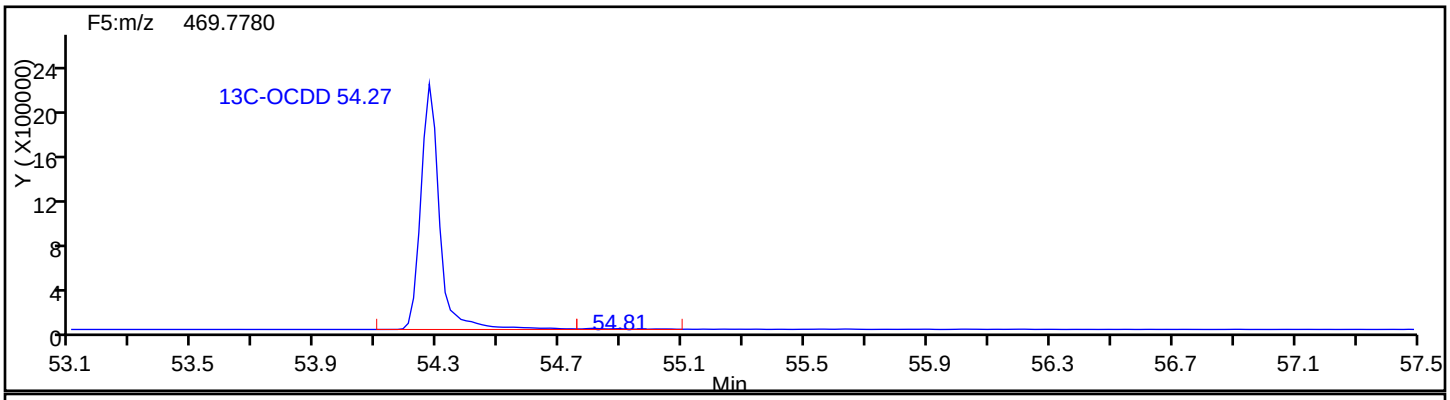
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| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
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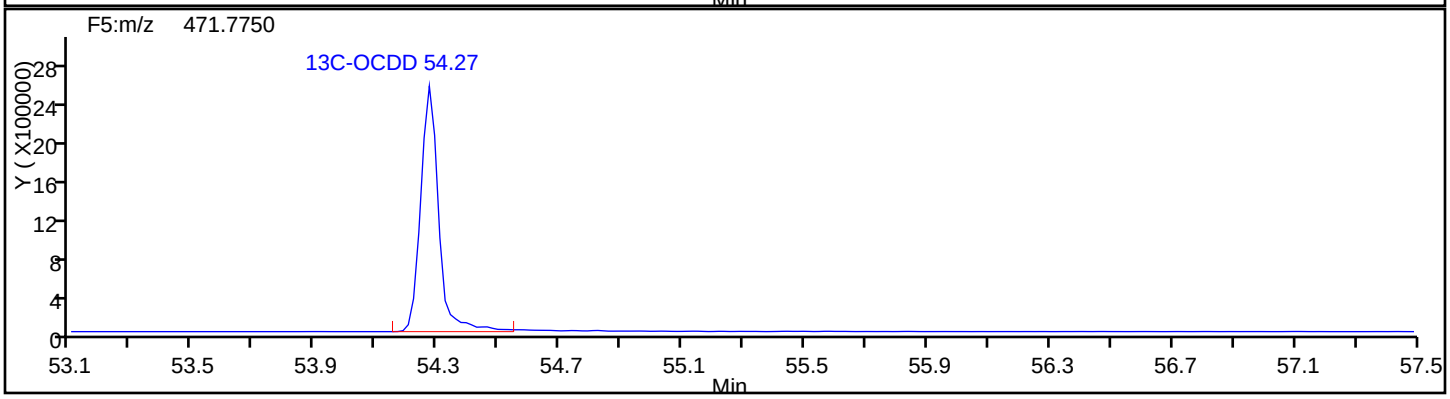
OCDD




OCDD Standards



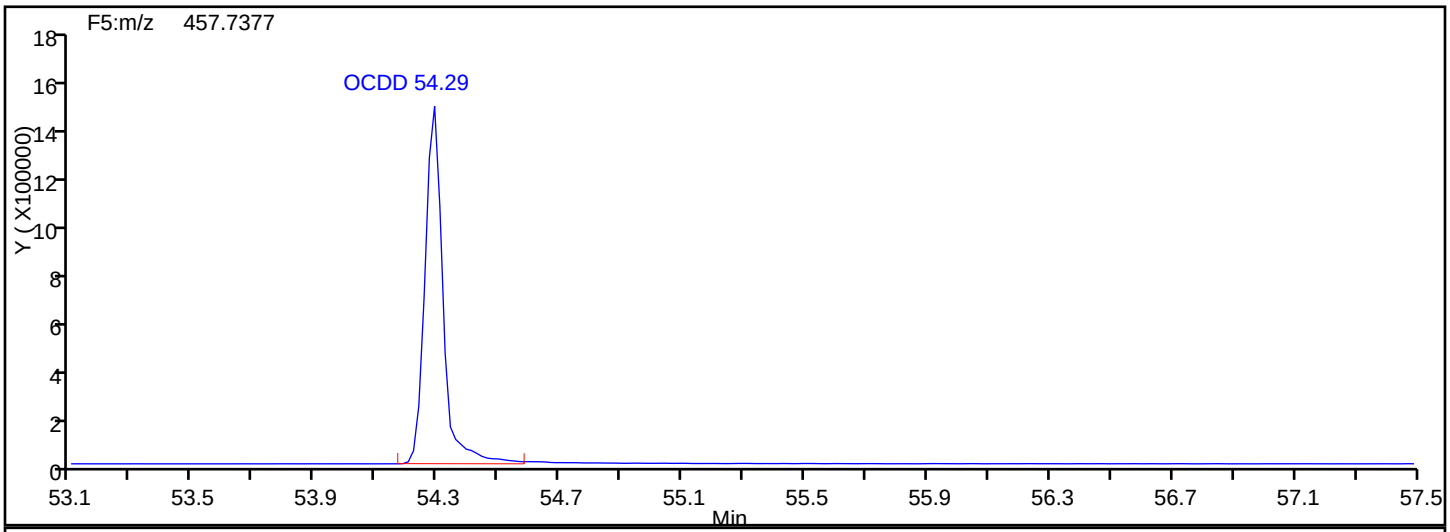
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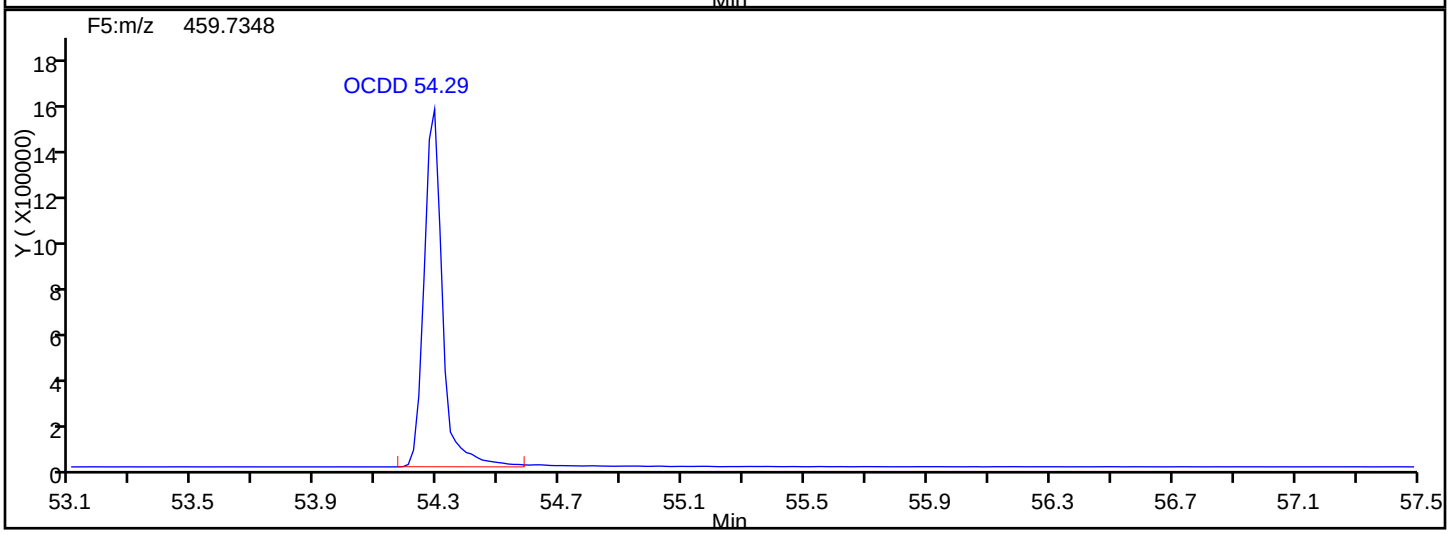
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516w1.d

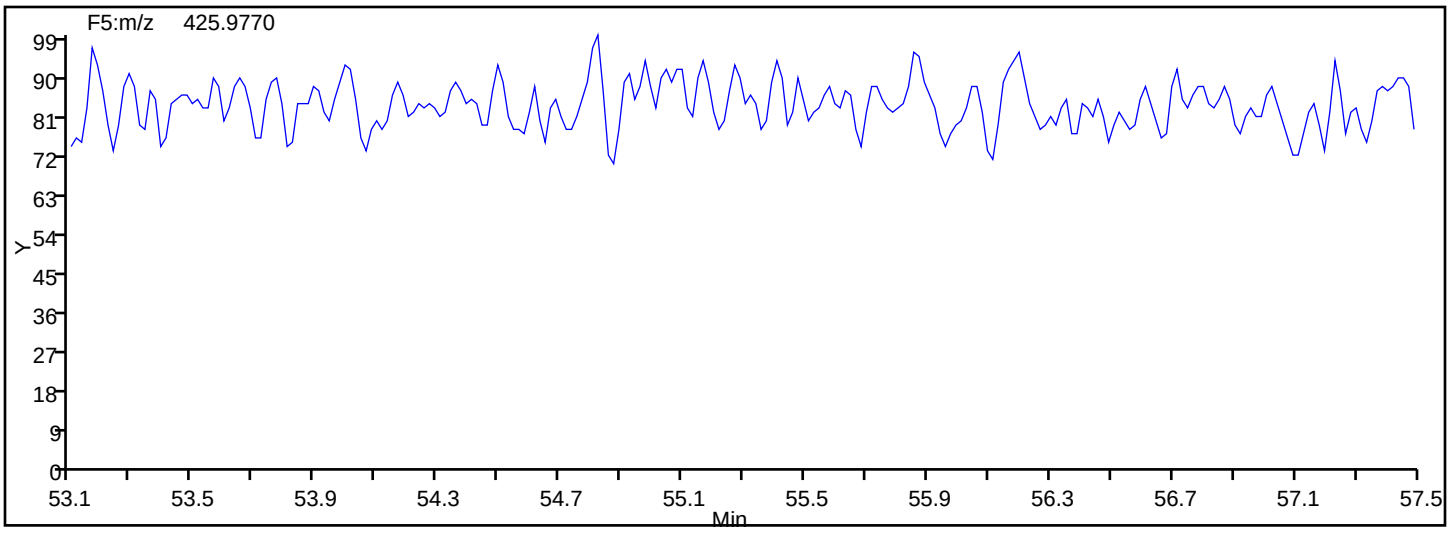
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 10:23:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

OCDD




OCDD Lock Mass



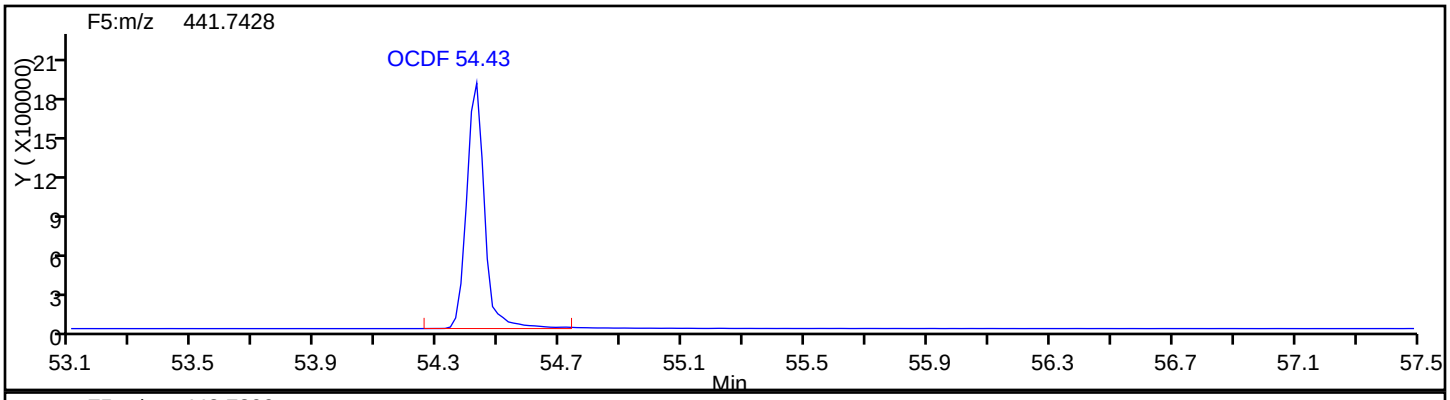
Report Date: 01-Feb-2017 12:19:18 Chrom Revision: 2.2 30-Jan-2017 14:50:44

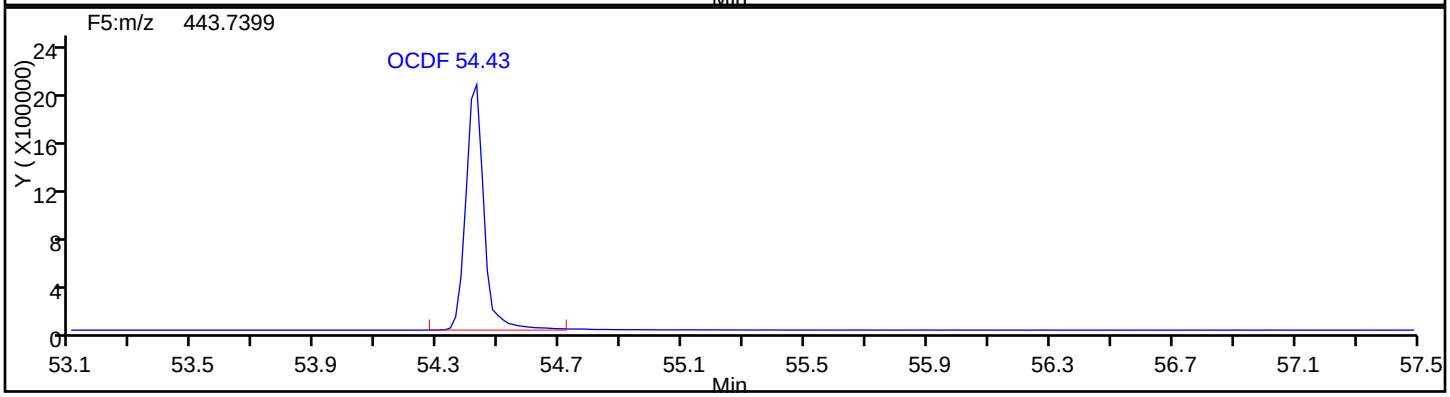
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516w1.d

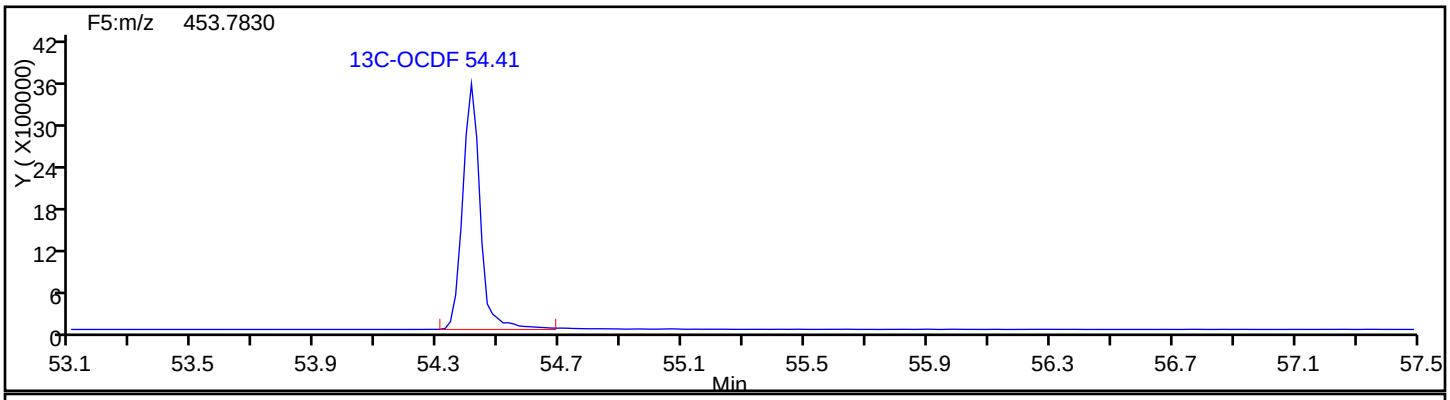
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 10:23:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

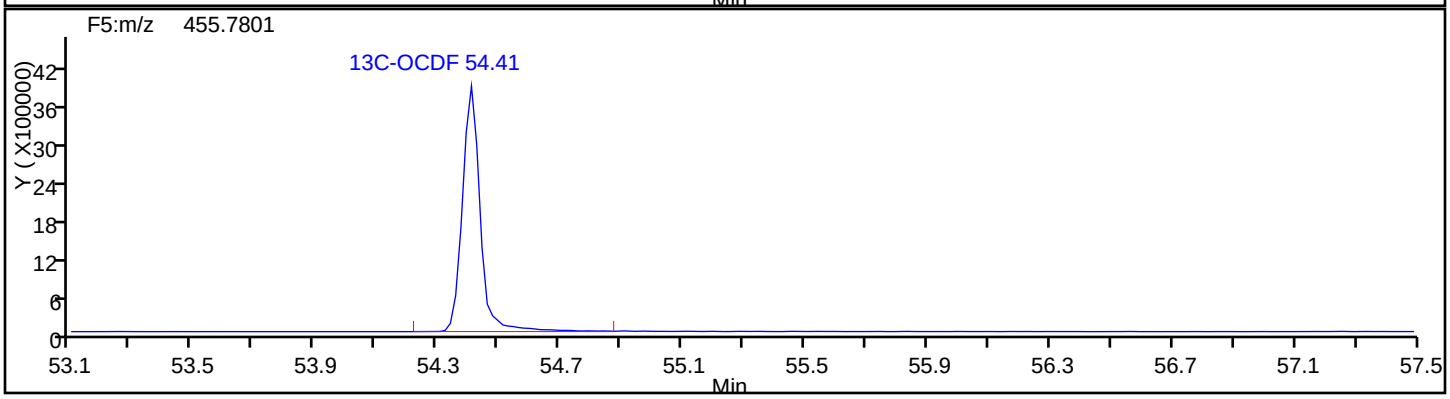
OCDF




OCDF Standards



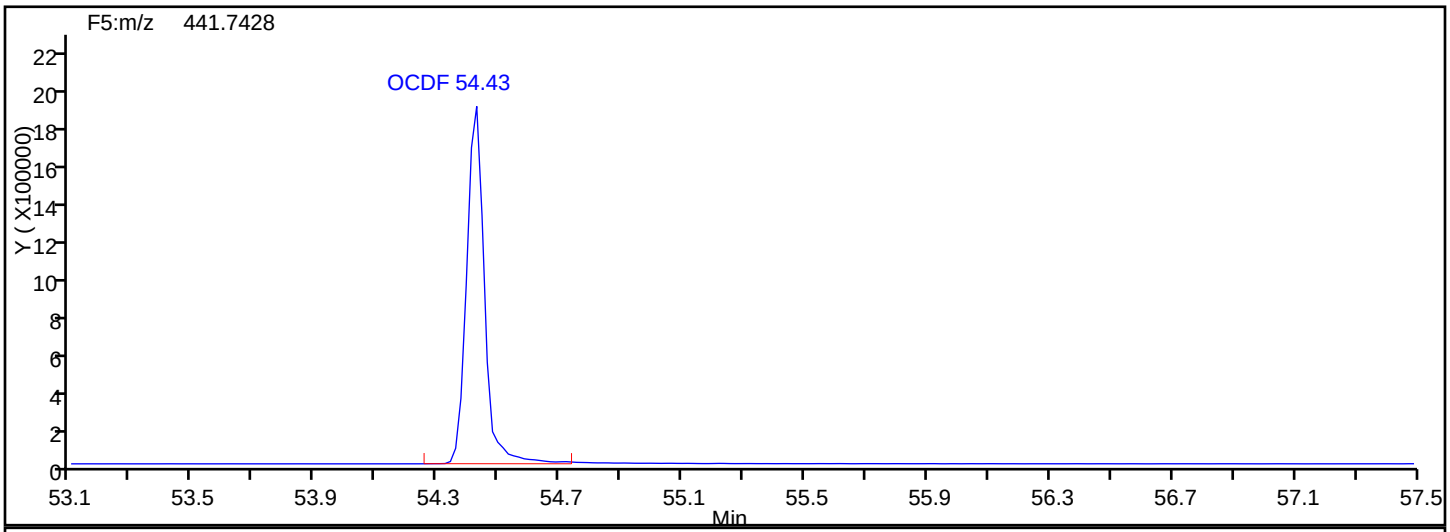
Report Date: 01-Feb-2017 12:19:18 Chrom Revision: 2.2 30-Jan-2017 14:50:44

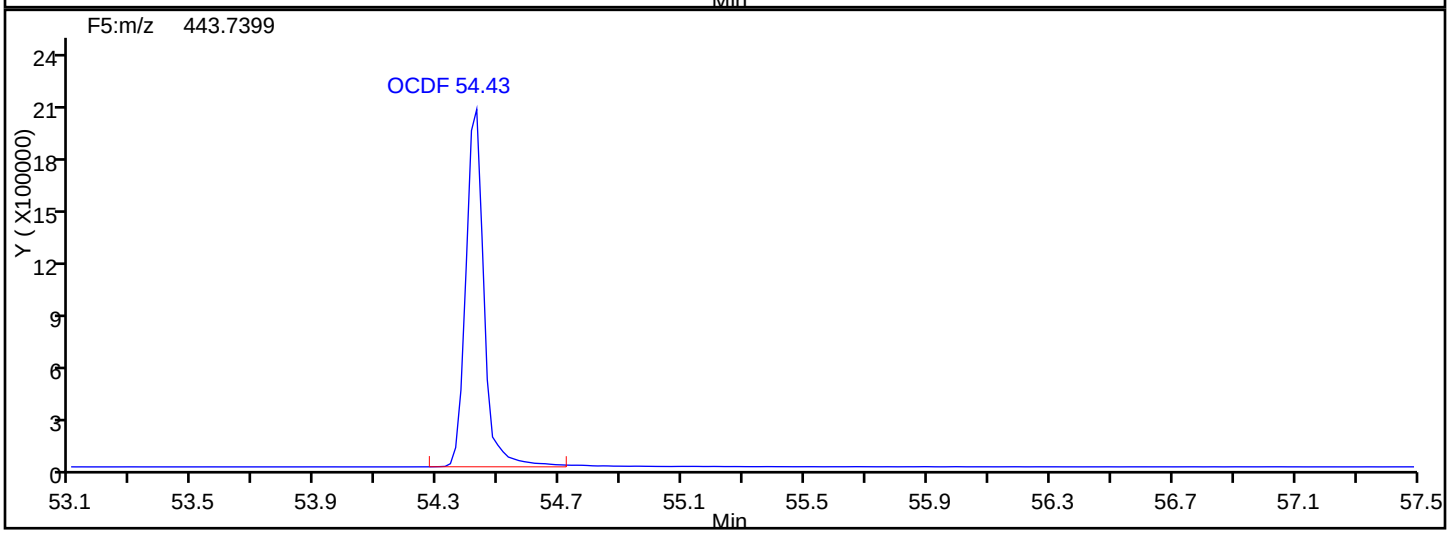
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516w1.d

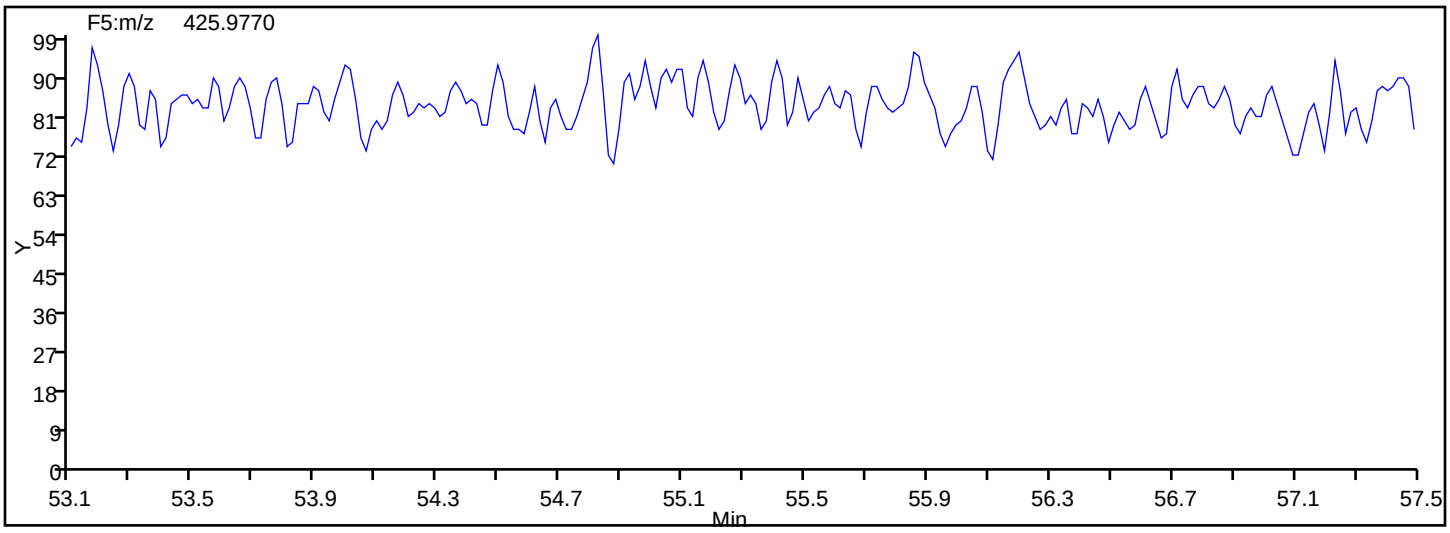
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 10:23:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Lock Mass



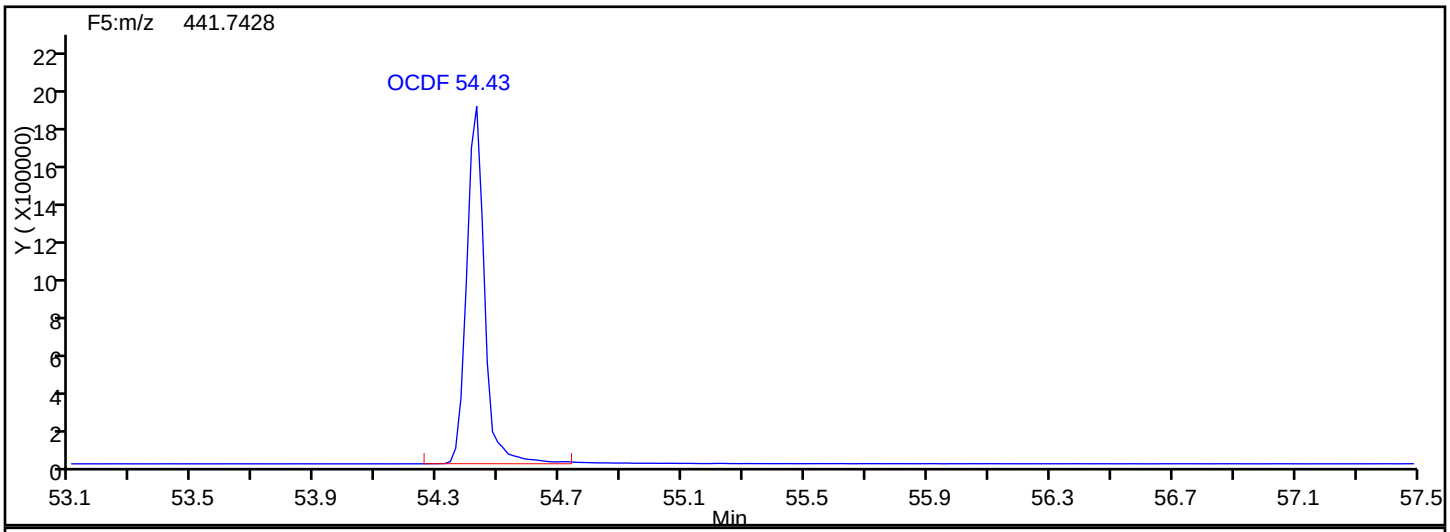
Report Date: 01-Feb-2017 12:19:18 Chrom Revision: 2.2 30-Jan-2017 14:50:44

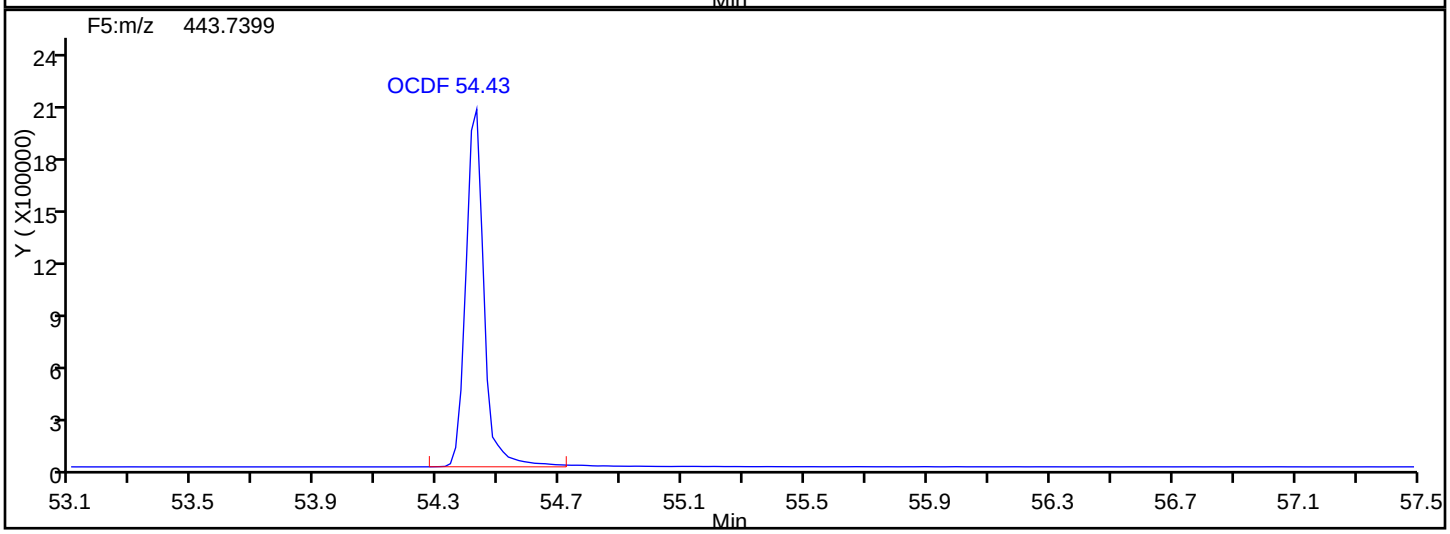
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516w1.d

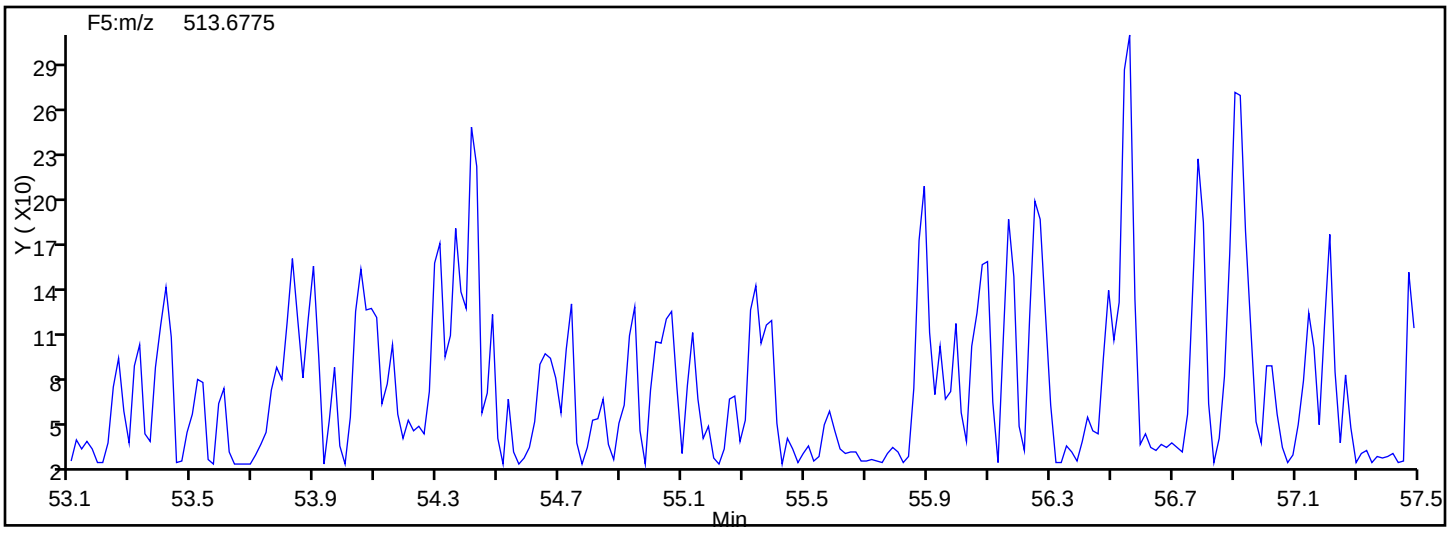
| | | | |
|---|---|---|---|
| Injection Date: | 16-May-2014 10:23:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | DavidsonM |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 7768 | Sample Line#: | 1 |
| Column Type: | | Column Dia: | |

OCDF




OCDF Interference Mass



FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-27087/10-A

Matrix: Water | Lab File ID: MB140-270884-Aa.d

Analysis Method: 1613B | Date Collected:

Extract. Method: HRMS-Sepf | Date Extracted: 01/22/2019 13:19

Sample wt/vol: 1000(mL) | Date Analyzed: 01/28/2019 03:56

Con. Extract Vol.: 20(uL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 27191 | Units: pg/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | EDL |
|---|---|---|---|---|---|
| 1746-01-6 | 2,3,7,8-TCDD | 0.44 | U | 10 | 0.44 |

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| 76523-40-5 | 13C-2,3,7,8-TCDD | 84 | | 25-164 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 85508-50-5 | 37Cl4-2,3,7,8-TCDD | 97 | | 35-197 |

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\MB140-270884-Aa.d
Lims ID: MB 140-27087/10-A
Client ID:
Sample Type: MB
Inject. Date: 28-Jan-2019 03:56:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010654-008
Operator ID: Xcalibur_System Instrument ID: D2A

Method: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 28-Jan-2019 08:40:18 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX1016

First Level Reviewer: davidsonm Date: 28-Jan-2019 08:40:18

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 31:00 | | | | | | 0.0220 | 0.0220 | | |
| A Non-2,3,7,8-sub-TCDD | 29:38 | | | | | | 0.0220 | 0.0220 | | |
| S Total TCDD | | | | | | | 0.0220 | 0.0220 | | |
| 2,3,7,8-TCDF | 29:00 | | | | | | 0.0100 | 0.0100 | | |
| A Non-2,3,7,8-sub-TCDF | 28:21 | | | | | | 0.0100 | 0.0100 | | |
| S Total TCDF | | | | | | | 0.0100 | 0.0100 | | |
| 1,2,3,7,8-PeCDD | 40:40 | | | | | | 0.0145 | 0.0145 | | |
| A Non-2,3,7,8-sub-PeCDD | 39:32 | | | | | | 0.0145 | 0.0145 | | |
| S Total PeCDD | | | | | | | 0.0145 | 0.0145 | | |
| 1,2,3,7,8-PeCDF | 38:53 | | | | | | 0.0167 | 0.0167 | | |
| 2,3,4,7,8-PeCDF | 40:08 | | | | | | 0.0161 | 0.0161 | | |
| A Non-2,3,7,8-sub-PeCDF | 38:08 | | | | | | 0.0164 | 0.0164 | | |
| S Total PeCDF | | | | | | | 0.0167 | 0.0167 | | |
| 1,2,3,4,7,8-HxCDD | 44:55 | | | | | | 0.0110 | 0.0110 | | |
| 1,2,3,6,7,8-HxCDD | 45:03 | | | | | | 0.0116 | 0.0116 | | |
| 1,2,3,7,8,9-HxCDD | 45:39 | | | | | | 0.0106 | 0.0106 | | RQU |
| A Non-2,3,7,8-sub-HxCDD | 44:24 | | | | | | 0.0110 | 0.0110 | | |
| S Total HxCDD | | | | | | | 0.0116 | 0.0116 | | |
| 1,2,3,4,7,8-HxCDF | 43:54 | | | | | | 0.0132 | 0.0132 | | |
| 1,2,3,6,7,8-HxCDF | 44:02 | | | | | | 0.0111 | 0.0111 | | |
| 2,3,4,6,7,8-HxCDF | 44:45 | | | | | | 0.0119 | 0.0119 | | |
| 1,2,3,7,8,9-HxCDF | 45:41 | | | | | | 0.0133 | 0.0133 | | |
| A Non-2,3,7,8-sub-HxCDF | 44:14 | | | | | | 0.0123 | 0.0123 | | |
| S Total HxCDF | | | | | | | 0.0133 | 0.0133 | | |
| 1,2,3,4,6,7,8-HpCDD | 49:43 | 2163 | 0.99 | 1.1204 | 0.0570 | 0.0570 | 0.0262 | 0.0262 | | M |
| A Non-2,3,7,8-sub-HpCDD | 49:10 | | | | | | 0.0262 | 0.0262 | | |
| S Total HpCDD | | | | | 0.0570 | 0.0570 | 0.0262 | 0.0262 | | |
| 1,2,3,4,6,7,8-HpCDF | 48:03 | 6669 | 0.91 | 1.4984 | 0.1076 | 0.1076 | 0.009569 | 0.009569 | | |
| 1,2,3,4,7,8,9-HpCDF | 50:24 | | | | | | 0.0138 | 0.0138 | | |
| A Non-2,3,7,8-sub-HpCDF | 49:25 | | | | | | 0.0114 | 0.0114 | | |
| S Total HpCDF | | | | | 0.1076 | 0.1076 | 0.0117 | 0.0117 | | |

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| OCDD | 53:57 | 11754 | 0.89 | 1.2073 | 0.4029 | 0.3638 | 0.0131 | 0.0131 | | RQM |
| OCDF | 54:05 | 14840 | 0.79 | 1.1162 | 0.3684 | 0.3684 | 0.009294 | 0.009294 | | M |
| D 13C-2,3,7,8-TCDD | 30:58 | 2199831 | 0.81 | 1.0709 | 41.9 | 41.9 | 0.1814 | 0.1814 | 83.72 | |
| D 13C-2,3,7,8-TCDF | 28:57 | 3540412 | 0.77 | 1.7545 | 41.1 | 41.1 | 0.3934 | 0.3934 | 82.24 | |
| D 13C-1,2,3,7,8-PeCDD | 40:37 | 2022240 | 1.62 | 0.8743 | 47.1 | 47.1 | 0.4557 | 0.4557 | 94.27 | |
| D 13C-1,2,3,7,8-PeCDF | 38:49 | 2974765 | 1.61 | 1.3704 | 44.2 | 44.2 | 0.4478 | 0.4478 | 88.47 | |
| D 13C-2,3,4,7,8-PeCDF | 40:05 | 2878665 | 1.60 | 1.3837 | 42.4 | 42.4 | 0.4435 | 0.4435 | 84.79 | |
| D 13C-1,2,3,4,7,8-HxCDD | 44:53 | 1815773 | 1.25 | 0.8772 | 39.6 | 39.6 | 0.0882 | 0.0882 | 79.22 | |
| D 13C-1,2,3,6,7,8-HxCDD | 45:01 | 1899667 | 1.22 | 0.9171 | 39.6 | 39.6 | 0.0843 | 0.0843 | 79.28 | |
| D 13C-1,2,3,4,7,8-HxCDF | 43:52 | 2341109 | 0.51 | 1.1892 | 37.7 | 37.7 | 0.1554 | 0.1554 | 75.34 | |
| D 13C-1,2,3,6,7,8-HxCDF | 43:59 | 2913824 | 0.53 | 1.4625 | 38.1 | 38.1 | 0.1264 | 0.1264 | 76.25 | |
| D 13C-2,3,4,6,7,8-HxCDF | 44:42 | 2735940 | 0.51 | 1.3197 | 39.7 | 39.7 | 0.1401 | 0.1401 | 79.34 | |
| D 13C-1,2,3,7,8,9-HxCDF | 45:39 | 2835218 | 0.53 | 1.2001 | 45.2 | 45.2 | 0.1540 | 0.1540 | 90.41 | |
| D 13C-1,2,3,4,6,7,8-HpCDD | 49:42 | 1693727 | 1.05 | 0.8155 | 39.7 | 39.7 | 0.1367 | 0.1367 | 79.49 | |
| D 13C-1,2,3,4,6,7,8-HpCDF | 48:02 | 2068177 | 0.48 | 1.0496 | 37.7 | 37.7 | 0.1960 | 0.1960 | 75.41 | |
| D 13C-1,2,3,4,7,8,9-HpCDF | 50:21 | 1769001 | 0.46 | 0.8947 | 37.8 | 37.8 | 0.2300 | 0.2300 | 75.67 | |
| D 13C-OCDD | 53:56 | 2676074 | 0.89 | 0.7044 | 72.7 | 72.7 | 0.1918 | 0.1918 | 72.70 | |
| D 13C-OCDF | 54:04 | 3608613 | 0.92 | 1.0615 | 65.1 | 65.1 | 0.1745 | 0.1745 | 65.06 | |
| $ 37Cl4-2,3,7,8-TCDD | 31:00 | 583570 | | 1.2266 | 9.696 | 9.696 | 0.0254 | 0.0254 | 96.96 | |
| * 13C-1,2,3,4-TCDD | 30:27 | 4907043 | 0.80 | 9.1E+04 | 100.0 | 100.0 | | | | |
| * 13C-1,2,3,7,8,9-HxCDD | 45:23 | 5225805 | 1.28 | 1E+05 | 100.0 | 100.0 | | | | |

## QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\MB140-270884-Aa.d
Lims ID: MB 140-27087/10-A
Client ID:
Sample Type: MB
Inject. Date: 28-Jan-2019 03:56:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010654-008
Operator ID: Xcalibur_System Instrument ID: D2A

Method: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 28-Jan-2019 08:40:18 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX1016

First Level Reviewer: davidsonm Date: 28-Jan-2019 08:40:18

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | |
| 319.8965 | 30:56 | | | | | | 20 | 50 | | | |
| 321.8936 | 30:56 | | | | | | 28 | 70 | | | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | |
| 319.8965 | 29:38 | | | | | | 20 | 50 | | | |
| 321.8936 | 29:38 | | | | | | 28 | 70 | | | |
| 2,3,7,8-TCDF | | | | | | | | | | | |
| 303.9016 | 28:56 | | | | | | 17 | 42 | | | |
| 305.8987 | 28:56 | | | | | | 18 | 45 | | | |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | |
| 303.9016 | 28:21 | | | | | | 17 | 42 | | | |
| 305.8987 | 28:21 | | | | | | 18 | 45 | | | |
| 1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 355.8546 | 40:37 | | | | | | 20 | 50 | | | |
| 357.8516 | 40:37 | | | | | | 36 | 90 | | | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | |
| 355.8546 | 39:32 | | | | | | 20 | 50 | | | |
| 357.8516 | 39:32 | | | | | | 36 | 90 | | | |
| 1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 38:48 | | | | | | 43 | 107 | | | |
| 341.8567 | 38:48 | | | | | | 50 | 125 | | | |
| 2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 40:05 | | | | | | 43 | 107 | | | |
| 341.8567 | 40:05 | | | | | | 50 | 125 | | | |
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | |
| 339.8597 | 38:08 | | | | | | 43 | 107 | | | |
| 341.8567 | 38:08 | | | | | | 50 | 125 | | | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 44:52 | | | | | | 28 | 70 | | | |
| 391.8127 | 44:52 | | | | | | 20 | 50 | | | |
| 1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:01 | | | | | | 28 | 70 | | | |
| 391.8127 | 45:01 | | | | | | 20 | 50 | | | |
| 1,2,3,7,8,9-HxCDD | | | | | | | | | | | RQU |
| 389.8158 | 45:25 | | | | | | 28 | 70 | | | |
| 391.8127 | 45:25 | | | | | | 20 | 50 | | | |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | |
| 389.8158 | 44:24 | | | | | | 28 | 70 | | | |
| 391.8127 | 44:24 | | | | | | 20 | 50 | | | |
| 1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 43:51 | | | | | | 33 | 82 | | | |
| 375.8178 | 43:51 | | | | | | 54 | 135 | | | |
| 1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 43:59 | | | | | | 33 | 82 | | | |
| 375.8178 | 43:59 | | | | | | 54 | 135 | | | |
| 2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:45 | | | | | | 33 | 82 | | | |
| 375.8178 | 44:45 | | | | | | 54 | 135 | | | |
| 1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 45:38 | | | | | | 33 | 82 | | | |
| 375.8178 | 45:38 | | | | | | 54 | 135 | | | |
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:14 | | | | | | 33 | 82 | | | |
| 375.8178 | 44:14 | | | | | | 54 | 135 | | | |
| 1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | M |
| 423.7767 | 49:43 | 49:43 | -1 | 1.000 | 1074 | 292 | 22 | 55 | 13 | | M |
| 425.7737 | 49:44 | 49:43 | 0 | 1.001 | 1089 | 254 | 57 | 142 | 4 | 0.99(0.88-1.20) | M |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | |
| 423.7767 | 49:10 | | | | | | 22 | 55 | | | |
| 425.7737 | 49:10 | | | | | | 57 | 142 | | | |
| 1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 407.7817 | 48:03 | 48:03 | -1 | 1.000 | 3184 | 725 | 35 | 87 | 21 | | |
| 409.7788 | 48:02 | 48:03 | -2 | 1.000 | 3485 | 535 | 16 | 40 | 33 | 0.91(0.88-1.20) | |
| 1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 407.7817 | 50:21 | | | | | | 35 | 87 | | | |
| 409.7788 | 50:21 | | | | | | 16 | 40 | | | |
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | |
| 407.7817 | 49:25 | | | | | | 35 | 87 | | | |
| 409.7788 | 49:25 | | | | | | 16 | 40 | | | |
| OCDD | | | | | | | | | | | RQM |
| 457.7377 | 53:57 | 53:57 | -2 | 1.000 | 5535 | 1392 | 22 | 55 | 63 | | M |
| 459.7348 | 53:57 | 53:57 | -2 | 1.000 | 7483 | 1785 | 21 | 52 | 85 | 0.74(0.76-1.02) | M |
| | Empc Correction | | | | 6219 | 1564 | 21 | 52 | 74 | | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCDF | | | | | | | | | | | M |
| 441.7428 | 54:05 | 54:05 | -2 | 1.000 | 6546 | 1913 | 18 | 45 | 106 | | M |
| 443.7399 | 54:04 | 54:05 | -3 | 1.000 | 8294 | 1866 | 19 | 47 | 98 | 0.79(0.76-1.02) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 30:58 | 31:04 | -4 | 1.017 | 982831 | 105393 | 236 | 590 | 447 | | |
| 333.9338 | 30:57 | 31:04 | -5 | 1.017 | 1217000 | 127277 | 175 | 437 | 727 | 0.81(0.65-0.89) | |
| 13C-2,3,7,8-TCDF | | | | | | | | | | | |
| 315.9419 | 28:57 | 29:03 | -4 | 0.951 | 1542736 | 171026 | 882 | 2205 | 194 | | |
| 317.9389 | 28:57 | 29:03 | -4 | 0.951 | 1997676 | 227778 | 578 | 1445 | 394 | 0.77(0.65-0.89) | |
| 13C-1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 367.8949 | 40:37 | 40:43 | -3 | 1.334 | 1249419 | 284949 | 512 | 1280 | 557 | | |
| 369.8919 | 40:37 | 40:43 | -3 | 1.334 | 772821 | 177511 | 331 | 827 | 536 | 1.62(1.32-1.78) | |
| 13C-1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 38:49 | 38:56 | -4 | 1.275 | 1833942 | 361265 | 805 | 2012 | 449 | | |
| 353.8970 | 38:50 | 38:56 | -3 | 1.276 | 1140823 | 221115 | 493 | 1232 | 449 | 1.61(1.32-1.78) | |
| 13C-2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 40:05 | 40:11 | -3 | 1.316 | 1772465 | 402831 | 805 | 2012 | 500 | | |
| 353.8970 | 40:05 | 40:11 | -3 | 1.316 | 1106200 | 247039 | 493 | 1232 | 501 | 1.60(1.32-1.78) | |
| 13C-1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 44:53 | 44:57 | -3 | 0.989 | 1007862 | 264979 | 241 | 602 | 1099 | | |
| 403.8529 | 44:53 | 44:57 | -3 | 0.989 | 807911 | 212137 | 126 | 315 | 1684 | 1.25(1.05-1.43) | |
| 13C-1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:01 | 45:04 | -3 | 0.992 | 1044198 | 246028 | 241 | 602 | 1021 | | |
| 403.8529 | 45:01 | 45:04 | -3 | 0.992 | 855469 | 205363 | 126 | 315 | 1630 | 1.22(1.05-1.43) | |
| 13C-1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 43:52 | 43:54 | -2 | 0.967 | 793209 | 203687 | 413 | 1032 | 493 | | |
| 385.8610 | 43:51 | 43:54 | -3 | 0.966 | 1547900 | 401296 | 464 | 1160 | 865 | 0.51(0.43-0.59) | |
| 13C-1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 43:59 | 44:02 | -3 | 0.969 | 1011905 | 263513 | 413 | 1032 | 638 | | |
| 385.8610 | 43:59 | 44:02 | -3 | 0.969 | 1901919 | 501487 | 464 | 1160 | 1081 | 0.53(0.43-0.59) | |
| 13C-2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44:42 | 44:46 | -3 | 0.985 | 928945 | 243985 | 413 | 1032 | 591 | | |
| 385.8610 | 44:42 | 44:46 | -3 | 0.985 | 1806995 | 478993 | 464 | 1160 | 1032 | 0.51(0.43-0.59) | |
| 13C-1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 383.8639 | 45:39 | 45:43 | -3 | 1.006 | 985406 | 232598 | 413 | 1032 | 563 | | |
| 385.8610 | 45:39 | 45:43 | -3 | 1.006 | 1849812 | 415942 | 464 | 1160 | 896 | 0.53(0.43-0.59) | |
| 13C-1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 435.8169 | 49:42 | 49:46 | -3 | 1.095 | 867937 | 170583 | 297 | 742 | 574 | | |
| 437.8140 | 49:42 | 49:46 | -3 | 1.095 | 825790 | 165073 | 232 | 580 | 712 | 1.05(0.88-1.20) | |
| 13C-1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 417.8250 | 48:02 | 48:06 | -3 | 1.059 | 668493 | 142763 | 347 | 867 | 411 | | |
| 419.8220 | 48:02 | 48:06 | -3 | 1.059 | 1399684 | 300104 | 629 | 1572 | 477 | 0.48(0.37-0.51) | |
| 13C-1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 417.8250 | 50:21 | 50:25 | -3 | 1.110 | 560102 | 105233 | 347 | 867 | 303 | | |
| 419.8220 | 50:22 | 50:25 | -2 | 1.110 | 1208899 | 228977 | 629 | 1572 | 364 | 0.46(0.37-0.51) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13C-OCDD | | | | | | | | | | | |
| 469.7780 | 53:56 | 54:00 | -3 | 1.189 | 1263264 | 322949 | 338 | 845 | 955 | | |
| 471.7750 | 53:56 | 54:00 | -3 | 1.189 | 1412810 | 355065 | 303 | 757 | 1172 | 0.89(0.76-1.02) | |
| 13C-OCDF | | | | | | | | | | | |
| 453.7830 | 54:04 | 54:08 | -3 | 1.192 | 1732924 | 428256 | 291 | 727 | 1472 | | |
| 455.7801 | 54:04 | 54:08 | -3 | 1.192 | 1875689 | 458604 | 588 | 1470 | 780 | 0.92(0.76-1.02) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31:00 | 31:03 | -1 | 1.018 | 583570 | 61927 | 66 | 165 | 938 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 30:27 | 30:28 | -1 | | 2184796 | 236582 | 236 | 590 | 1002 | | |
| 333.9338 | 30:27 | 30:28 | -1 | | 2722247 | 292211 | 175 | 437 | 1670 | 0.80(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:23 | 45:25 | -2 | | 2932470 | 667953 | 241 | 602 | 2772 | | |
| 403.8529 | 45:23 | 45:25 | -2 | | 2293335 | 517874 | 126 | 315 | 4110 | 1.28(1.05-1.43) | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

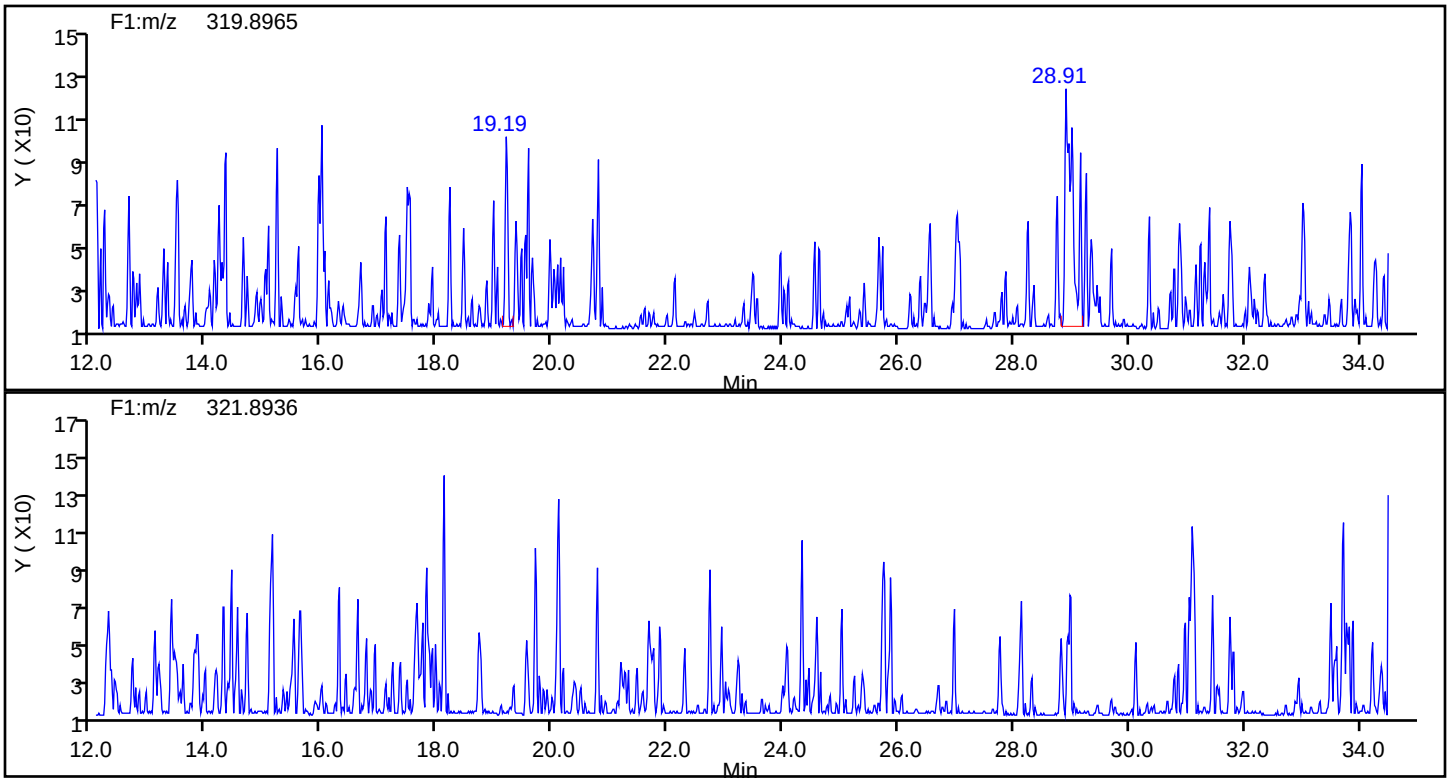
Report Date: 28-Jan-2019 08:40:18 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Knoxville

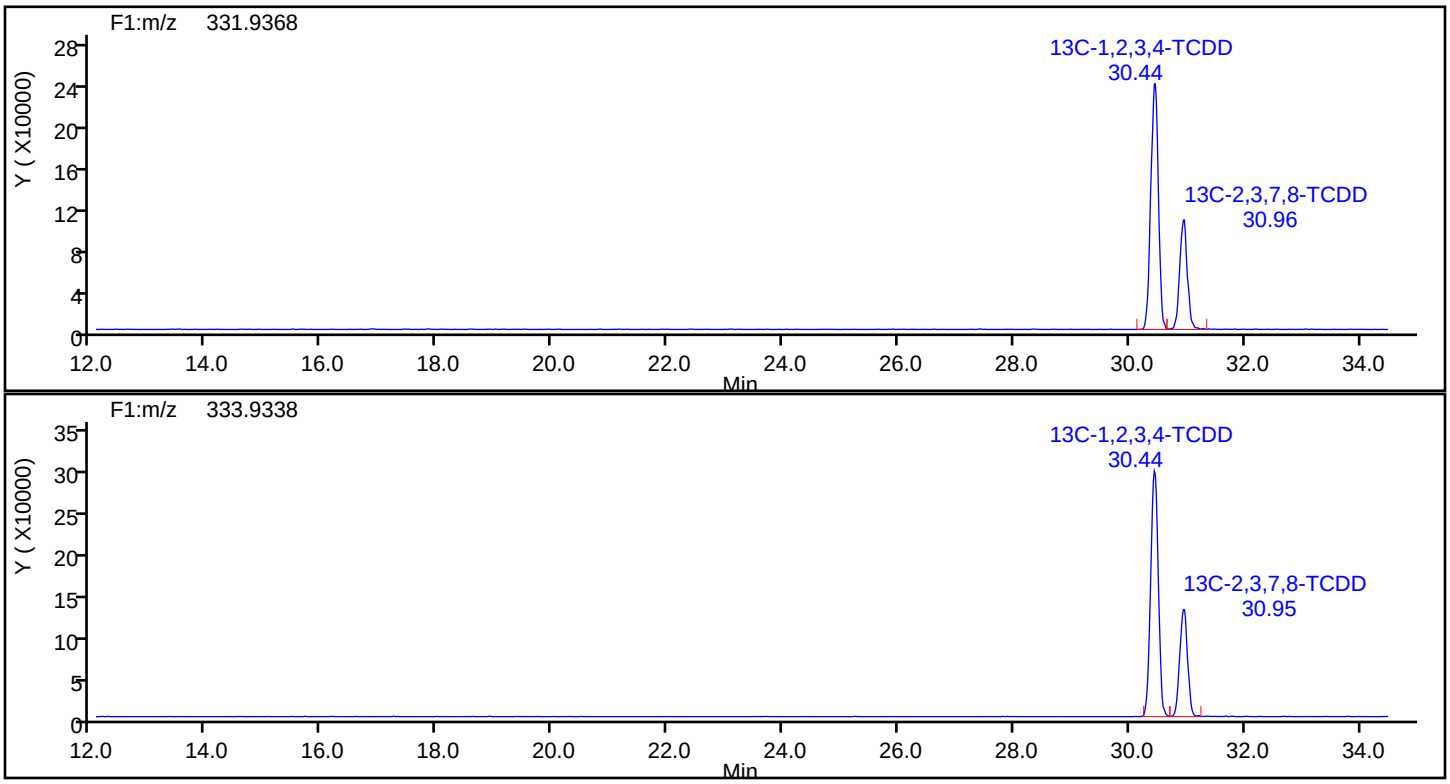
Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\MB140-270884-Aa.d

| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 03:56:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 9 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Standards



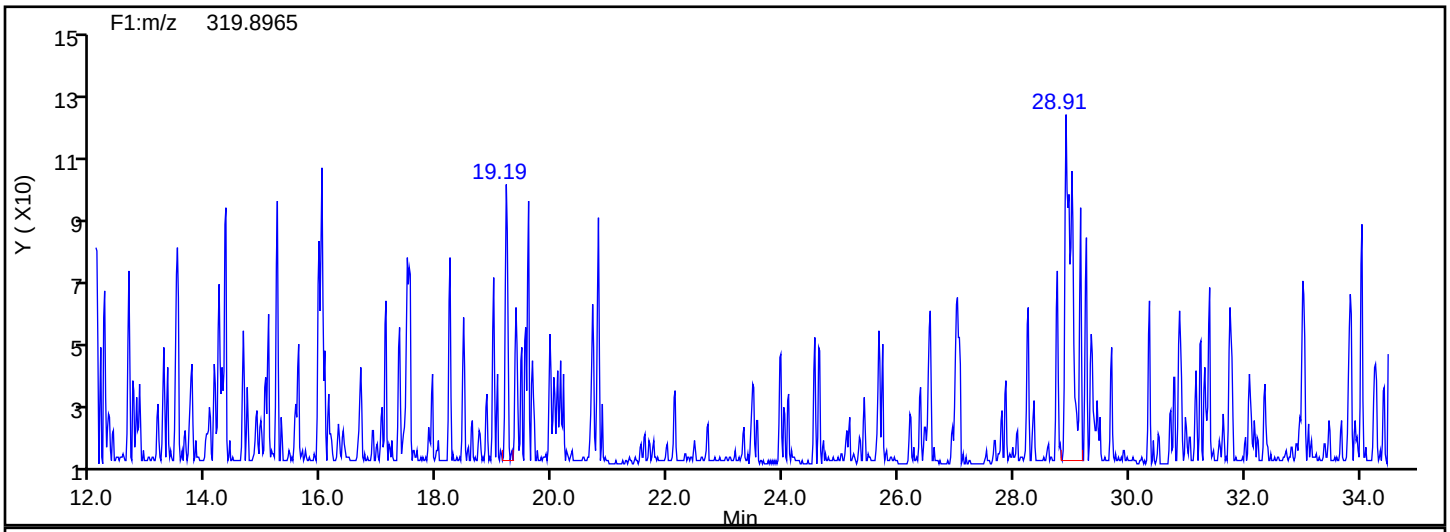
Report Date: 28-Jan-2019 08:40:18 Chrom Revision: 2.3 15-Jan-2019 08:51:34

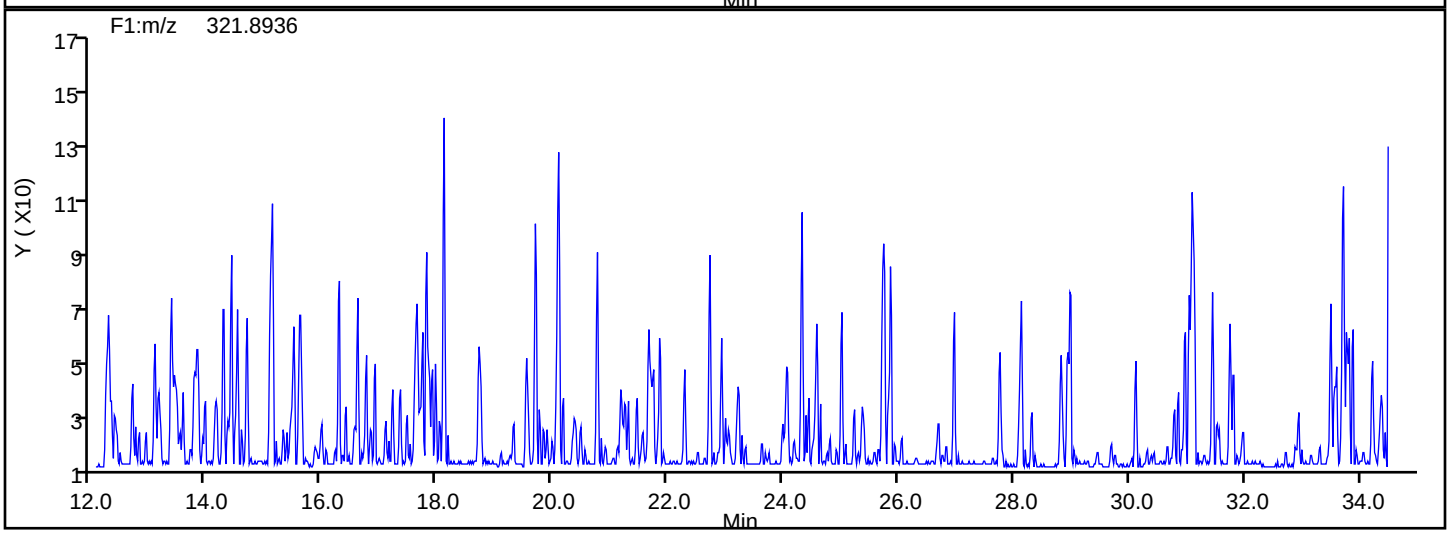
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\MB140-270884-Aa.d

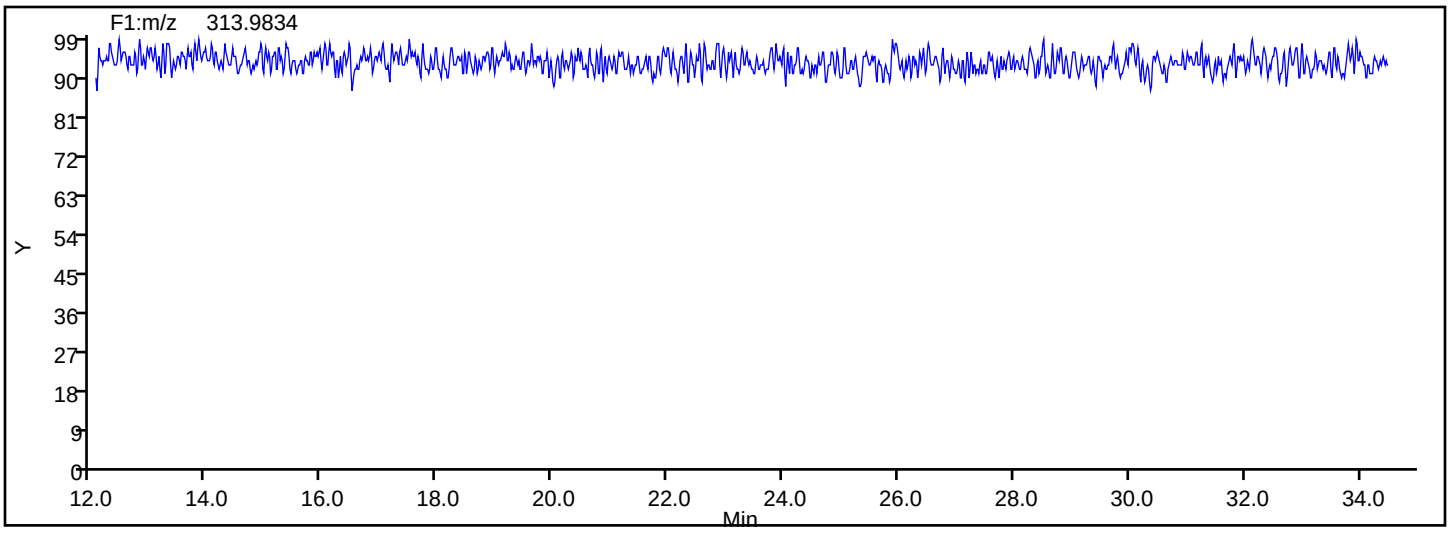
| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 03:56:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 9 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



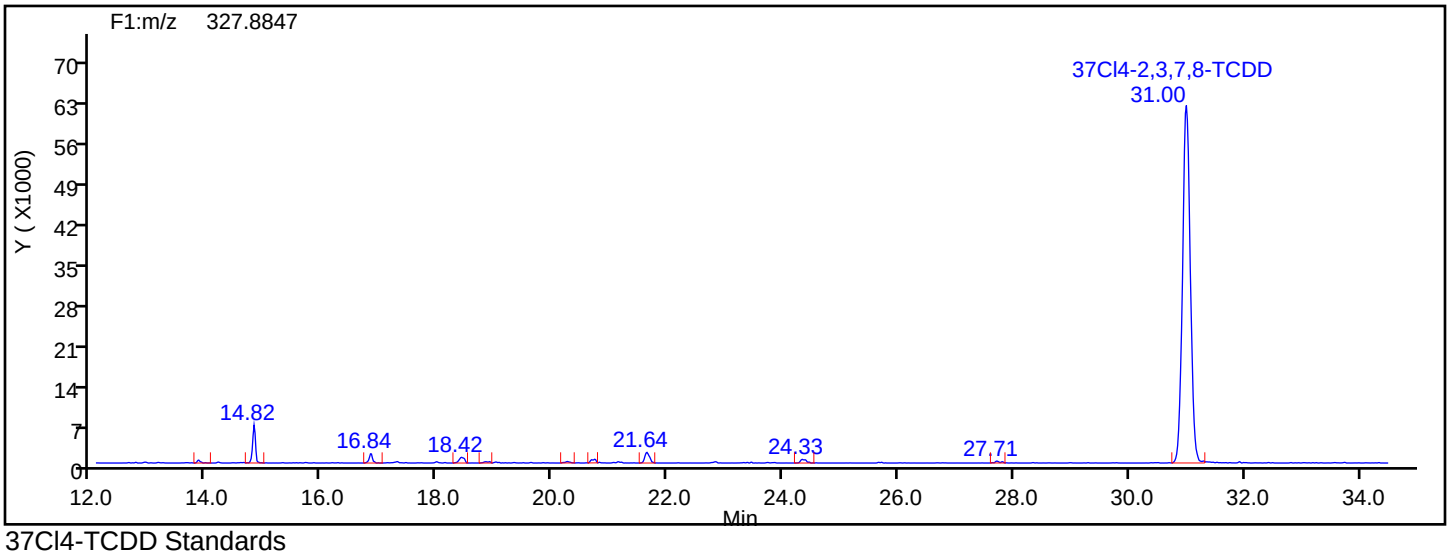
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TestAmerica Knoxville

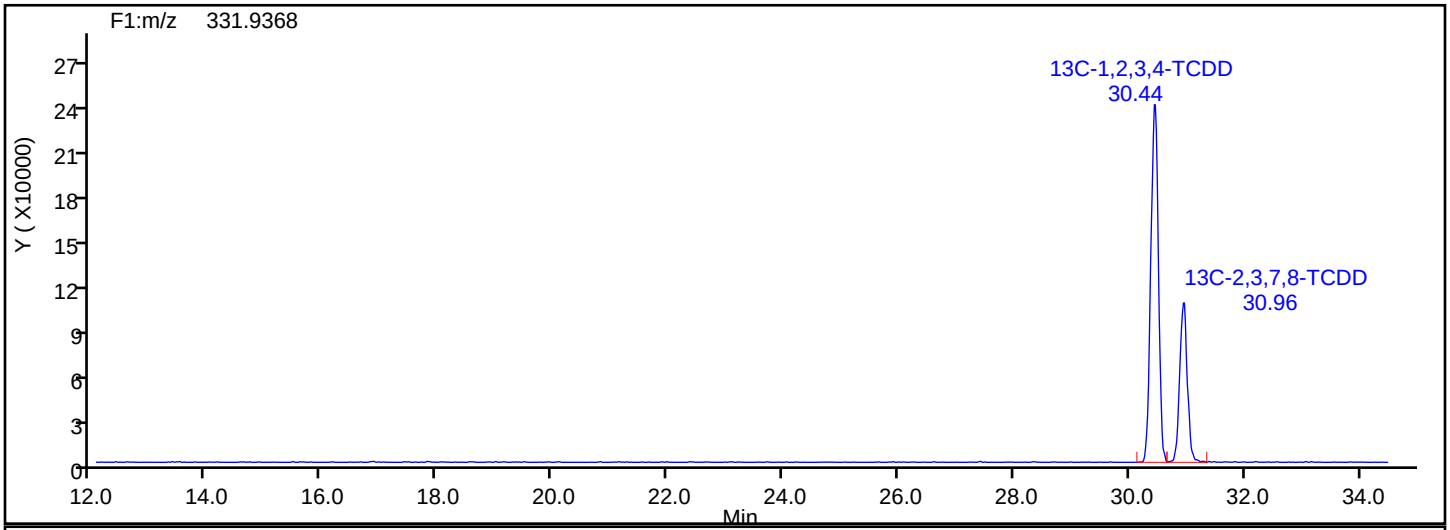
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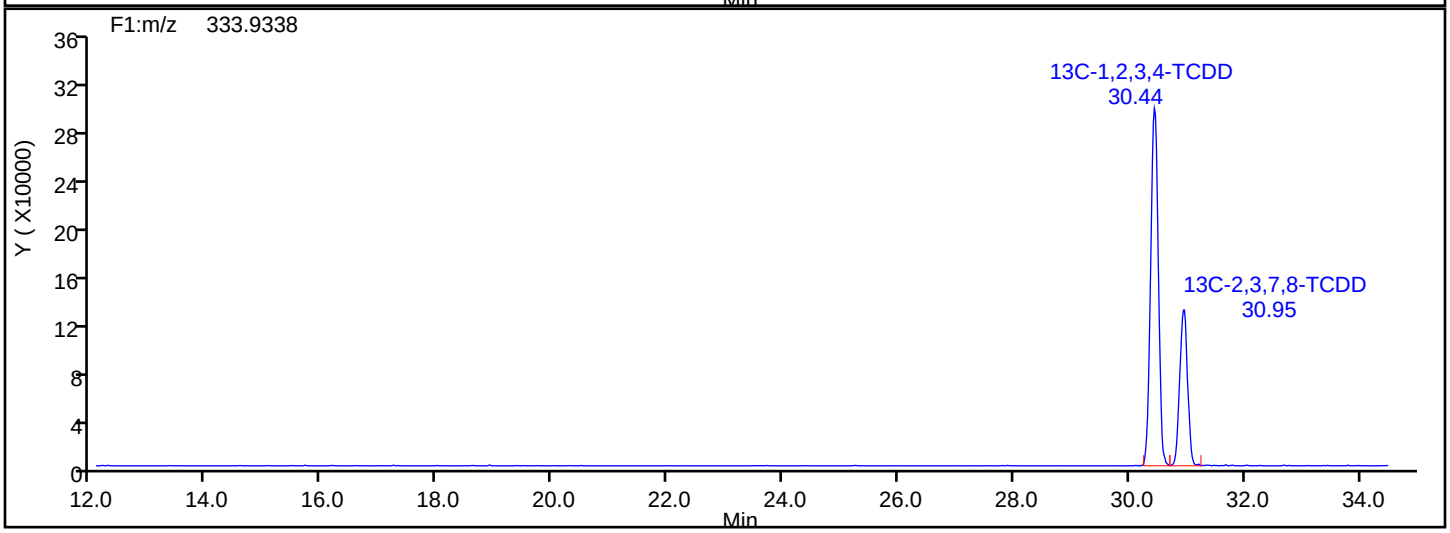
| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 03:56:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 9 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



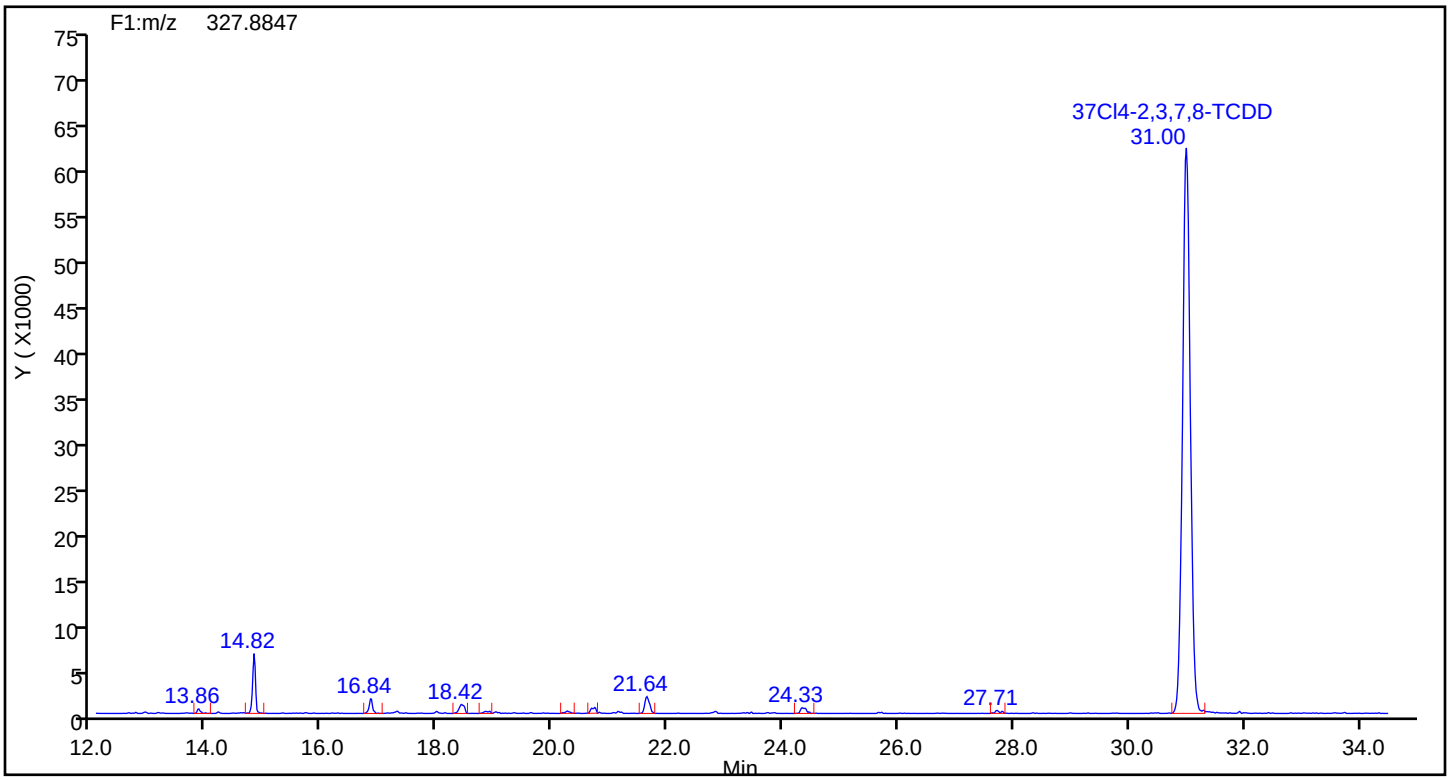
Report Date: 28-Jan-2019 08:40:19 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Knoxville

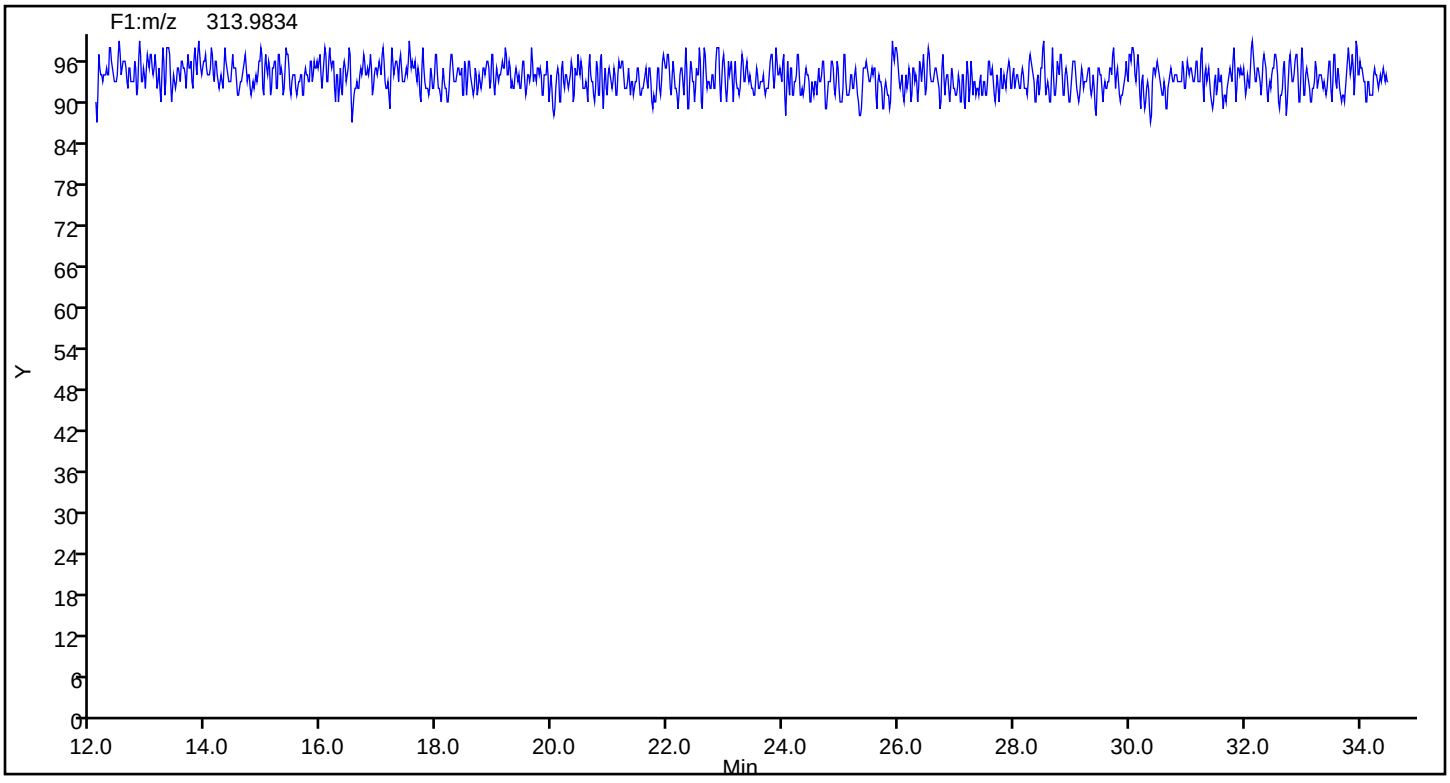
Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\MB140-270884-Aa.d

| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 03:56:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 9 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Lock Mass



FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 160-32649-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 140-27087/11-A

Matrix: Water | Lab File ID: LCS140-270885-Aa.d

Analysis Method: 1613B | Date Collected:

Extract. Method: HRMS-Sepf | Date Extracted: 01/22/2019 13:19

Sample wt/vol: 1000(mL) | Date Analyzed: 01/28/2019 02:07

Con. Extract Vol.: 20(uL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 27191 | Units: pg/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | EDL |
|---|---|---|---|---|---|
| 1746-01-6 | 2,3,7,8-TCDD | 183 | | 10 | 0.63 |

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| 76523-40-5 | 13C-2,3,7,8-TCDD | 83 | | 20-175 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 85508-50-5 | 37Cl4-2,3,7,8-TCDD | 100 | | 31-191 |

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d
Lims ID: LCS 140-27087/11-A
Client ID:
Sample Type: LCS
Inject. Date: 28-Jan-2019 02:07:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010654-002
Operator ID: Xcalibur_System Instrument ID: D2A

Method: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 28-Jan-2019 08:25:45 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX1016

First Level Reviewer: davidsonm Date: 28-Jan-2019 08:25:58

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 31:02 | 292976 | 0.82 | 1.1733 | 9.159 | 9.159 | 0.0315 | 0.0315 | 91.59 | |
| A Non-2,3,7,8-sub-TCDD | 29:38 | | | | | | 0.0315 | 0.0315 | | |
| S Total TCDD | | | | | 9.159 | 9.159 | 0.0315 | 0.0315 | | |
| 2,3,7,8-TCDF | 29:03 | 442467 | 0.82 | 1.0881 | 9.215 | 9.215 | 0.0199 | 0.0199 | 92.15 | |
| A Non-2,3,7,8-sub-TCDF | 28:21 | | | | | | 0.0199 | 0.0539 | | RQU |
| S Total TCDF | | | | | 9.215 | 9.215 | 0.0199 | 0.0199 | | |
| 1,2,3,7,8-PeCDD | 40:41 | 1169083 | 1.55 | 1.0434 | 45.4 | 45.4 | 0.0253 | 0.0253 | 90.87 | |
| A Non-2,3,7,8-sub-PeCDD | 39:32 | | | | | | 0.0253 | 0.4573 | | U |
| S Total PeCDD | | | | | 45.4 | 45.4 | 0.0253 | 0.0253 | | |
| 1,2,3,7,8-PeCDF | 38:54 | 1815768 | 1.59 | 1.1898 | 41.3 | 41.3 | 0.1688 | 0.1688 | 82.65 | |
| 2,3,4,7,8-PeCDF | 40:09 | 1792752 | 1.57 | 1.1095 | 44.5 | 44.5 | 0.1692 | 0.1692 | 88.97 | |
| A Non-2,3,7,8-sub-PeCDF | 38:08 | | | | | | 0.1688 | 0.3551 | | U |
| S Total PeCDF | | | | | 85.8 | 85.8 | 0.1690 | 0.1690 | | |
| 1,2,3,4,7,8-HxCDD | 44:57 | 1310518 | 1.25 | 1.1409 | 47.9 | 47.9 | 0.0186 | 0.0186 | 95.84 | |
| 1,2,3,6,7,8-HxCDD | 45:03 | 1335396 | 1.28 | 1.1481 | 46.6 | 46.6 | 0.0178 | 0.0178 | 93.19 | |
| 1,2,3,7,8,9-HxCDD | 45:26 | 1450400 | 1.23 | 1.2212 | 48.5 | 48.5 | 0.0170 | 0.0170 | 97.09 | |
| A Non-2,3,7,8-sub-HxCDD | 44:24 | | | | | | 0.0178 | 0.8628 | | U |
| S Total HxCDD | | | | | 143.1 | 143.1 | 0.0178 | 0.0178 | | |
| 1,2,3,4,7,8-HxCDF | 43:54 | 2130035 | 1.26 | 1.3629 | 47.5 | 47.5 | 0.1191 | 0.1191 | 95.03 | |
| 1,2,3,6,7,8-HxCDF | 44:02 | 2303692 | 1.28 | 1.2762 | 47.2 | 47.2 | 0.1116 | 0.1116 | 94.39 | |
| 2,3,4,6,7,8-HxCDF | 44:46 | 2052255 | 1.26 | 1.2654 | 46.5 | 46.5 | 0.1298 | 0.1298 | 92.93 | |
| 1,2,3,7,8,9-HxCDF | 45:42 | 1923788 | 1.27 | 1.2573 | 48.2 | 48.2 | 0.1569 | 0.1569 | 96.31 | |
| A Non-2,3,7,8-sub-HxCDF | 44:14 | | | | | | 0.1274 | 0.1274 | | |
| S Total HxCDF | | | | | 189.3 | 189.3 | 0.1293 | 0.1293 | | |
| 1,2,3,4,6,7,8-HpCDD | 49:46 | 1184409 | 1.05 | 1.1204 | 46.6 | 46.6 | 0.0252 | 0.0252 | 93.19 | |
| A Non-2,3,7,8-sub-HpCDD | 49:10 | | | | | | 0.0252 | 2.021 | | U |
| S Total HpCDD | | | | | 46.6 | 46.6 | 0.0252 | 0.0252 | | |
| 1,2,3,4,6,7,8-HpCDF | 48:05 | 2089052 | 1.06 | 1.4984 | 49.5 | 49.5 | 0.0461 | 0.0461 | 99.07 | |
| 1,2,3,4,7,8,9-HpCDF | 50:25 | 1639071 | 1.05 | 1.3807 | 50.4 | 50.4 | 0.0636 | 0.0636 | 101 | |
| A Non-2,3,7,8-sub-HpCDF | 49:25 | | | | | | 0.0537 | 0.6761 | | U |
| S Total HpCDF | | | | | 99.9 | 99.9 | 0.0548 | 0.0548 | | |

Report Date: 28-Jan-2019 08:25:59 Chrom Revision: 2.3 15-Jan-2019 08:51:34
Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d

| Compound | RT (min.) | Area | Ratio | Ical RRF | Amount pg/ul | EMPC pg/ul | Noise EDL | Final EDL | %Rec | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| OCDD | 54:00 | 1980378 | 0.89 | 1.2073 | 92.2 | 92.2 | 0.0174 | 0.0174 | 92.24 | |
| OCDF | 54:07 | 2499700 | 0.92 | 1.1162 | 90.8 | 90.8 | 0.0212 | 0.0212 | 90.80 | |
| D 13C-2,3,7,8-TCDD | 31:01 | 1363155 | 0.75 | 1.0709 | 41.3 | 41.3 | 0.2256 | 0.2256 | 82.62 | |
| D 13C-2,3,7,8-TCDF | 29:00 | 2206419 | 0.82 | 1.7545 | 40.8 | 40.8 | 0.2535 | 0.2535 | 81.63 | |
| D 13C-1,2,3,7,8-PeCDD | 40:40 | 1232965 | 1.54 | 0.8743 | 45.8 | 45.8 | 0.3504 | 0.3504 | 91.54 | |
| D 13C-1,2,3,7,8-PeCDF | 38:52 | 1846440 | 1.60 | 1.3704 | 43.7 | 43.7 | 0.4944 | 0.4944 | 87.46 | |
| D 13C-2,3,4,7,8-PeCDF | 40:08 | 1816105 | 1.52 | 1.3837 | 42.6 | 42.6 | 0.4896 | 0.4896 | 85.19 | |
| D 13C-1,2,3,4,7,8-HxCDD | 44:56 | 1198560 | 1.32 | 0.8772 | 45.3 | 45.3 | 0.1259 | 0.1259 | 90.67 | |
| D 13C-1,2,3,6,7,8-HxCDD | 45:02 | 1248154 | 1.34 | 0.9171 | 45.2 | 45.2 | 0.1204 | 0.1204 | 90.32 | |
| D 13C-1,2,3,4,7,8-HxCDF | 43:53 | 1644652 | 0.54 | 1.1892 | 45.9 | 45.9 | 0.2327 | 0.2327 | 91.78 | |
| D 13C-1,2,3,6,7,8-HxCDF | 44:01 | 1912291 | 0.55 | 1.4625 | 43.4 | 43.4 | 0.1892 | 0.1892 | 86.77 | |
| D 13C-2,3,4,6,7,8-HxCDF | 44:45 | 1745163 | 0.52 | 1.3197 | 43.9 | 43.9 | 0.2097 | 0.2097 | 87.76 | |
| D 13C-1,2,3,7,8,9-HxCDF | 45:41 | 1588674 | 0.53 | 1.2001 | 43.9 | 43.9 | 0.2305 | 0.2305 | 87.85 | |
| D 13C-1,2,3,4,6,7,8-HpCDD | 49:44 | 1134396 | 1.06 | 0.8155 | 46.2 | 46.2 | 0.3047 | 0.3047 | 92.31 | |
| D 13C-1,2,3,4,6,7,8-HpCDF | 48:04 | 1407355 | 0.47 | 1.0496 | 44.5 | 44.5 | 0.3740 | 0.3740 | 88.98 | |
| D 13C-1,2,3,4,7,8,9-HpCDF | 50:24 | 1178613 | 0.48 | 0.8947 | 43.7 | 43.7 | 0.4388 | 0.4388 | 87.42 | |
| D 13C-OCDD | 53:59 | 1778395 | 0.89 | 0.7044 | 83.8 | 83.8 | 0.2916 | 0.2916 | 83.77 | |
| D 13C-OCDF | 54:07 | 2466426 | 0.91 | 1.0615 | 77.1 | 77.1 | 0.1725 | 0.1725 | 77.10 | |
| $ 37Cl4-2,3,7,8-TCDD | 31:03 | 376540 | | 1.2266 | 9.964 | 9.964 | 0.0552 | 0.0552 | 99.64 | |
| * 13C-1,2,3,4-TCDD | 30:30 | 3081107 | 0.81 | 9.1E+04 | 100.0 | 100.0 | | | 100 | |
| * 13C-1,2,3,7,8,9-HxCDD | 45:25 | 3013760 | 1.26 | 1E+05 | 100.0 | 100.0 | | | 100 | |

## QC Flag Legend

Review Flags

U - Marked Undetected

Report Date: 28-Jan-2019 08:25:59 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Knoxville
Target Compound Quantitation Worksheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d
Lims ID: LCS 140-27087/11-A
Client ID:
Sample Type: LCS
Inject. Date: 28-Jan-2019 02:07:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 140-0010654-002
Operator ID: Xcalibur_System Instrument ID: D2A

Method: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\D2A_Dioxin.m
Limit Group: HR - 1613B - ICAL
Last Update: 28-Jan-2019 08:25:45 Calib Date: 16-May-2014 18:31:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\D2A\20170111-3817.b\d3140516i5.d

Column 1 : Det: F1(12.07 :34.29 )
Process Host: CTX1016

First Level Reviewer: davidsonm Date: 28-Jan-2019 08:25:58

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | | | | | | | | | | | |
| 319.8965 | 31:02 | 30:59 | 2 | 1.001 | 132063 | 14278 | 18 | 45 | 793 | | |
| 321.8936 | 31:04 | 30:59 | 4 | 1.002 | 160913 | 16645 | 23 | 57 | 724 | 0.82(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDD | | | | | | | | | | | |
| 319.8965 | 29:38 | | | | | | 18 | 45 | | | |
| 321.8936 | 29:38 | | | | | | 23 | 57 | | | |
| 2,3,7,8-TCDF | | | | | | | | | | | |
| 303.9016 | 29:03 | 28:59 | 3 | 1.002 | 199001 | 23078 | 18 | 45 | 1282 | | |
| 305.8987 | 29:03 | 28:59 | 3 | 1.002 | 243466 | 28381 | 25 | 62 | 1135 | 0.82(0.65-0.89) | |
| A Non-2,3,7,8-sub-TCDF | | | | | | | | | | | U |
| 303.9016 | 22:43 | 28:21 | -338 | 0.783 | 571 | 134 | 18 | 45 | 7 | | |
| | Empc Correction | | | | 481 | 110 | 18 | 45 | 6 | | |
| 305.8987 | 22:42 | 28:21 | -339 | 0.783 | 625 | 143 | 25 | 62 | 6 | 0.91(0.65-0.89) | |
| 1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 355.8546 | 40:41 | 40:40 | 1 | 1.000 | 710808 | 168355 | 15 | 37 | 11224 | | |
| 357.8516 | 40:41 | 40:40 | 1 | 1.000 | 458275 | 107731 | 45 | 112 | 2394 | 1.55(1.32-1.78) | |
| A Non-2,3,7,8-sub-PeCDD | | | | | | | | | | | U |
| 355.8546 | 37:45 | 39:32 | -107 | 0.928 | 2894 | 435 | 15 | 37 | 29 | | |
| 357.8516 | 37:46 | 39:32 | -106 | 0.929 | 2005 | 416 | 45 | 112 | 9 | 1.44(1.32-1.78) | |
| 1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 38:54 | 38:51 | 2 | 1.001 | 1115975 | 221746 | 357 | 892 | 621 | | |
| 341.8567 | 38:53 | 38:51 | 1 | 1.000 | 699793 | 135431 | 239 | 597 | 567 | 1.59(1.32-1.78) | |
| 2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 339.8597 | 40:09 | 40:07 | 1 | 1.000 | 1094458 | 243070 | 357 | 892 | 681 | | |
| 341.8567 | 40:09 | 40:07 | 1 | 1.000 | 698294 | 154310 | 239 | 597 | 646 | 1.57(1.32-1.78) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A Non-2,3,7,8-sub-PeCDF | | | | | | | | | | | U |
| 339.8597 | 38:08 | 38:08 | 0 | 0.981 | 8607 | 1498 | 357 | 892 | | | |
| 341.8567 | 38:08 | 38:08 | 0 | 0.981 | 6346 | 1438 | 239 | 597 | | 1.36(1.32-1.78) | |
| 1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 44:57 | 44:55 | 2 | 1.000 | 729072 | 180846 | 38 | 95 | 4759 | | |
| 391.8127 | 44:56 | 44:55 | 1 | 1.000 | 581446 | 148715 | 12 | 30 | 12393 | 1.25(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:03 | 45:01 | 1 | 1.000 | 749778 | 183319 | 38 | 95 | 4824 | | |
| 391.8127 | 45:03 | 45:01 | 1 | 1.000 | 585618 | 146074 | 12 | 30 | 12173 | 1.28(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 389.8158 | 45:26 | 45:25 | 1 | 1.011 | 800031 | 191672 | 38 | 95 | 5044 | | |
| 391.8127 | 45:26 | 45:25 | 1 | 1.011 | 650369 | 152463 | 12 | 30 | 12705 | 1.23(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDD | | | | | | | | | | | U |
| 389.8158 | 43:22 | 44:24 | -62 | 0.963 | 13578 | 3840 | 38 | 95 | 101 | | |
| 391.8127 | 43:22 | 44:24 | -62 | 0.963 | 11123 | 3122 | 12 | 30 | 260 | 1.22(1.05-1.43) | |
| 1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 43:54 | 43:53 | 1 | 1.000 | 1187148 | 321923 | 329 | 822 | 978 | | |
| 375.8178 | 43:54 | 43:53 | 1 | 1.000 | 942887 | 255986 | 243 | 607 | 1053 | 1.26(1.05-1.43) | |
| 1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:02 | 44:01 | 1 | 1.000 | 1292980 | 335197 | 329 | 822 | 1019 | | |
| 375.8178 | 44:02 | 44:01 | 1 | 1.000 | 1010712 | 264793 | 243 | 607 | 1090 | 1.28(1.05-1.43) | |
| 2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:46 | 44:45 | 1 | 1.000 | 1142352 | 293829 | 329 | 822 | 893 | | |
| 375.8178 | 44:46 | 44:45 | 1 | 1.000 | 909903 | 227014 | 243 | 607 | 934 | 1.26(1.05-1.43) | |
| 1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 373.8208 | 45:42 | 45:39 | 1 | 1.000 | 1075319 | 236291 | 329 | 822 | 718 | | |
| 375.8178 | 45:42 | 45:39 | 1 | 1.000 | 848469 | 193537 | 243 | 607 | 796 | 1.27(1.05-1.43) | |
| A Non-2,3,7,8-sub-HxCDF | | | | | | | | | | | |
| 373.8208 | 44:14 | | | | | | 329 | 822 | | | |
| 375.8178 | 44:14 | | | | | | 243 | 607 | | | |
| 1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 423.7767 | 49:46 | 49:43 | 2 | 1.001 | 606661 | 114341 | 19 | 47 | 6018 | | |
| 425.7737 | 49:45 | 49:43 | 1 | 1.000 | 577748 | 109730 | 30 | 75 | 3658 | 1.05(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDD | | | | | | | | | | | U |
| 423.7767 | 48:35 | 49:10 | -34 | 0.977 | 24476 | 5174 | 19 | 47 | 272 | | |
| 425.7737 | 48:35 | 49:10 | -34 | 0.977 | 26909 | 5171 | 30 | 75 | 172 | 0.91(0.88-1.20) | |
| 1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 407.7817 | 48:05 | 48:03 | 1 | 1.000 | 1073212 | 227842 | 117 | 292 | 1947 | | |
| 409.7788 | 48:05 | 48:03 | 1 | 1.000 | 1015840 | 222430 | 50 | 125 | 4449 | 1.06(0.88-1.20) | |
| 1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 407.7817 | 50:25 | 50:23 | 1 | 1.000 | 841051 | 165944 | 117 | 292 | 1418 | | |
| 409.7788 | 50:25 | 50:23 | 1 | 1.000 | 798020 | 161325 | 50 | 125 | 3227 | 1.05(0.88-1.20) | |
| A Non-2,3,7,8-sub-HpCDF | | | | | | | | | | | U |
| 407.7817 | 48:43 | 49:25 | -41 | 1.014 | 12235 | 2390 | 117 | 292 | 20 | | |
| 409.7788 | 48:43 | 49:25 | -41 | 1.014 | 12932 | 2517 | 50 | 125 | 50 | 0.95(0.88-1.20) | |

Report Date: 28-Jan-2019 08:25:59 Chrom Revision: 2.3 15-Jan-2019 08:51:34
Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCDD | | | | | | | | | | | |
| 457.7377 | 54:00 | 53:58 | 1 | 1.000 | 932380 | 222619 | 24 | 60 | 9276 | | |
| 459.7348 | 53:59 | 53:58 | 0 | 1.000 | 1047998 | 242464 | 13 | 32 | 18651 | 0.89(0.76-1.02) | |
| OCDF | | | | | | | | | | | |
| 441.7428 | 54:07 | 54:07 | 0 | 1.000 | 1197796 | 289187 | 30 | 75 | 9640 | | |
| 443.7399 | 54:07 | 54:07 | 0 | 1.000 | 1301904 | 321324 | 26 | 65 | 12359 | 0.92(0.76-1.02) | |
| 13C-2,3,7,8-TCDD | | | | | | | | | | | |
| 331.9368 | 31:01 | 31:04 | -2 | 1.017 | 584158 | 60485 | 206 | 515 | 294 | | |
| 333.9338 | 31:00 | 31:04 | -3 | 1.017 | 778997 | 77570 | 122 | 305 | 636 | 0.75(0.65-0.89) | |
| 13C-2,3,7,8-TCDF | | | | | | | | | | | |
| 315.9419 | 29:00 | 29:03 | -2 | 0.951 | 995209 | 112401 | 323 | 807 | 348 | | |
| 317.9389 | 29:00 | 29:03 | -2 | 0.951 | 1211210 | 134243 | 281 | 702 | 478 | 0.82(0.65-0.89) | |
| 13C-1,2,3,7,8-PeCDD | | | | | | | | | | | |
| 367.8949 | 40:40 | 40:43 | -1 | 1.333 | 748096 | 176037 | 260 | 650 | 677 | | |
| 369.8919 | 40:40 | 40:43 | -1 | 1.333 | 484869 | 108468 | 156 | 390 | 695 | 1.54(1.32-1.78) | |
| 13C-1,2,3,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 38:52 | 38:56 | -2 | 1.275 | 1137359 | 229255 | 596 | 1490 | 385 | | |
| 353.8970 | 38:52 | 38:56 | -2 | 1.275 | 709081 | 141768 | 324 | 810 | 438 | 1.60(1.32-1.78) | |
| 13C-2,3,4,7,8-PeCDF | | | | | | | | | | | |
| 351.9000 | 40:08 | 40:11 | -1 | 1.316 | 1096322 | 238624 | 596 | 1490 | 400 | | |
| 353.8970 | 40:08 | 40:11 | -1 | 1.316 | 719783 | 158231 | 324 | 810 | 488 | 1.52(1.32-1.78) | |
| 13C-1,2,3,4,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 44:56 | 44:57 | -1 | 0.989 | 682605 | 165246 | 226 | 565 | 731 | | |
| 403.8529 | 44:55 | 44:57 | -2 | 0.989 | 515955 | 129477 | 95 | 237 | 1363 | 1.32(1.05-1.43) | |
| 13C-1,2,3,6,7,8-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:02 | 45:04 | -2 | 0.991 | 714521 | 176865 | 226 | 565 | 783 | | |
| 403.8529 | 45:02 | 45:04 | -2 | 0.991 | 533633 | 129472 | 95 | 237 | 1363 | 1.34(1.05-1.43) | |
| 13C-1,2,3,4,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 43:53 | 43:54 | -1 | 0.966 | 574070 | 148939 | 489 | 1222 | 305 | | |
| 385.8610 | 43:53 | 43:54 | -1 | 0.966 | 1070582 | 291650 | 315 | 787 | 926 | 0.54(0.43-0.59) | |
| 13C-1,2,3,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44:01 | 44:02 | -1 | 0.969 | 675545 | 179777 | 489 | 1222 | 368 | | |
| 385.8610 | 44:01 | 44:02 | -1 | 0.969 | 1236746 | 322095 | 315 | 787 | 1023 | 0.55(0.43-0.59) | |
| 13C-2,3,4,6,7,8-HxCDF | | | | | | | | | | | |
| 383.8639 | 44:45 | 44:46 | -1 | 0.985 | 596765 | 150500 | 489 | 1222 | 308 | | |
| 385.8610 | 44:45 | 44:46 | -1 | 0.985 | 1148398 | 284746 | 315 | 787 | 904 | 0.52(0.43-0.59) | |
| 13C-1,2,3,7,8,9-HxCDF | | | | | | | | | | | |
| 383.8639 | 45:41 | 45:43 | -2 | 1.006 | 549790 | 123261 | 489 | 1222 | 252 | | |
| 385.8610 | 45:41 | 45:43 | -2 | 1.006 | 1038884 | 239288 | 315 | 787 | 760 | 0.53(0.43-0.59) | |
| 13C-1,2,3,4,6,7,8-HpCDD | | | | | | | | | | | |
| 435.8169 | 49:44 | 49:46 | -2 | 1.095 | 583639 | 109567 | 190 | 475 | 577 | | |
| 437.8140 | 49:45 | 49:46 | -1 | 1.095 | 550757 | 106685 | 532 | 1330 | 201 | 1.06(0.88-1.20) | |
| 13C-1,2,3,4,6,7,8-HpCDF | | | | | | | | | | | |
| 417.8250 | 48:04 | 48:06 | -2 | 1.058 | 448754 | 99807 | 420 | 1050 | 238 | | |
| 419.8220 | 48:04 | 48:06 | -2 | 1.058 | 958601 | 201893 | 721 | 1802 | 280 | 0.47(0.37-0.51) | |

| Signal | RT (min.) | Adj RT (min.) | Sec. | REL RT | Area | Height | Avg Noise | EDL Height | S/N | Ratio(Limits) | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13C-1,2,3,4,7,8,9-HpCDF | | | | | | | | | | | |
| 417.8250 | 50:24 | 50:25 | -1 | 1.109 | 380466 | 77437 | 420 | 1050 | 184 | | |
| 419.8220 | 50:24 | 50:25 | -1 | 1.109 | 798147 | 160154 | 721 | 1802 | 222 | 0.48(0.37-0.51) | |
| 13C-OCDD | | | | | | | | | | | |
| 469.7780 | 53:59 | 54:00 | -1 | 1.188 | 839650 | 208241 | 212 | 530 | 982 | | |
| 471.7750 | 53:59 | 54:00 | -1 | 1.188 | 938745 | 228611 | 385 | 962 | 594 | 0.89(0.76-1.02) | |
| 13C-OCDF | | | | | | | | | | | |
| 453.7830 | 54:07 | 54:08 | -1 | 1.191 | 1178142 | 287973 | 163 | 407 | 1767 | | |
| 455.7801 | 54:07 | 54:08 | -1 | 1.191 | 1288284 | 303895 | 369 | 922 | 824 | 0.91(0.76-1.02) | |
| 37Cl4-2,3,7,8-TCDD | | | | | | | | | | | |
| 327.8847 | 31:03 | 31:03 | 2 | 1.018 | 376540 | 38457 | 92 | 230 | 418 | | |
| 13C-1,2,3,4-TCDD | | | | | | | | | | | |
| 331.9368 | 30:30 | 30:28 | 2 | | 1375101 | 155684 | 206 | 515 | 756 | | |
| 333.9338 | 30:30 | 30:28 | 2 | | 1706006 | 183776 | 122 | 305 | 1506 | 0.81(0.65-0.89) | |
| 13C-1,2,3,7,8,9-HxCDD | | | | | | | | | | | |
| 401.8559 | 45:25 | 45:25 | 1 | | 1678194 | 406780 | 226 | 565 | 1800 | | |
| 403.8529 | 45:25 | 45:25 | 1 | | 1335566 | 319675 | 95 | 237 | 3365 | 1.26(1.05-1.43) | |

## QC Flag Legend

Review Flags

U - Marked Undetected

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d
Lims ID: LCS 140-27087/11-A
Client ID:
Inject. Date: 28-Jan-2019 02:07:00 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27191 Lims Sample ID: 3

Non-2,3,7,8-sub-TCDF, RT: 28.346

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 2,3,7,8-TCDF | 1.088 | D 13C-2,3,7,8-TCDF | 50.000 | 2206419 | 246644 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.088 | | 50.000 | 2206419 | 246644 |

Sum the Uncalibrated Results

| RT | 303.9016 Area | 303.9016 Height | 305.8987 Area | 305.8987 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 22:43 | 571 | 134 | 625 | 143 | 0.0249 | 0.91 | RQ |
| 22:43 | 481 | 110 | 625 | 143 | 0.0230 | | Empc Correction |
| 27:55 | 1125 | 215 | 1844 | 285 | 0.0618 | 0.61 | RQ |
| 27:55 | 1125 | 215 | 1461 | 279 | 0.0539 | | Empc Correction |
| 34:05 | 927 | 138 | 893 | 117 | 0.0379 | 1.04 | RQ |
| 34:05 | 687 | 90 | 893 | 117 | 0.0329 | | Empc Correction |

Compound is Marked ND

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d
Lims ID: LCS 140-27087/11-A
Client ID:
Inject. Date: 28-Jan-2019 02:07:00 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27191 Lims Sample ID: 3

Non-2,3,7,8-sub-PeCDD, RT: 39.522

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,7,8-PeCDD | 1.043 | D 13C-1,2,3,7,8-PeCDD | 50.000 | 1232965 | 284505 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.043 | | 50.000 | 1232965 | 284505 |

Sum the Uncalibrated Results

| RT | 355.8546 Area | 355.8546 Height | 357.8516 Area | 357.8516 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 37:45 | 2894 | 435 | 2005 | 416 | 0.1904 | 1.44 | |
| 41:20 | 6930 | 1011 | 4837 | 821 | 0.4573 | 1.43 | |

Compound is Marked ND

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d
Lims ID: LCS 140-27087/11-A
Client ID:
Inject. Date: 28-Jan-2019 02:07:00 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27191 Lims Sample ID: 3

Non-2,3,7,8-sub-PeCDF, RT: 38.126

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,7,8-PeCDF | 1.190 | D 13C-1,2,3,7,8-PeCDF | 50.000 | 1846440 | 371023 |
| 2,3,4,7,8-PeCDF | 1.109 | D 13C-2,3,4,7,8-PeCDF | 50.000 | 1816105 | 396855 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.150 | | 50.000 | 1831272 | 383939 |

Sum the Uncalibrated Results

| RT | 339.8597 Area | 339.8597 Height | 341.8567 Area | 341.8567 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 39:26 | 8607 | 1498 | 6346 | 1438 | 0.3551 | 1.36 | |

Compound is Marked ND

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d
Lims ID: LCS 140-27087/11-A
Client ID:
Inject. Date: 28-Jan-2019 02:07:00 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27191 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDD, RT: 44.384

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,4,7,8-HxCDD | 1.141 | D 13C-1,2,3,4,7,8-HxCDD | 50.000 | 1198560 | 294723 |
| 1,2,3,6,7,8-HxCDD | 1.148 | D 13C-1,2,3,6,7,8-HxCDD | 50.000 | 1248154 | 306337 |
| 1,2,3,7,8,9-HxCDD | 1.221 | | | | |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.170 | | 50.000 | 1223357 | 300530 |

Sum the Uncalibrated Results

| RT | 389.8158 Area | 389.8158 Height | 391.8127 Area | 391.8127 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 43:22 | 13578 | 3840 | 11123 | 3122 | 0.8628 | 1.22 | |

Compound is Marked ND

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d
Lims ID: LCS 140-27087/11-A
Client ID:
Inject. Date: 28-Jan-2019 02:07:00 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27191 Lims Sample ID: 3

Non-2,3,7,8-sub-HpCDD, RT: 49.151

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 1.120 | D 13C-1,2,3,4,6,7,8-HpCDD | 50.000 | 1134396 | 216252 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.120 | | 50.000 | 1134396 | 216252 |

Sum the Uncalibrated Results

| RT | 423.7767 Area | 423.7767 Height | 425.7737 Area | 425.7737 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 48:35 | 24476 | 5174 | 26909 | 5171 | 2.02 | 0.91 | |

Compound is Marked ND

TestAmerica Knoxville
AreaSum WorkSheet Report

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d
Lims ID: LCS 140-27087/11-A
Client ID:
Inject. Date: 28-Jan-2019 02:07:00 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: D2A Operator: Xcalibur_System
Lims Batch ID: 27191 Lims Sample ID: 3

Non-2,3,7,8-sub-HpCDF, RT: 49.404

Initial Calibration RRF IsoDil Std Amount Added and Responses

| Target Compound | RRF | Iso Dil Std Compound | Amount pg/ul | Area | Height |
|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDF | 1.498 | D 13C-1,2,3,4,6,7,8-HpCDF | 50.000 | 1407355 | 301700 |
| 1,2,3,4,7,8,9-HpCDF | 1.381 | D 13C-1,2,3,4,7,8,9-HpCDF | 50.000 | 1178613 | 237591 |

Averages:

| | RRFn | | Qis | Ris Area | Ris Height |
|---|---|---|---|---|---|
| | 1.440 | | 50.000 | 1292984 | 269645 |

Sum the Uncalibrated Results

| RT | 407.7817 Area | 407.7817 Height | 409.7788 Area | 409.7788 Height | Amount | Ratio | Flags |
|---|---|---|---|---|---|---|---|
| 48:43 | 12235 | 2390 | 12932 | 2517 | 0.6761 | 0.95 | |

Compound is Marked ND

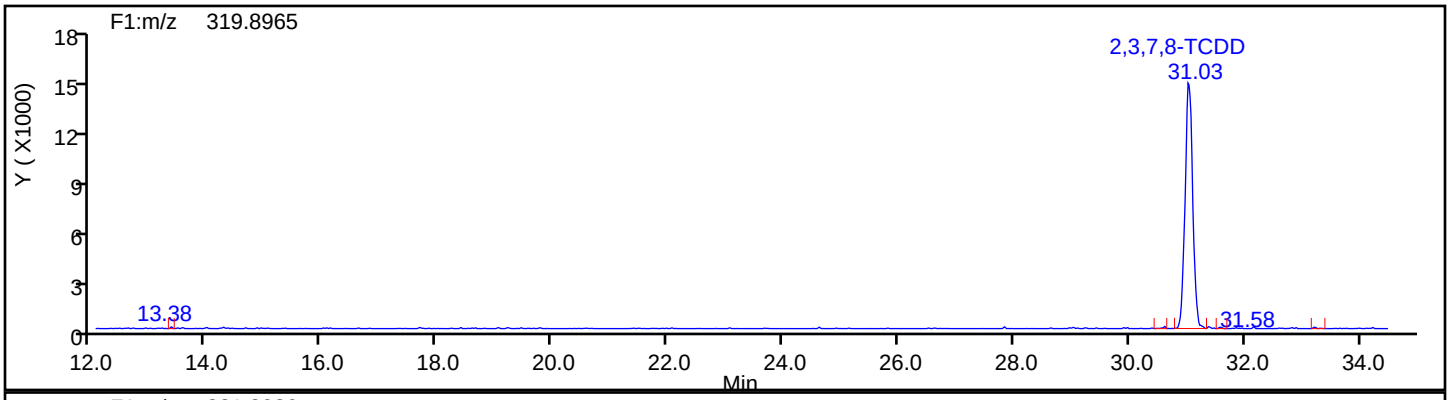
Report Date: 28-Jan-2019 08:25:59 Chrom Revision: 2.3 15-Jan-2019 08:51:34

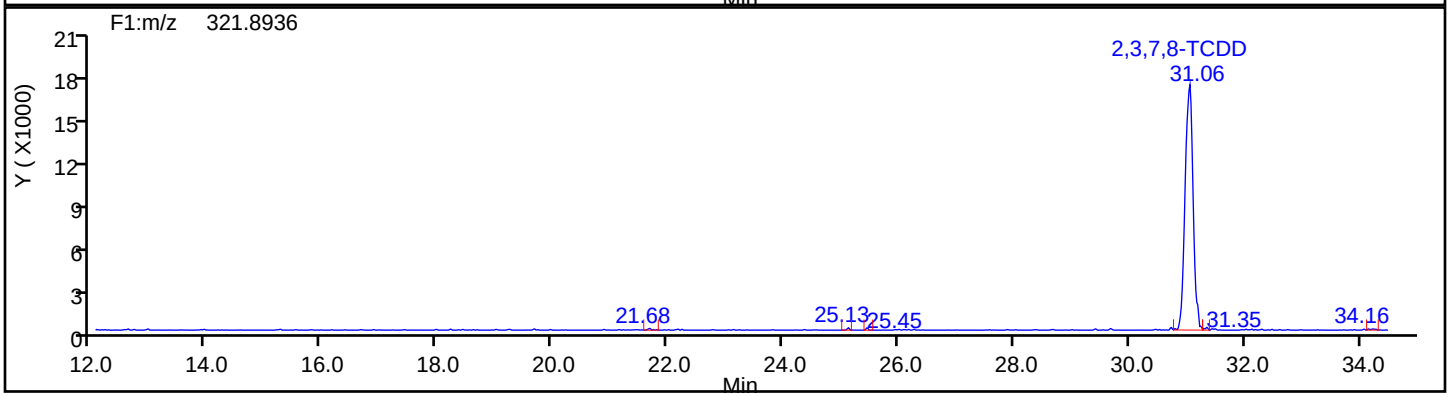
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d

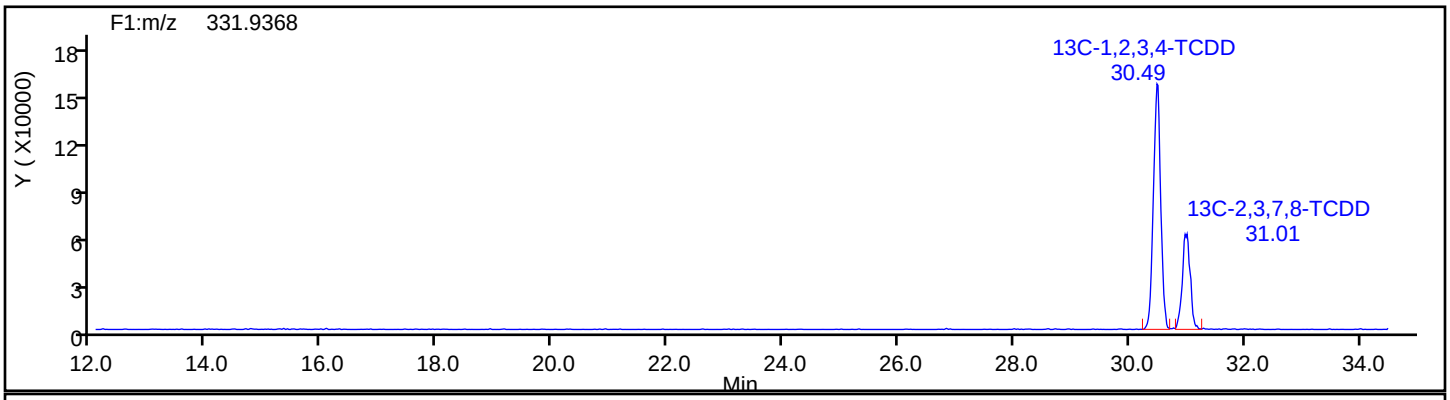
| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 02:07:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

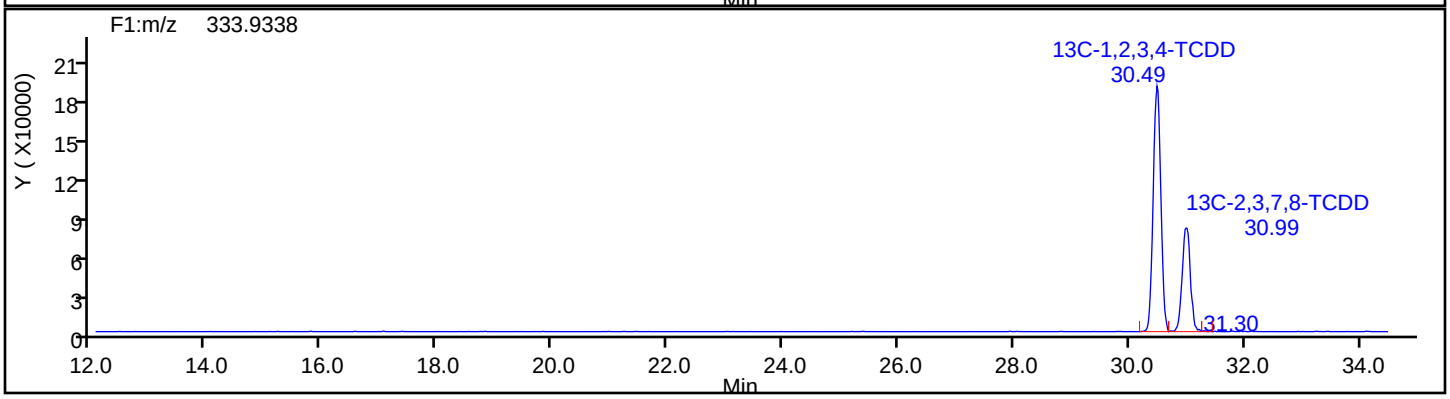
TCDD




TCDD Standards



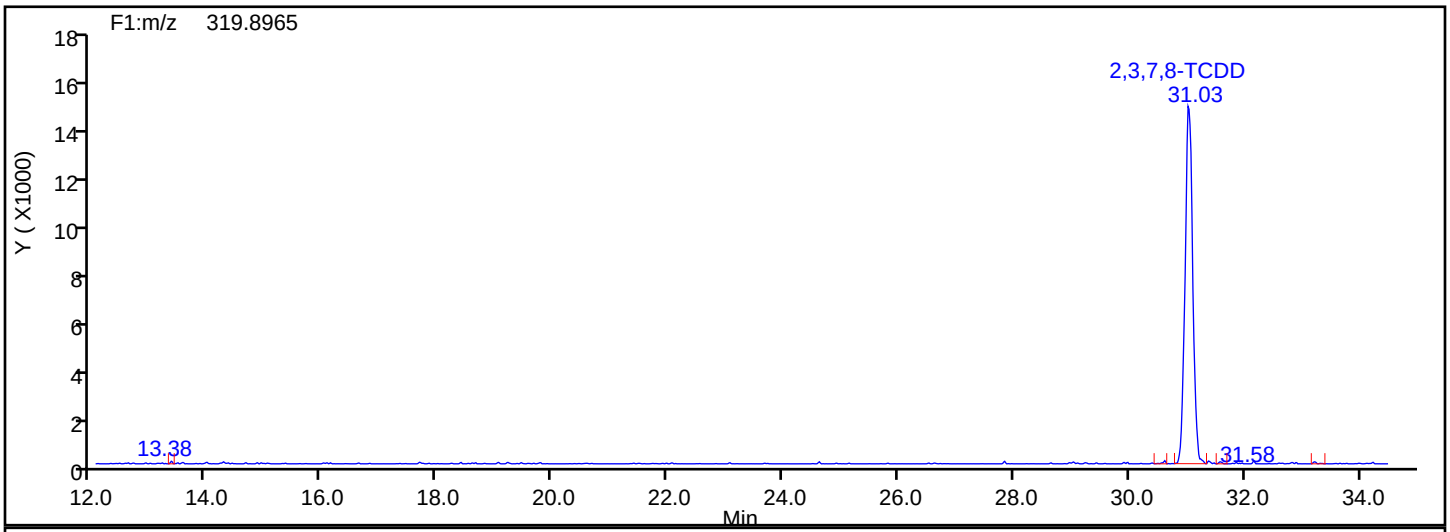
Report Date: 28-Jan-2019 08:25:59 Chrom Revision: 2.3 15-Jan-2019 08:51:34

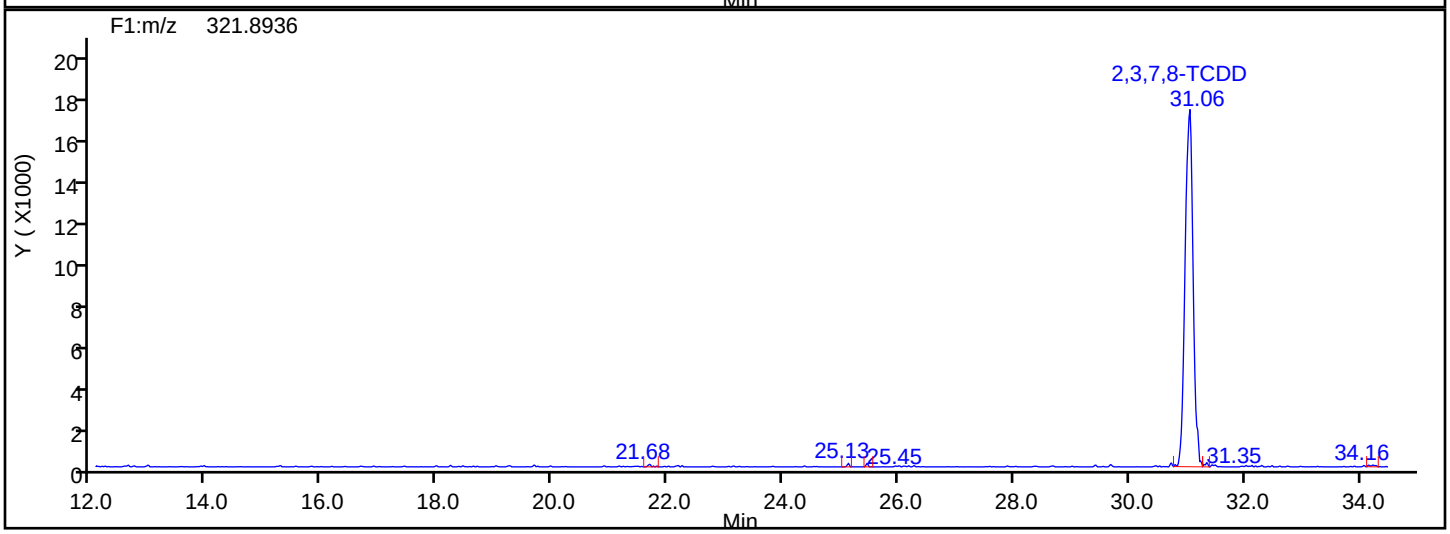
TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d

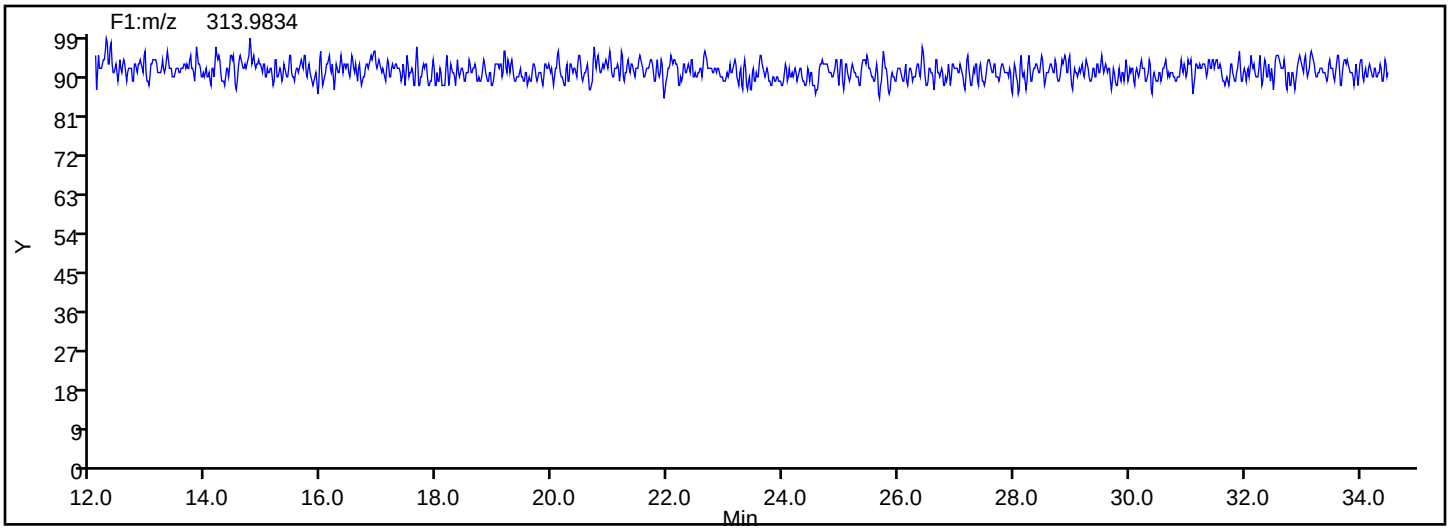
| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 02:07:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

TCDD




TCDD Lock Mass



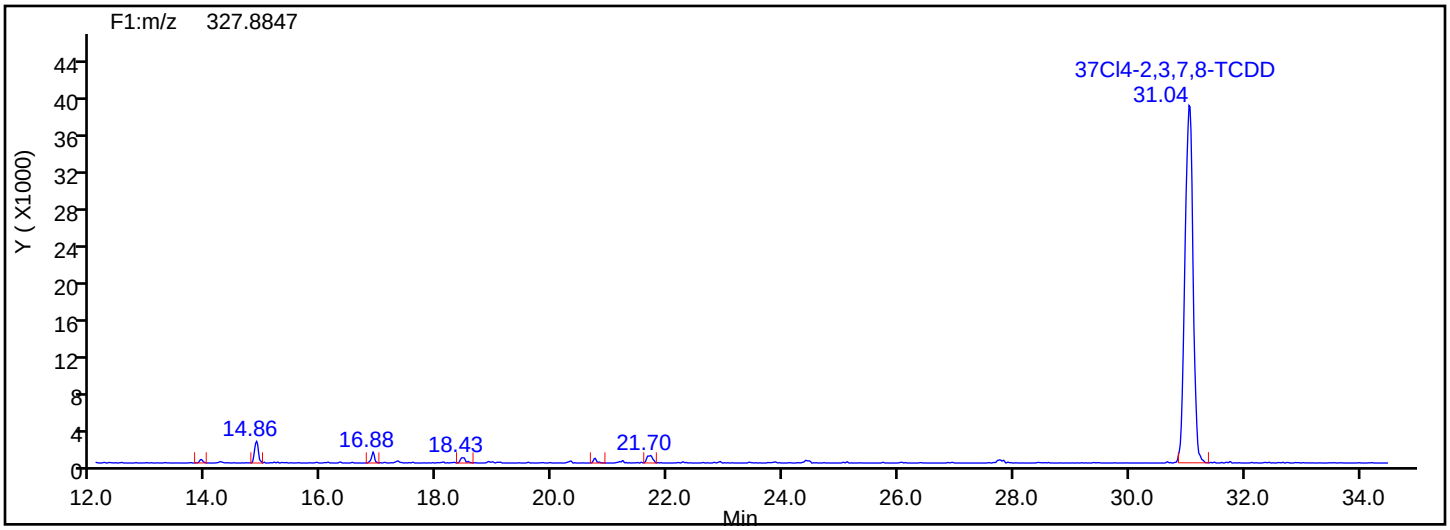
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TestAmerica Knoxville

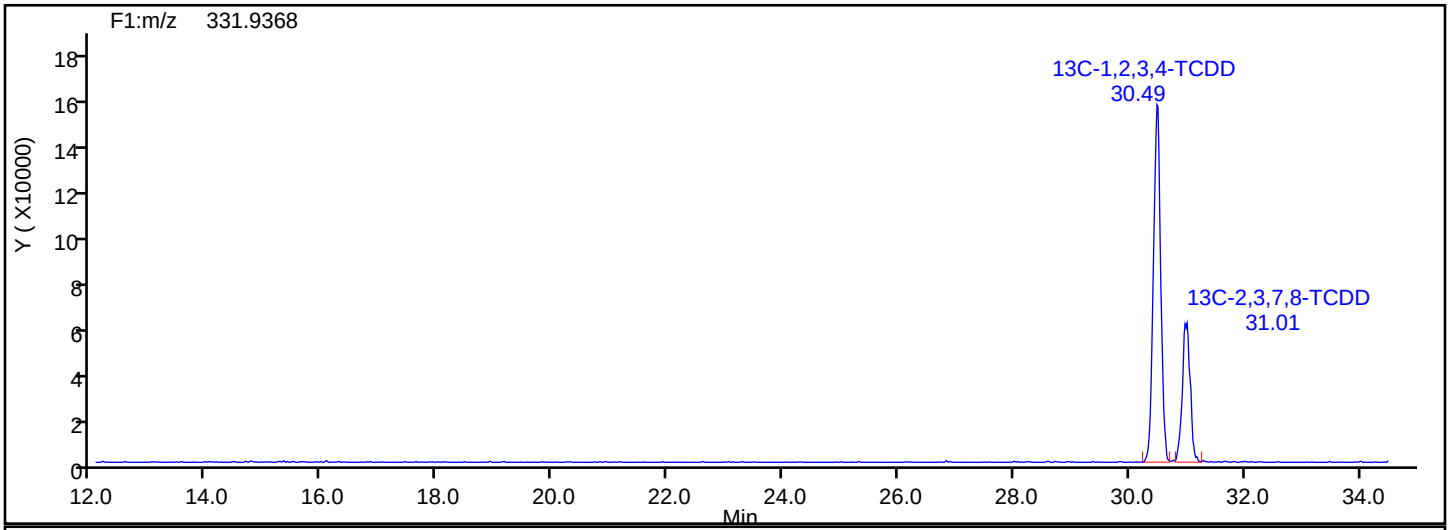
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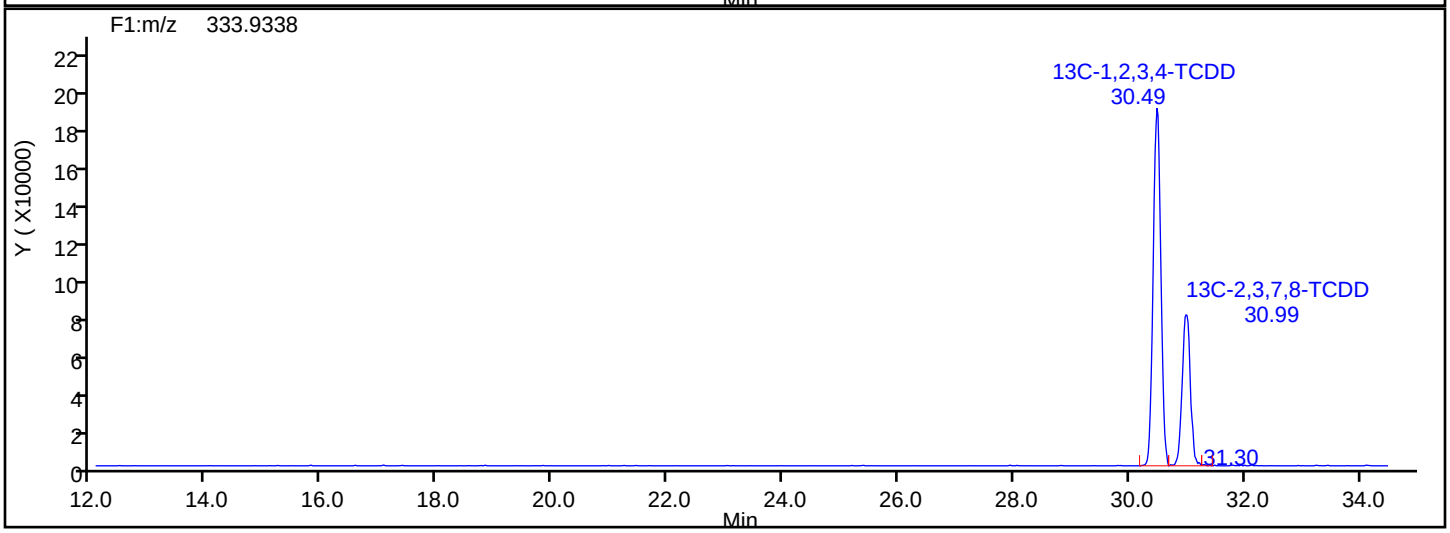
| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 02:07:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Standards



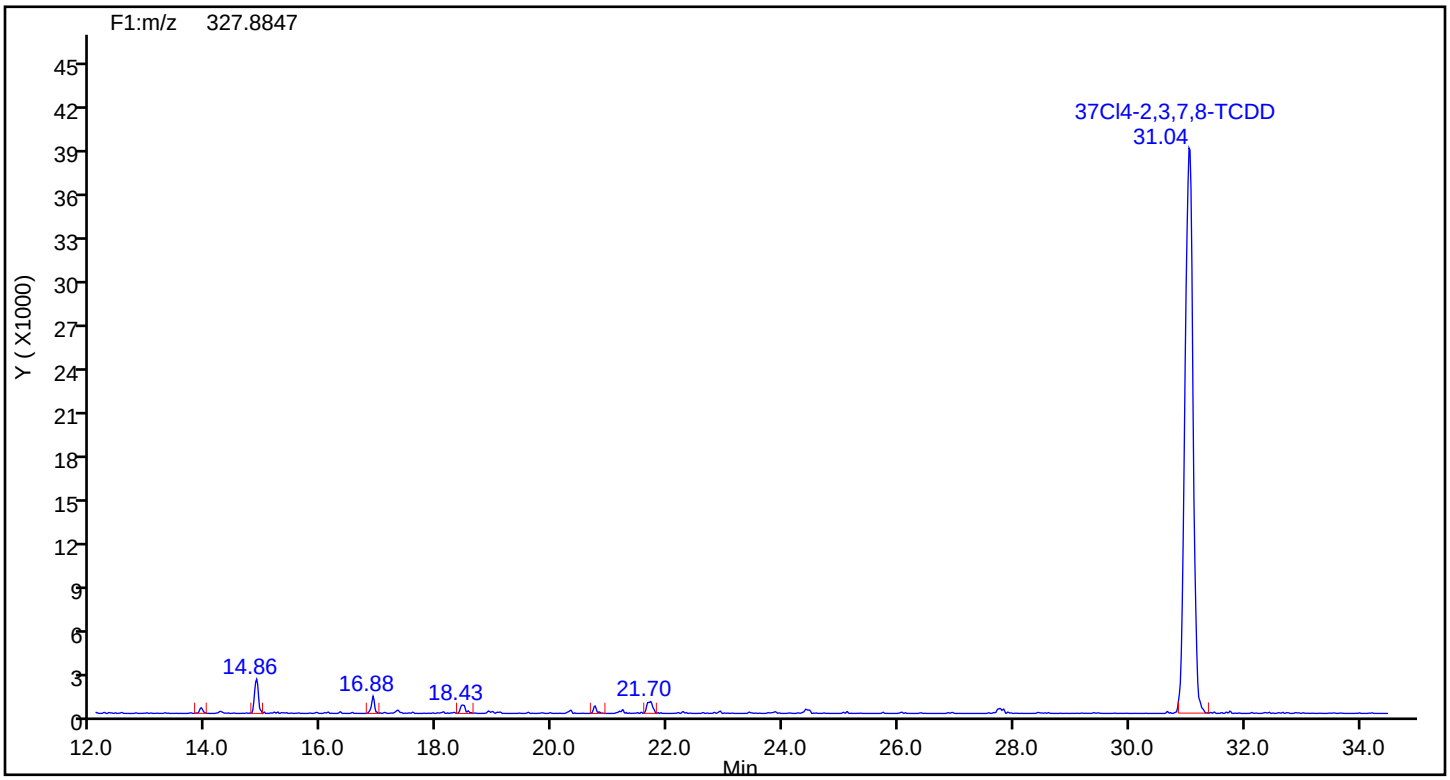
Report Date: 28-Jan-2019 08:25:59 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Knoxville

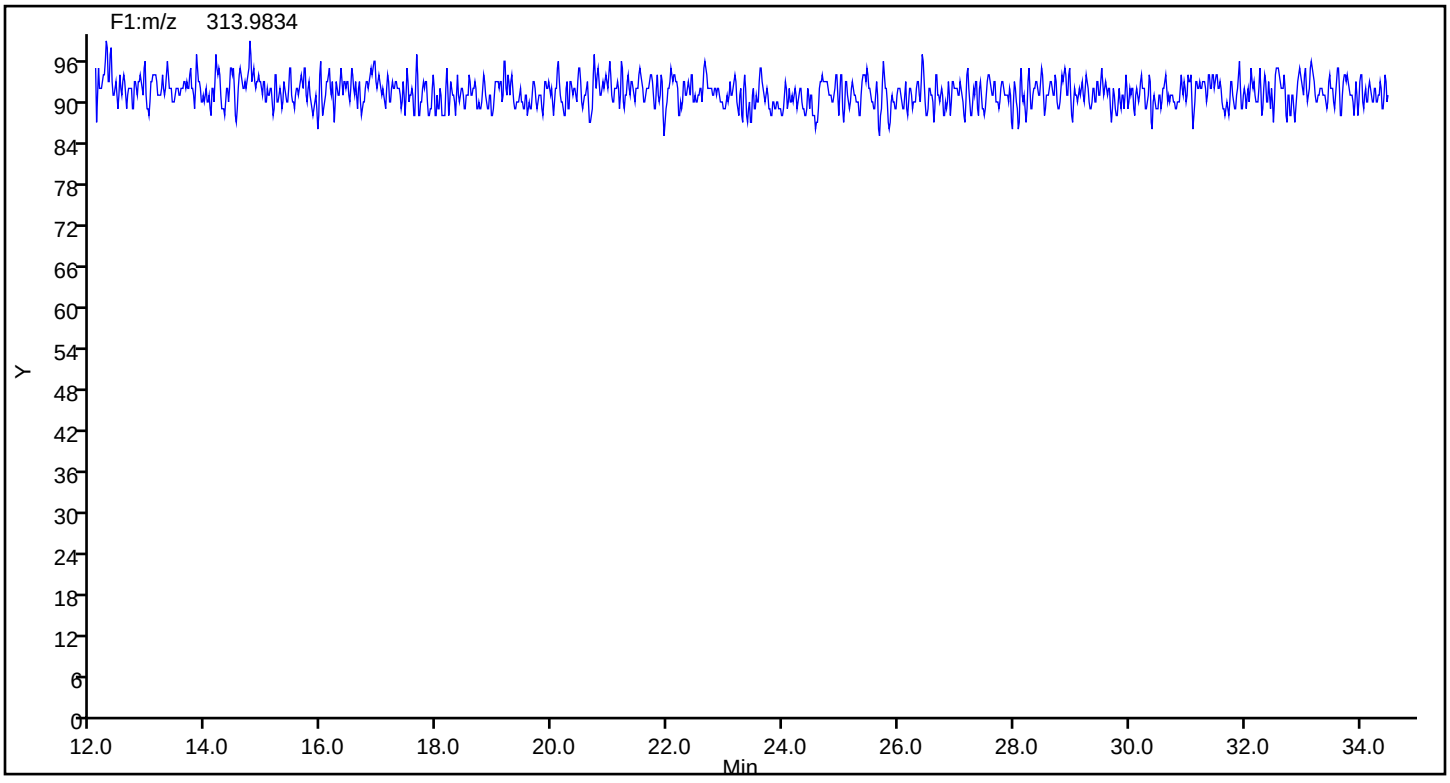
Data File: \\chromna\Knoxville\ChromData\D2A\20190127-10654.b\LCS140-270885-Aa.d

| | | | |
|---|---|---|---|
| Injection Date: | 28-Jan-2019 02:07:00 | Injection Vol: | 1.0 ul |
| Instrument ID: | D2A | Operator ID: | Xcalibur_System |
| Method: | D2A_Dioxin | Limit Group: | HR - 1613B - ICAL |
| Client ID: | | | |
| Worklist#: | 27191 | Sample Line#: | 3 |
| Column Type: | | Column Dia: | |

37Cl4-TCDD




37Cl4-TCDD Lock Mass



DIOXIN ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

Instrument ID: D2A Start Date: 05/16/2014 10:23

Analysis Batch Number: 7768 End Date: 05/16/2014 20:36

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| WDM 140-7768/1 | | 05/16/2014 10:23 | 1 | d3140516w1.d | RTX-5 0.32(mm) |
| IC 140-7768/2 | | 05/16/2014 14:26 | 1 | d3140516i1.d | RTX-5 0.32(mm) |
| IC 140-7768/3 | | 05/16/2014 15:26 | 1 | d3140516i2.d | RTX-5 0.32(mm) |
| IC 140-7768/4 | | 05/16/2014 16:27 | 1 | d3140516i3.d | RTX-5 0.32(mm) |
| IC 140-7768/5 | | 05/16/2014 17:29 | 1 | d3140516i4.d | RTX-5 0.32(mm) |
| IC 140-7768/6 | | 05/16/2014 18:31 | 1 | d3140516i5.d | RTX-5 0.32(mm) |
| ICV 140-7768/7 | | 05/16/2014 20:36 | 1 | d3140516ss.d | RTX-5 0.32(mm) |

# TestAmerica Knoxville Dioxin GC/MS Initial Calibration Data Review / Narrative Checklist
## Method: 1613B - KNOX-ID-0004-R12

| Mass Res. / Date/Time: | 5-16-14/10:01 | Instr: | D2A | Win Filename: | d31405160l | Col Perf Filename: | d31405160l |
|---|---|---|---|---|---|---|---|

| CS0.5 Filename | CS1 Filename | CS2 Filename | CS3 Filename | CS4 Filename | CS5 Filename |
|---|---|---|---|---|---|
| d31405161b | d31405161l | d31405160z | d31405160 3 | d31405161 4 | d31405161 5 |

| Review Items | N/A | Yes | No | If No, why is data reportable? | 2nd Level |
|---|---|---|---|---|---|
| 1. Was the mass resolution documented before beginning the initial calibration? | | ✓ | | | ✓ |
| 2. Was the instrument resolution >10,000 (<100 ppm) on PFK m/z 304.9824 and m/z 380.9760 (MAT) and > 10,000 on FC43 m/z 313.9838, 351.9802 and 363.9807? FC43 m/z 313.9838, 351.9802 and 375.9802? FC43 m/z 375.9802, 401.9770 and 413.9770? FC43 m/z 413.9775, 425.9770 and 463.9738? FC43 m/z 425.9775, 463.9743 and 501.9706? (DFS) | | ✓ | | | ✓ |
| 3. Was the measured exact mass of m/z 380.9760 (PFK) or m/z363.9807 (FC43) within 5 ppm at reduced accelerating voltage? | | ✓ | | | ✓ |
| 4. Was the Window Defining Mixture analyzed and the MID switchpoints set to encompass the retention time windows of each congener group? | | ✓ | | | ✓ |
| 5. Was the Column Performance solution analyzed and the %Valley ≤25 for separation between 2378-TCDD/F and the closest eluting non-2378 isomer on their respective columns? | | ✓ | | | ✓ |
| 6. Were the five calibration standard solutions, at the concentrations specified in Table 5 of the SOP, analyzed (6 point calibration used for microwave extractions)? | | ✓ | | | ✓ |
| 7. Was date/time of analysis verified between analysis header and logbook as correct? | | ✓ | | | ✓ |
| 8. Were the response factors calculated for each labeled standard and unlabeled native analyte using the SOP specified reference compound (Table 3), quantitation ions (Table 21) and formula (Section 10.2.7)? | | ✓ | | | ✓ |
| 9. Is the retention time of $^{13}C_{12}$-1,2,3,4-TCDD >25.0 minutes on the DB/Rtx-5 column (15.0 minutes on the DB/Rtx-225 column)? | | ✓ | | | ✓ |
| 10. Are the relative retention times of all PCDDs/PCDFs and all labeled compounds within the limits specified in Table 3? | | ✓ | | | ✓ |
| 11. Are %RSD ≤20% for all unlabeled native analytes except 1,2,3,7,8,9-HxCDD and OCDF? | | ✓ | | | ✓ |
| 12. Are %RSD ≤35% for 1,2,3,7,8,9-HxCDD and OCDF and all labeled internal standards? | | ✓ | | | ✓ |
| 13. Are all S/N ratios ≥10 for the GC signals in each EICP (extracted ion chromatographic profile) including internal standards? | | ✓ | | | ✓ |
| 14. Are the ion abundance ratios for all labeled and unlabeled analytes within the control limits specified in Table 22 of the SOP? | | ✓ | | | ✓ |
| 15. Was the second source ICV standard analyzed according to Sec 10.2.9 of the SOP? | | ✓ | | | ✓ |
| 16. If manual integrations were performed, are they clearly identified, initialed and dated? | ✓ | | | | ✓ |
| 17. Were before/after chromatograms reviewed to determine whether the software and manual integrations were appropriate? | | ✓ | | | ✓ |
| 18. Were manual integrations documented properly? | ✓ | | | | ✓ |
| 19. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder? | ✓ | | | | ✓ |
| 20. Does the ICAL folder contain **complete** data in the following order: Data review checklist, a **complete** run log, Avg. %RSD summary, Ratio summary, Calculation summary, PFK/FC43 resolution/peak match documentation; Total RIC, EICP's and manual integration - for window and all standards, in order from low to high standard, ICV Summary Table, Calculation Summary, and chromatograms? | | ✓ | | | ✓ |

| Analyst: | Date: 5/19/14 | 2nd Level Reviewer: | Date: 5/19/14 |
|---|---|---|---|
| Comments: | | Comments: | |

ID023R15doo, 041913

# TestAmerica Knoxville Dioxin GC/MS Initial Calibration Data Review / Narrative Checklist
## Method: 8290/8290A - KNOX-ID-0004-R12

| Mass Res. Y Date/Time: | 5/16/14 10:01 | Instr | D2A | Win Filename: | d31405160 1 | Col Perf Filename: | d31405160 1 |
|---|---|---|---|---|---|---|---|

| CS0.5 Filename | CS1 Filename | CS2 Filename | CS3 Filename | CS4 Filename | CS5 Filename |
|---|---|---|---|---|---|
| d31405160 i 6 | d31405160 i 1 | d31405160 i 2 | d31405160 i 3 | d31405160 i 4 | d31405160 i 5 |

| Review Items | N/A | Yes | No | If No, why is data reportable? | 2nd Level |
|---|---|---|---|---|---|
| 1. Was the mass resolution documented before beginning the initial calibration? | | ✓ | | | ✓ |
| 2. Was the instrument resolution >10,000 (<100 ppm) on PFK m/z 304.9824 and m/z 380.9760 (MAT) and > 10,000 on<br>FC43 m/z 313.9838, 351.9802 and 363.9807?<br>FC43 m/z 313.9838, 351.9802 and 375.9802?<br>FC43 m/z 375.9802, 401.9770 and 413.9770?<br>FC43 m/z 413.9775, 425.9770 and 463.9738?<br>FC43 m/z 425.9775, 463.9743 and 501.9706? (DFS) | | ✓ | | | ✓ |
| 3. Was the measured exact mass of m/z 380.9760 (PFK) or 363.9807 (FC43) within 5 ppm at reduced accelerating voltage? | | ✓ | | | ✓ |
| 4. Was the Window Defining Mixture analyzed and the MID switchpoints set to encompass the retention time windows of each congener group? | | ✓ | | | ✓ |
| 5. Was the Column Performance solution analyzed and the %Valley ≤25 for separation between 2378-TCDD/F and the closest eluting non-2378 isomer on their respective columns? | | ✓ | | | ✓ |
| 6. Were the five calibration standard solutions, at the concentrations specified in Table 5 of the SOP, analyzed (6 point calibration used for microwave extractions)? | | ✓ | | | ✓ |
| 7. Was date/time of analysis verified between analysis header and logbook as correct? | | ✓ | | | ✓ |
| 8. Were the response factors calculated for each labeled standard and unlabeled native analyte using the SOP specified reference compound (Table 3), quantitation ions (Table 21), and formula (Section 10.2.7)? | | ✓ | | | ✓ |
| 9. Are the relative retention times of all PCDDs/PCDFs and all labeled compounds within the limits specified in Table 3? | | ✓ | | | ✓ |
| 10. Are %RSD ≤20% for all unlabeled native analytes? | | ✓ | | | ✓ |
| 11. 8290, are %RSD ≤30% for all labeled internal standards? | | ✓ | | | ✓ |
| 12. 8090A, are %RSD ≤20% for all labeled internal standards? | | ✓ | | | ✓ |
| 13. Are all S/N ratios ≥10 for the GC signals in each EICP (extracted ion chromatographic profile) including internal standards? | | ✓ | | | ✓ |
| 14. Are the ion abundance ratios for all labeled and unlabeled analytes within the control limits specified in Table 22 of the SOP? | | ✓ | | | ✓ |
| 15. Was the second source ICV standard analyzed according to Sec 10.2.9 of the SOP? | | ✓ | | | ✓ |
| 16. If manual integrations were performed, are they clearly identified, initialed and dated? | ✓ | | | | ✓ |
| 17. Were before/after chromatograms reviewed to determine whether the software and manual integrations were appropriate? | | ✓ | | | ✓ |
| 18. Were manual integrations documented properly? | ✓ | | | | ✓ |
| 19. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder? | ✓ | | | | ✓ |
| 20. Does the ICAL folder contain **complete** data in the following order? Data review checklist, a **complete** runlog, Avg. %RSD summary, Ratio summary, Calculation summary, PFK/FC43 resolution/peak match documentation; Total RIC, EICP's and manual integration - for window and all standards, in order from low to high standard, ICV Summary Table, Calculation Summary, and chromatograms? | | ✓ | | | ✓ |

| Analyst: | Date: 5/19/14 | 2nd Level Reviewer: | Date: 5/19/14 |
|---|---|---|---|
| Comments: | | Comments: | |

ID022R18.doc, 042213

# TestAmerica Knoxville Dioxin GC/MS Initial Calibration Data Review / Narrative Checklist
## Method: 8290/8290A - KNOX-ID-0004-R14

| Mass Res. ✓ Date/Time: | 5/16/14 10:01 | Inst: | D2A | Win Filename: | d31405l6w1 | Col Perf Filename: | d31405l6w1 |
|---|---|---|---|---|---|---|---|

| CS0.5 Filename | CS1 Filename | CS2 Filename | CS3 Filename | CS4 Filename | CS5 Filename |
|---|---|---|---|---|---|
| d31405l6i6 | d31405l6i1 | d31405l6i2 | d31405l6i3 | d31405l6i4 | d31405l6i5 |

| Review Items | N/A | Yes | No | If No, why is data reportable? | 2nd Level |
|---|---|---|---|---|---|
| 1. Was the mass resolution documented before beginning the initial calibration? | | ✓ | | | ✓ |
| 2. Was the instrument resolution >10,000 (<100 ppm) on PFK m/z 304.9824 and m/z 380.9760 (MAT) and > 10,000 on FC43 m/z 313.9838, 351.9802 and 363.9807? FC43 m/z 313.9838, 351.9802 and 375.9802? FC43 m/z 375.9802, 401.9770 and 413.9770? FC43 m/z 413.9775, 425.9770 and 463.9738? FC43 m/z 425.9775, 463.9743 and 501.9706? (DFS) | | ✓ | | | ✓ |
| 3. Was the measured exact mass of m/z 380.9760 (PFK) or 363.9807 (FC43) within 5 ppm at reduced accelerating voltage? | | ✓ | | | ✓ |
| 4. Was the Window Defining Mixture analyzed and the MID switchpoints set to encompass the retention time windows of each congener group? | | ✓ | | | ✓ |
| 5. Was the Column Performance solution analyzed and the %Valley ≤25 for separation between 2378-TCDD/F and the closest eluting non-2378 isomer on their respective columns? | | ✓ | | | ✓ |
| 6. Was DoD Performance check criteria met? Identification of all first and last eluters of the eight homologue retention time windows and documentation by labeling (F/L) on the chromatogram Absolute retention times for switching from one homologous series to the next ≥ 10 seconds for all components of the mixture. | | ✓ | | | ✓ |
| 7. Were the five calibration standard solutions, at the concentrations specified in Table 5 of the SOP, analyzed (6 point calibration used for microwave extractions)? | | ✓ | | | ✓ |
| 8. Was date/time of analysis verified between analysis header and logbook as correct? | | ✓ | | | ✓ |
| 9. Were the response factors calculated for each labeled standard and unlabeled native analyte using the SOP specified reference compound (Table 3), quantitation ions (Table 21), and formula (Section 10.2.7)? | | ✓ | | | ✓ |
| 10. Are the relative retention times of all PCDDs/PCDFs and all labeled compounds within the limits specified in Table 3? | | ✓ | | | ✓ |
| 11. Are %RSD ≤20% for all unlabeled native analytes? | | ✓ | | | ✓ |
| 12. 8290, are %RSD ≤30% for all labeled internal standards? | | ✓ | | | ✓ |
| 13. 8090A, are %RSD ≤20% for all labeled internal standards? | | ✓ | | | ✓ |
| 14. Are all S/N ratios ≥10 for the GC signals in each EICP (extracted ion chromatographic profile) including internal standards? | | ✓ | | | ✓ |
| 15. Are the ion abundance ratios for all labeled and unlabeled analytes within the control limits specified in Table 22 of the SOP? | | ✓ | | | ✓ |
| 16. Was the second source ICV standard analyzed according to Sec 10.2.9 of the SOP? | | ✓ | | | ✓ |
| 17. Was DoD ICV Criteria met? (For unlabeled standards, RF within ± 20% D of RF established in the ICAL.For labeled standards, RF within ± 30% D of the mean RF established in ICAL. | | ✓ | | | ✓ |
| 1. If manual integrations were performed, are they clearly identified, initialed and dated? | ✓ | | | | ✓ |
| 2. Were before/after chromatograms reviewed to determine whether the software and manual integrations were appropriate? | | ✓ | | | ✓ |
| 3. Were manual integrations documented properly? | ✓ | | | | ✓ |
| 18. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder? | ✓ | | | | ✓ |
| 19. Does the ICAL folder contain complete data in the following order? Data review checklist, a complete runlog, Avg. %RSD summary, Ratio summary, Calculation summary, PFK/FC43 resolution/peak match documentation; Total RIC, EICP's and manual integration - for window and all standards, in order from low to high standard, ICV Summary Table, Calculation Summary, and chromatograms? | | ✓ | | | ✓ |

| Analyst: | Date: 11/18/14 | 2nd Level Reviewer : | Date: 11/18/14 |
|---|---|---|---|
| Comments: | | Comments: | |

DIOXIN ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 160-32649-1

SDG No.:

Instrument ID: D2A Start Date: 01/28/2019 01:01

Analysis Batch Number: 27191 End Date: 01/28/2019 09:03

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| WDMCCV 140-27191/1 | | 01/28/2019 01:01 | 1 | d3190128s1.d | RTX-5 0.32(mm) |
| ZZZZZ | | 01/28/2019 02:07 | 1 | | RTX-5 0.32(mm) |
| LCS 140-27087/11-A | | 01/28/2019 02:07 | 1 | LCS140-270885-Aa.d | RTX-5 0.32(mm) |
| ZZZZZ | | 01/28/2019 03:06 | 1 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/28/2019 03:18 | 1 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/28/2019 03:31 | 1 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/28/2019 03:43 | 1 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/28/2019 03:56 | 1 | | RTX-5 0.32(mm) |
| MB 140-27087/10-A | | 01/28/2019 03:56 | 1 | MB140-270884-Aa.d | RTX-5 0.32(mm) |
| ZZZZZ | | 01/28/2019 04:58 | 3 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/28/2019 05:59 | 3 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/28/2019 07:00 | 3 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/28/2019 08:02 | 3 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/28/2019 09:03 | 3 | | RTX-5 0.32(mm) |

## TestAmerica Knoxville Dioxin GC/MS Continuing Calibration Review / Narrative Checklist
## Method: _8290 V 8290A V 1613B - KNOX-ID-0004-R19

| | | | | | |
|---|---|---|---|---|---|
| Start Mass Res. ✓: | 00:47 | Start Ver Filename: | d31901285 1 | Inst/Date: | D21 |
| End Mass Res. ✓: | 11:40 | Win/CPS Filename: | ↓ | ICAL Event #(s): | 825, 827, 828 |
| WL#: | 10654 | End Ver Filename: | d31901285 2 | Job # (s): | SeeComments |
| AD Batch #(s): | 27191, 27192, 27193 | | | | |

| Review Items | N/A | Yes | No | If No, why is data reportable? | 2nd √ |
|---|---|---|---|---|---|
| 1. Was the mass resolution documented at both the beginning and end of the 12 hour shift and is data verified as within the 12 hour clock? Was the continuing calibration performed at the beginning of the shift (all methods) and ending of the shift (8290/8290A)? | | ✓ | | | ✓ |
| 2. Was the instrument resolution >10,000 (<100 ppm) on either PFK or FC43 for the masses listed in SOP section 10.2.3? | | ✓ | | | ✓ |
| 3. Was the measured exact mass within 5 ppm at reduced accelerating voltage for masses listed in the SOP section 10.2.4? | | ✓ | | | ✓ |
| 4. Was the Window Defining Mixture analyzed and the MID switchpoints set to encompass the retention time windows of each congener group? | | ✓ | | | ✓ |
| 5. Was the Column Performance solution analyzed and the %Valley ≤25 for separation between 2378-TCDD/F and the closest eluting non-2378 isomer on their respective columns? | | ✓ | | | ✓ |
| 6. Was DoD Performance check criteria met? | | ✓ | | | ✓ |
| 7. Were the response factors calculated for each labeled standard and unlabeled native analyte using the SOP specified reference compound (Table 3), quantitation ions (Table 21), and formula (Section 10.2.7)? | | ✓ | | | ✓ |
| 8. Are the measured RRFs and/or concentrations for each compound within the specified control limits in Table 7 for all PCDDs/PCDFs? | | ✓ | | ☐CCV-Capping, RR Confirms (NCM#_____) ☐CCV-Capping-Detects (8290/8290A) (NCM#_____) ☐CCV-Capping-IDA (8290/8290A) (NCM#_____) | ✓ |
| 9. Are the relative retention times of all PCDDs/PCDFs and all labeled compounds within the limits specified in Table 3 (1613B)? | | ✓ | | | ✓ |
| 10. Is the retention time of $C^{13}$-1,2,3,4-TCDD >25 minutes on the Rtx-5 column and/or >15.0 min on the DB-225? | | ✓ | | | ✓ |
| 11. Are all S/N ratios ≥10 for the GC signals in each EICP (extracted ion chromatographic profile) including IDA's? | | ✓ | | | ✓ |
| 12. Are the ion abundance ratios for all labeled and unlabeled analytes within the control limits specified in Table 22 of the SOP? | | ✓ | | | ✓ |
| 13. Were all reagents used for calibration verified as correct in the reagent tab? | | ✓ | | | ✓ |
| 14. If manual integrations were performed, are the analyst name, reason, and date noted in the AD II batches? Are before and after graphics uploaded to AD II? | | ✓ | | | ✓ |
| 15. Were all graphics checked after upload to AD II? Was the mass res check scanned and attached to the corresponding CCV? | | ✓ | | | ✓ |
| 16. If criteria were not met, was a NCM generated? | ✓ | | | | ✓ |
| 17. Do the AD II batches contain a completed checklist for this work list? | | ✓ | | | ✓ |

Analyst: [signature] Date: 1-28-19

Comments:

240-106601, 280-119105, 280-119173, 280-118993, 460-173660, 240-107020, 160-32649, 240-106949, 680-163005,

2nd Level Reviewer: [signature] Date: 1-28-19

Comments:

**TestAmerica Knoxville Dioxin Batch Data Review Checklist**
**Method: _8290 _X_8290A _X_1613B - KNOX-ID-0004-R19**

**WL #:** 106654
**ADII Batch #(s):** 27191, 27192, 27193
**Job #(s):** See Comments

| Review Items | N/A | Yes | No | Why is data reportable? | 2nd √ |
|---|---|---|---|---|---|
| 1. Was the correct ICAL used for quantitation? (Check ICAL event number in every sample and CCV.) | | ✓ | | ICAL Event # 825, 827, 828 | ✓ |
| 2. Has a Continuing Calibration Checklist been completed for each work list? | | ✓ | | | ✓ |
| 3. Were all special project requirements met (checked in backlog report and in AD II under notes)? | | ✓ | | | ✓ |
| 4. DoD requirements met? | | ✓ | | ☐ NCM#140-11724: Add to Case Narrative if Manual Integrations Performed<br>☐ Narrate reasons for multiple analyses of samples<br># 10-14 - Complex Dilution | ✓ |
| 5. Were the prep factors and dilution factors verified in AD II? | | ✓ | | ☑ Dilution-Respike IDA. (NCM# 140-16151) | ✓ |
| 6. Is date/time of analysis correct and within the 12 hour clock? | | ✓ | | | ✓ |
| 7. Sample analyses done within preparation and analytical HT? (Check for H-flag in sample result in AD II.) | | ✓ | | ☐ Holding Time-Initial Analysis (NCM#_____)<br>☐ Holding Time-Reanalysis (NCM#_____) | ✓ |
| 8. Are IDA ratios within limits specified in Table 22 of the SOP? | | | ✓ | ☑ Abundance ratio outside limit (NCM# 140-16153) | ✓ |
| 9. Are IDAs and cleanup standards within QC limits specified in Table 13? | | ✓ | | ☐ IDA-Low-S/N 10:1 (NCM#_____)<br>☐ IDA-High-Isotope Dilution (NCM#_____) | ✓ |
| 10. Were reported PCDD/Fs which did not meet the criteria below properly calculated and reported as EMPCs?<br>• RT of 2378 isomers within SOP Table 3 limits.<br>• RT of non-2378 isomers within established first/last windows.<br>• Both native ions maximized within ±2 seconds.<br>• Ion abundance ratios within the control limits specified in Table 22 (not adjusted for 8290A).<br>• No corresponding peak at PCDPE mass (**dpe tab checked and flag added in peak review**).<br>• Ion suppression tab checked and **flags added in peak review if needed.**<br>• Co-elution (CI) flags **added manually in AD II if needed**. | | ✓ | | #19, #21 | ✓ |
| 11. Were all 2378-TCDF hits greater than or equal to the ML turned to acceptable on the primary column and confirmed on the DB-225 confirmation column? | | ✓ | | Were all of the samples marked as acceptable for TCDF analyzed on a DB-225 column and the **lower** result reported? | ✓ |
| 12. Are non-detects that are G-qualified narrated? | | ✓① | | ☑ (NCM# 140-16152) | ✓ |
| 13. Are positive results > ML within calibration range? | | ✓ | | ☐ ICAL-Range Exceed;No Sat. (NCM#_____)<br>☐ non-2378's or OCDD/F (NCM#_____) | ✓ |
| 14. Are all manual integrations documented with analyst name, reason, and date noted in AD II? | | ✓ | | | ✓ |
| 15. Were all graphics uploaded into AD II? | | ✓ | | | ✓ |
| 16. Final report acceptable (1. Job Data Review was checked and all CCVs, QC, and samples are turned to 2nd Level, 2. The narrative was checked in Supervisor Desktop for all deviations and grammar errors, and 3. All QC links were verified and at least one sample from every job is linked to the ICAL)? | | ✓ | | | ✓ |
| 17. LCS/LCSD done per prep batch and all analytes within limits? | | ✓ | | ☐ LCS/LCSD-Insuff. Sample (NCM#_____)<br>☐ LCS/LCSD-%R High (NCM#_____) | ✓ |
| 18. Method blank done per prep batch, method/instrument blank analyzed with each sequence and analytes present in the method blank < ML or within specific program requirements? | | ✓ | | ☐ Method Blank-Report, 10X (NCM#_____)<br>☐ Method Blank-Report, ND (NCM#_____)<br>☐ Method Blank-Insuff. Sample (NCM#_____) | ✓ |

**1st Level Reviewed by:** [signature] **Date:** 1/28/19

**Comments:**
240-106601, 280-119105, 280-119173, 280-118993, 460-173660, 240-107020, 160-32649, 240-106949, 680-163005

**2nd Level Reviewed by:** [signature] **Date:** 1/28/19

**Comments:**
①240-106601-A-18, A-22, A-24

DIOXIN ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville  Job No.: 160-32649-1

SDG No.:

Instrument ID: D2A  Start Date: 01/29/2019 09:51

Analysis Batch Number: 27242  End Date: 01/29/2019 14:46

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| WDMCCV 140-27242/1 | | 01/29/2019 09:51 | 1 | d3190129s2.d | RTX-5 0.32(mm) |
| ZZZZZ | | 01/29/2019 10:52 | 1 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/29/2019 11:04 | 1 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/29/2019 11:17 | 1 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/29/2019 11:29 | 1 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/29/2019 11:42 | 1 | | RTX-5 0.32(mm) |
| 160-32649-1 | | 01/29/2019 12:43 | 1 | 160-32649-n-1-a.d | RTX-5 0.32(mm) |
| ZZZZZ | | 01/29/2019 13:45 | 1 | | RTX-5 0.32(mm) |
| ZZZZZ | | 01/29/2019 14:46 | 1 | | RTX-5 0.32(mm) |

## TestAmerica Knoxville Dioxin GC/MS Continuing Calibration Review / Narrative Checklist

**Method:** X 8290 __ 8290A X 1613B - KNOX-ID-0004-R19

| | | | | | |
|---|---|---|---|---|---|
| Start Mass Res. ✓: | 09:38 | Start Ver Filename: | d31901793 2 | Inst/Date: | D2A / 1.29.19 |
| End Mass Res. ✓: | 21:25 | Win/CPS Filename: | 1 | ICAL Event #(s): | 827, 825 |
| WL#: | 10667 | End Ver Filename: | d3190129s23 | Job # (s): | See below |
| AD Batch #(s): | 27241, 27242 | | PMP 1.29.19 | | |

| Review Items | N/A | Yes | No | If No, why is data reportable? | 2nd ✓ |
|---|---|---|---|---|---|
| 1. Was the mass resolution documented at both the beginning and end of the 12 hour shift and is data verified as within the 12 hour clock? Was the continuing calibration performed at the beginning of the shift (all methods) and ending of the shift (8290/8290A)? | | ✓ | | | ✓ |
| 2. Was the instrument resolution >10,000 (<100 ppm) on either PFK or FC43 for the masses listed in SOP section 10.2.3? | | ✓ | | | ✓ |
| 3. Was the measured exact mass within 5 ppm at reduced accelerating voltage for masses listed in the SOP section 10.2.4? | | ✓ | | | ✓ |
| 4. Was the Window Defining Mixture analyzed and the MID switchpoints set to encompass the retention time windows of each congener group? | | ✓ | | | ✓ |
| 5. Was the Column Performance solution analyzed and the %Valley ≤25 for separation between 2378-TCDD/F and the closest eluting non-2378 isomer on their respective columns? | | ✓ | | | ✓ |
| 6. Was DoD Performance check criteria met? | ✓ | | | | ✓ |
| 7. Were the response factors calculated for each labeled standard and unlabeled native analyte using the SOP specified reference compound (Table 3), quantitation ions (Table 21), and formula (Section 10.2.7)? | | ✓ | | | ✓ |
| 8. Are the measured RRFs and/or concentrations for each compound within the specified control limits in Table 7 for all PCDDs/PCDFs? | | ✓ | | ☐ CCV-Capping, RR Confirms (NCM#_____) ☐ CCV-Capping-Detects (8290/8290A) (NCM#_____) ☐ CCV-Capping-IDA (8290/8290A) (NCM#_____) | ✓ |
| 9. Are the relative retention times of all PCDDs/PCDFs and all labeled compounds within the limits specified in Table 3 (1613B)? | | ✓ | | | ✓ |
| 10. Is the retention time of $C^{13}$-1,2,3,4-TCDD >25 minutes on the Rtx-5 column and/or >15.0 min on the DB-225? | | ✓ | | | ✓ |
| 11. Are all S/N ratios ≥10 for the GC signals in each EICP (extracted ion chromatographic profile) including IDA's? | | ✓ | | | ✓ |
| 12. Are the ion abundance ratios for all labeled and unlabeled analytes within the control limits specified in Table 22 of the SOP? | | ✓ | | | ✓ |
| 13. Were all reagents used for calibration verified as correct in the reagent tab? | | ✓ | | | ✓ |
| 14. If manual integrations were performed, are the analyst name, reason, and date noted in the AD II batches? Are before and after graphics uploaded to AD II? | ✓ | | | | ✓ |
| 15. Were all graphics checked after upload to AD II? Was the mass res check scanned and attached to the corresponding CCV? | | ✓ | | | ✓ |
| 16. If criteria were not met, was a NCM generated? | ✓ | | | | ✓ |
| 17. Do the AD II batches contain a completed checklist for this work list? | | ✓ | | | ✓ |

**Analyst:** MJSD **Date:** 1/29/19

**Comments:**

160-32649, 240-107020, 240-106949, 440-229699

**2nd Level Reviewer :** PMP **Date:** 1-29-19

**Comments:**

**TestAmerica Knoxville Dioxin Batch Data Review Checklist**
**Method: X 8290 __ 8290A X 1613B - KNOX-ID-0004-R19**

**WL #:** 10667
**ADII Batch #(s):** 27241, 27242
**Job #(s):** 160-32649, 240-107020, 240-106949, 440-229699

| *Review Items* | N/A | Yes | No | Why is data reportable? | 2nd √ |
|---|---|---|---|---|---|
| 1. Was the correct ICAL used for quantitation? (Check ICAL event number in every sample and CCV.) | | ✓ | | ICAL Event # 827, 825 | ✓ |
| 2. Has a Continuing Calibration Checklist been completed for each work list? | | ✓ | | | ✓ |
| 3. Were all special project requirements met (checked in backlog report and in AD II under notes)? | | ✓ | | | ✓ |
| 4. DoD requirements met? | ✓ | | | ☐ NCM#140-11724: Add to Case Narrative if Manual Integrations Performed<br>☐ Narrate reasons for multiple analyses of samples | ✓ |
| 5. Were the prep factors and dilution factors verified in AD II? | | ✓ | | ☐ **Dilution-Respike IDA.** (NCM#_____) | ✓ |
| 6. Is date/time of analysis correct and within the 12 hour clock? | | ✓ | | | ✓ |
| 7. Sample analyses done within preparation and analytical HT? (Check for H-flag in sample result in AD II.) | | ✓ | | ☐ **Holding Time-Initial Analysis** (NCM#_____)<br>☐ **Holding Time-Reanalysis** (NCM#_____) | ✓ |
| 8. Are IDA ratios within limits specified in Table 22 of the SOP? | | ✓ | | ☐ **Abundance ratio outside limit** (NCM#_____) | ✓ |
| 9. Are IDAs and cleanup standards within QC limits specified in Table 13? | | ✓ | | ☐ **IDA-Low-S/N 10:1** (NCM#_____)<br>☐ **IDA-High-Isotope Dilution** (NCM#_____) | ✓ |
| 10. Were reported PCDD/Fs which did not meet the criteria below properly calculated and reported as EMPCs?<br>• RT of 2378 isomers within SOP Table 3 limits.<br>• RT of non-2378 isomers within established first/last windows.<br>• Both native ions maximized within ±2 seconds.<br>• Ion abundance ratios within the control limits specified in Table 22 (not adjusted for 8290A).<br>• No corresponding peak at PCDPE mass (**dpe tab checked and flag added in peak review**).<br>• Ion suppression tab checked and **flags added in peak review if needed.**<br>• Co-elution (CI) flags **added manually in AD II if needed.** | | ✓ | | | ✓ |
| 11. Were all 2378-TCDF hits greater than or equal to the ML turned to acceptable on the primary column and confirmed on the DB-225 confirmation column? | ✓ | | | Were all of the samples marked as acceptable for TCDF analyzed on a DB-225 column and the **lower** result reported? | ✓ |
| 12. Are non-detects that are G-qualified narrated? | ✓ | | | ☐ (NCM#_____) | ✓ |
| 13. Are positive results > ML within calibration range? | | ✓ | | ☐ **ICAL-Range Exceed;No Sat.** (NCM#_____)<br>☐ **non-2378's or OCDD/F** (NCM#_____) | ✓ |
| 14. Are all manual integrations documented with analyst name, reason, and date noted in AD II? | | ✓ | | | ✓ |
| 15. Were all graphics uploaded into AD II? | | ✓ | | | ✓ |
| 16. Final report acceptable (1. Job Data Review was checked and all CCVs, QC, and samples are turned to 2nd Level, 2. The narrative was checked in Supervisor Desktop for all deviations and grammar errors, and 3. All QC links were verified and at least one sample from every job is linked to the ICAL)? | | ✓ | | | ✓ |
| 17. LCS/LCSD done per prep batch and all analytes within limits? | ✓ | | | ☐ **LCS/LCSD-Insuff. Sample** (NCM#_____)<br>☐ **LCS/LCSD-%R High** (NCM#_____) | ✓ |
| 18. Method blank done per prep batch, method/instrument blank analyzed with each sequence and analytes present in the method blank < ML or within specific program requirements? | | ✓ | | ☐ **Method Blank-Report, 10X** (NCM#_____)<br>☐ **Method Blank-Report, ND** (NCM#_____)<br>☐ **Method Blank-Insuff. Sample** (NCM#_____) | ✓ |

**1st Level Reviewed by:** MD | PMP **Date:** 1-29-19

**Comments:**

**2nd Level Reviewed by:** PMP | MSD **Date:** 1-29-19 / 1-30-19

**Comments:**

ID023R24doc, 110518

# DIOXIN BATCH WORKSHEET

Lab Name: TestAmerica Knoxville  Job No.: 160-32649-1

SDG No.:

Batch Number: 27087  Batch Start Date: 01/22/19 13:19  Batch Analyst: Ahmed, Syed M

Batch Method: HRMS-Sepf  Batch End Date: 01/24/19 13:00

| Lab Sample ID | Client Sample ID | Method Chain | Basis | GrossWeight | TareWeight | InitialAmount | FinalAmount | 10CSDFCL37CUP 00034 | 10IDDFC13WRKP 00051 |
|---|---|---|---|---|---|---|---|---|---|
| 160-32649-N-1 | CRC-MW-1-011519 | HRMS-Sepf, 1613B | T | 1690.1 g | 736.7 g | 953.4 mL | 20 uL | 1 mL | 1 mL |
| MB 140-27087/10 | | HRMS-Sepf, 1613B | | | | 1000 mL | 20 uL | 1 mL | 1 mL |
| LCS 140-27087/11 | | HRMS-Sepf, 1613B | | | | 1000 mL | 20 uL | 1 mL | 1 mL |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | 10RSDFWRKP 00028 | 10SPDFNATSPKP 00023 | AnalysisComment | | | |
|---|---|---|---|---|---|---|---|---|---|
| 160-32649-N-1 | CRC-MW-1-011519 | HRMS-Sepf, 1613B | T | 20 uL | | Sample filtered, filter extracted. | | | |
| MB 140-27087/10 | | HRMS-Sepf, 1613B | | 20 uL | | Sample filtered, filter extracted. | | | |
| LCS 140-27087/11 | | HRMS-Sepf, 1613B | | 20 uL | 1 mL | | | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# DIOXIN BATCH WORKSHEET

Lab Name: TestAmerica Knoxville  Job No.: 160-32649-1

SDG No.:

Batch Number: 27087  Batch Start Date: 01/22/19 13:19  Batch Analyst: Ahmed, Syed M

Batch Method: HRMS-Sepf  Batch End Date: 01/24/19 13:00

| Batch Notes | |
|---|---|
| 65% DCM:Hexane ID | 201267 |
| 95% Hexane: MeCl ID | 197363 |
| Acid Silica ID | 186795 |
| Alumina ID | 187909 |
| Balance ID | d3 |
| Batch Comment | qc shared with #27088 |
| Dual Column C/U Analyst | sa |
| Dual Column C/U Date | 01/23/2019 |
| Deactivated Silica ID | 186771 |
| Hexane ID | 183501 |
| MeCL2 ID | 184949 |
| Na2SO4 ID | 169785 |
| Analyst ID - IDA Reagent Drop | sa |
| Analyst ID - IDA Reagent Drop Witness | lm |
| Analyst ID - IS Reagent Drop | es |
| Analyst ID - IS Reagent Drop Witness | es |
| Analyst ID - SU Reagent Drop | sa |
| Analyst ID - SU Reagent Drop Witness | sa |
| Analyst ID - TA Reagent Drop | sa |
| Analyst ID - TA Reagent Drop Witness | lm |
| Soxhlet End Date and Time | 01/23/2019 07:00 |
| Soxhlet Start Date and Time | 01/22/2019 13:30 |
| Tetradecane ID | 129538 |
| Toluene ID | 171178 |

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## TestAmerica Knoxville Prep Batch Review Checklist

**Batch #** 27087

**Split Batch #** NA

| *Review Items* | N/A | Yes | No | If No, why is data reportable? | 2nd Level |
|---|---|---|---|---|---|
| 1. Were the samples extracted within the required holding times? | | ✓ | | If No, NCM #: _____ | ✓ |
| 2. Are the final extracts free of water, precipitates, multiple phases, and for HRMS - color? | | ✓ | | | ✓ |
| 3. Were all project specific requirements met? | | ✓ | | | ✓ |
| 4. Were the correct start and completion dates entered into TALS? | | ✓ | | | ✓ |
| 5. Are the spike IDs and volumes correct in TALS for the method? | | ✓ | | | ✓ |
| 6. Does the prep batch paperwork package contain all required documentation which has been properly and completely filled out, including:<br>• Extraction Benchsheet (Excel)<br>• TALS Raw data worksheets<br>• Batch Worksheets (ANLY)<br>• Verify Protocol #'s (compare excel sheet to TALS)<br>• Was the Excel Extraction Benchsheet and Prep Batch Review Checklist scanned and attached to batch in TALS? | | ✓ | | | ✓ |
| 7. Did extracts go through GPC cleanup? Has the following nonconformance been associated with all extracts? | | | ✓ | If Yes, NCM# 140-15874 | ✓ |
| 8. Are all additional nonconformances documented appropriately and copy included with deliverable? | | ✓ | ~~X~~ ACS 1/24/19 | If Yes, NCM#: 140-16105 | ✓ |

**Analyst :** ES **Date:** 1/24/19

**Comments:**

**2nd Level Reviewer:** ACS **Date:** 1/24/19

**Comments:**

# TestAmerica Knoxville Extraction Sheet
## 1613B/8290/8290A Aqueous by Separatory Funnel Extraction - KNOX-OP-0001

Batch Number: 27087

TALS Prep Method: ☐ 1613_P_Sep→1613B

☐ 8290_P_Sep

☒ SHARED BATCH: 8290_P_Sep & 1613_P_Sep→1613B

Delivered: _____ Initials/Date/Time

Received: _____ Initials/Date/Time

| Lab Sample ID | Note in TALS if visible solids are present. (≤1%, >1%) | Note in TALS if sample is filtered. Soxhlet extract filter with toluene. | Add sample to sep funnel. | Add 1.0/2.0 ng/mL IS (IDA) to all samples & QC. Record in TALS. | Add 0.2/1.0/2.0 ng/mL native spike (TA) to LCS, MS, MSD. Record in TALS. | Perform sep funnel extraction with methylene chloride. | Concentrate sep funnel extract. | Solvent exchange to appropriate volume of hexane. | Conc filter extract. Add 100 µL tetradecane to 40 mL vial. | Exchange filter extract to appropriate volume of hexane. Combine filter extract and sep funnel extract. | Add 0.2 ng/mL cleanup std (SU) to all 1613B extracts. Record in TALS. | Acid/Base wash extracts if needed. | Concentrate to ~2 to 4 mL on N-EVAP for dual column cleanup. | Perform silica gel/alumina column cleanup. | Concentrate to ~2 mL on N-EVAP for carbon cleanup. | Perform carbon cleanup. Add 100 µL nonane to 40 mL vial. | Concentrate to 50 µL on N-EVAP. Adjust volume to 5 mL MeCl2. | Perform GPC cleanup. | Concentrate/solvent exchange to hexane to appropriate volume. | Concentrate to <1 mL. | Add 100 ng/mL recovery std (IS) to mini-vial. Record in TALS. Transfer extract to vial. | Conc to final volume in nonane. Record final volume in TALS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 680-118993-C-2 | N | NA | ✓ | ✓ | N/A | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | N/A | ✓ | ✓ | NA | NA | NA | NA | ✓ | ✓ | ✓ |
| 680-118993-A-2 DU | | | | | | | | | | | | | | | | | | | | | |
| 680-118993-A-3 | | | | | | | | | | | | | | | | | | | | | |
| 460-173660-J-1 | | | | | | | | | | | | | | | | | | | | | |
| 240-107020-E-1 | Y | ✓ | | | | | | | | | | | | | | | | | | | |
| 160-32649-N-1 | | ✓ | | | | | | | | | | | | | | | | | | | |
| 240-106949-H-1 | | ✓ | | | | | | | | | | | | | | | | | | | |
| 680-163005-B-20 | | ✓ | | | | | | | | | | | | | | | | | | | |
| 680-163005-A-21 | | ✓ | | | | | | | | | | | | | | | | | | | |
| MB 140-27087/10 | | ✓ | | | | | | | | | | | | | | | | | | | |
| LCS 140-27087/11 | Na | NA | ↓ | ↓ | 1.0 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| | SS | ↓ | SA | | | | | | 1325 | SA | | | | ES | | | | | | | |
| | 1/22 | ↓ | 1/22 | | | | | | 1/23 | 1/23 | | | | 1/24 | | | | | | | |

ES 1/24/19

# Shipping and Receiving Documents

**TestAmerica St. Louis**
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information | Sampler: Dave Franc | Lab PM: Lambert-Sykes, Chenise Y | Carrier Tracking No(s): | COC No: 160-7516-3843.1 |
|---|---|---|---|---|
| Client Contact: Ms. Kristine Schnoes | Phone: | E-Mail: chenise.lambert-sykes@testamericainc.com | | Page: Page 1 of 1 |
| Company: Tetra Tech, Inc. | | | | Job #: |
| Address: 1 South Wacker Dr. Suite 3700 | Due Date Requested: | | | |
| City: Chicago | TAT Requested (days): | | | |
| State, Zip: IL, 60606 | | | | |
| Phone: | PO #: Pay by Credit Card | | | |
| Email: kris.schnoes@tetratech.com | WO #: | | | |
| Project Name: Former Carnotite Site - MW-1 Sampling | Project #: 16007994 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 1613B - TCDD Only | 8260B - (MOD) HSL Analyte list (CLP) full spike | 8081B - (MOD) Standard 8081B list | 8082A - (MOD) Standard 8082A list | 8270D - HSL list (full list spike) | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | N | A | N | N | N | | |
| CRC-MW-1-011519 | 1/15/19 | 1230 | G | Water | N | N | X | X | X | X | X | | |

160-32649 Chain of Custody

***Possible Hazard Identification***
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| | Relinquished by: | 1/15/19 1700 | | | 011619 0910 | |
| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| | | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: 726004+005 | Cooler Temperature(s) °C and Other Remarks:

Ver: 08/04/2016

**TestAmerica St. Louis**
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

# Chain of Custody Record

160-32649 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | | | |
|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: Lambert-Sykes, Chenise Y | COC No: 160-160884.1 |
| Client Contact: Shipping/Receiving | Phone: | E-Mail: chenise.lambert-sykes@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Louisiana | Job #: 160-32649-1 |
| Address: 5815 Middlebrook Pike, , | Due Date Requested: 2/4/2019 | | |
| City: Knoxville | TAT Requested (days): | | |
| State, Zip: TN, 37921 | | | |
| Phone: 865-291-3000(Tel) 865-584-4315(Fax) | PO #: | | |
| Email: | WO #: | | |
| Project Name: Former Carnotite Site - MW-1 Sampling | Project #: 16007994 | | |
| Site: | SSOW#: | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 1613B/1613B_P_Sep TCDD Only | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| CRC-MW-1-011519 (160-32649-1) | 1/15/19 | 12:30 Central | | Water | | | X | 3 | |
| | | | | | | | | | |
| | | | | | | | | | |
| RT: 0.8°c CT: 0.8°c, 1 cooler | | | | | | | | | |
| RC-ND, pH=6 | | | | | | | | | |
| Custody seal intact | | | | | | | | | |
| FedEx #7948 6528 2823 | | | | | | | | | |
| KW 1/17/19 | | | | | | | | | |
| | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| | |
|---|---|
| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4 | Special Instructions/QC Requirements: |

| | | | |
|---|---|---|---|
| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |

| | | | | | | |
|---|---|---|---|---|---|---|
| Relinquished by: C McKay | Date/Time: 011619 1730 | Company | Received by: | Date/Time: 1/17/19 0930 | Company TA-KC |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| | | |
|---|---|---|
| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |

Ver: 09/20/2016

Loc: 160
32649

# TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

**Log In Number:**

| Review Items | Yes | No | NA | If No, what was the problem? |
|---|---|---|---|---|
| 1. Are the shipping containers intact? | / | | | ☐ **Containers, Broken** |
| 2. Were ambient air containers received intact? | | | / | ☐ Checked in lab |
| 3. The coolers/containers custody seal if present, is it intact? | / | | | ☐ Yes<br>☐ NA |
| 4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C)<br>Thermometer ID: IR68<br>Correction factor: +0.0 | / | | | ☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel**<br>☐ **Cooler Out of Temp, Same Day Receipt** |
| 5. Were all of the sample containers received intact? | / | | | ☐ **Containers, Broken** |
| 6. Were samples received in appropriate containers? | / | | | ☐ **Containers, Improper; Client Contacted; Proceed/Cancel** |
| 7. Do sample container labels match COC? (IDs, Dates, Times) | / | | | ☐ **COC & Samples Do Not Match**<br>☐ **COC Incorrect/Incomplete**<br>☐ **COC Not Received** |
| 8. Were all of the samples listed on the COC received? | / | | | ☐ **Sample Received, Not on COC**<br>☐ **Sample on COC, Not Received** |
| 9. Is the date/time of sample collection noted? | / | | | ☐ **COC; No Date/Time; Client Contacted** |
| 10. Was the sampler identified on the COC? | | | / | ☐ **Sampler Not Listed on COC** |
| 11. Is the client and project name/# identified? | / | | | ☐ **COC Incorrect/Incomplete** |
| 12. Are tests/parameters listed for each sample? | / | | | ☐ **COC No tests on COC** |
| 13. Is the matrix of the samples noted? | / | | | ☐ **COC Incorrect/Incomplete** |
| 14. Was COC relinquished? (Signed/Dated/Timed) | / | | | ☐ **COC Incorrect/Incomplete** |
| 15. Were samples received within holding time? | / | | | ☐ **Holding Time - Receipt** |
| 16. Were samples received with correct chemical preservative (excluding Encore)? | | | / | ☐ **pH Adjusted, pH Included (See box 16A)**<br>☐ **Incorrect Preservative** |
| 17. Were VOA samples received without headspace? | | | / | ☐ **Headspace (VOA only)** |
| 18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668)<br>Chlorine test strip lot number: 794 2020/04 | / | | | ☐ **Residual Chlorine** |
| 19. For 1613B water samples is pH<9? | / | | | ☐ If no, notify lab to adjust |
| 20. For rad samples was sample activity info. Provided? | | | / | ☐ Project missing info |

**Comments/Actions Taken**

**Labeling Verified by:** **Date:**

**pH test strip lot number:** HC849161

| Box 16A: pH Preservation | Box 18A: Residual Chlorine |
|---|---|
| Preservative: | |
| Lot Number: | |
| Exp Date: | |
| Analyst: | |
| Date: | |
| Time: | |

Project #: _____ PM Instructions: _____

Sample Receiving Associate: _____ Date: 1/17/19

QA026R31.doc, 112618

**TestAmerica St. Louis**
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lambert-Sykes, Chenise Y | Carrier Tracking No(s): | COC No: 160-160892.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: chenise.lambert-sykes@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Louisiana | | Job #: 160-32649-1 |
| Address: 4955 Yarrow Street, | Due Date Requested: 2/1/2019 | | | |
| City: Arvada | TAT Requested (days): | | | |
| State, Zip: CO, 80002 | | | | |
| Phone: 303-736-0100(Tel) 303-431-7171(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Former Carnotite Site - MW-1 Sampling | Project #: 16007994 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8260B/5030B (MOD) HSL Analyte list (CLP) full spike | 8270D/3510C HSL list (full list spike) | 8081B/3510C (MOD) Standard 8081B list | 8082A/3510C_PCB_1YR (MOD) Standard 8082A list | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | | |
| CRC-MW-1-011519 (160-32649-1) | 1/15/19 | 12:30 Central | | Water | | | X | X | X | X | 13 | |

160-32649 Chain of Custody

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| C McKs | 011619 1800 | | | 1/17/19 0900 | TA Den |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|
| | | 4.2, 1.1, FTO, IR#5 by AP 1/17/19 |

Ver: 09/20/2016

# Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 160-32649-1

**Login Number: 32649**
**List Number: 1**
**Creator: McKinney, Gerrod E**

**List Source: TestAmerica St. Louis**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.2°C; 3.6°C |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 160-32649-1

**Login Number: 32649**
**List Number: 3**
**Creator: Lujan, Jacob P**

**List Source: TestAmerica Denver**
**List Creation: 01/17/19 05:51 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Appendix F
# Phase 2 Environmental Site Assessment

# *Phase II Environmental Site Assessment Report*

## Michael Reese Hospital Site
## Chicago, Illinois

Prepared for

**Chicago 2016**

Chicago, Illinois

August 8, 2008

*Bidders and their Sureties shall maintain no direct or indirect action against CH2M HILL, CH2M HILL's officers, employees, affiliated corporations, and subcontractors for any and all claims arising out of, in connection with, or resulting from any conclusions or information derived or obtained from this Phase II ESA Report.*

CH2MHILL

125 S. Wacker Drive
Suite 300
Chicago, IL 60606

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# Abbreviation and Acronym List

| | |
|---|---|
| ASC | Administrative Service Center |
| AST | aboveground storage tank |
| bgs | below ground surface |
| BTEX | benzene, toluene, ethybenzene, and xylene |
| CH2M HILL | CH2M HILL, Inc. |
| COC | constituent of concern |
| EDI | Environmental Design International, Inc. |
| ESA | environmental site assessment |
| Everest | Everest Engineering Company |
| IAC | Illinois Administrative Code |
| IDW | Investigation-derived waste |
| IEPA | Illinois Environmental Protection Agency |
| LUST | leaking underground storage tank |
| mg/kg | milligrams per kilogram |
| mg/L | milligram per liter |
| MSL | mean sea level |
| MS/MSD | matrix spike/matrix spike duplicate |
| NFR | no further remediation |
| PAH | polycyclic aromatic hydrocarbon |
| PCB | polychlorinated biphenyl |
| PID | photoionization detector |
| PPE | personal protective equipment |
| PQL | practical quantitation limit |
| PVC | polyvinyl chloride |
| QC | quality control |
| RDC | Raimonde Drilling Corporation |

| | |
|---|---|
| REC | recognized environmental condition |
| RO | remediation objective |
| SVOC | semivolatile organic compound |
| TACO | Tiered Approach to Corrective Action Objective |
| TOC | top of casing |
| TPH | total petroleum hydrocarbon |
| TSC | Testing Services Corporation |
| USEPA | United States Environmental Protection Agency |
| USGS | United States Geological Survey |
| VOC | volatile organic compound |

# Executive Summary

CH2M HILL, Inc. (CH2M HILL) performed this Phase II environmental site assessment (ESA) on behalf of Chicago 2016 for the Michael Reese Hospital Facility in Chicago, Illinois. The purpose of this Phase II ESA was to identify and characterize soil and groundwater conditions that may need to be addressed (through additional characterization, management, or remediation) pursuant to proposed site redevelopment. This goal was achieved by assessing the condition of soil and groundwater media at the site and comparing the Phase II analytical results with established Illinois Tiered Approach to Corrective Action Objectives (TACO) Tier 1 cleanup criteria. This report documents the site investigation procedures, associated results, and key findings pertaining to the facility (hereafter referred to as the "property" or "site"), located at 2929 South Ellis Avenue, Chicago, Illinois. It is prepared exclusively for use by Chicago 2016 (and the City of Chicago) and may not be relied upon by others without written authorization.

Work was conducted pursuant to CH2M HILL's proposal dated May 2, 2008, and the directive from Chicago 2016 to streamline the Phase IIb effort to more broadly assess nature of the contamination present. The investigation consisted of: planning and subcontracting, field work, laboratory analysis, data management and evaluation, and reporting.

The Phase II ESA scope of work, including proposed boring locations and analytical parameters, was based on a site visit conducted on April 2, 2008; site information provided by Chicago 2016 (including a 2003 Phase I ESA completed by Vertex Engineering in June 2003); and additional historical information sources obtained by CH2M HILL (including environmental database search results, regulatory agency records, aerial photographs, and Sanborn maps). Seventy-six borings were completed, sampled, and analyzed to evaluate potential sources of subsurface impacts such as known leaking underground storage tanks (LUSTs) and historical areas of potential impacts (for example, former gasoline stations). Additional boring locations were selected to cover specific geographic areas of the site, such as the site's perimeter and central property areas. Broad spectrum chemical analyses consisting of volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and metals were run to characterize the quality of site soil and groundwater.

Fieldwork was conducted in two phases from May 5 to May 14 (Phase IIa), and June 12 and June 13, 2008 (Phase IIb), and the results from the Phase IIa were used to scope and guide the the Phase IIb work. A total of 127 soil samples and 53 groundwater samples were collected for laboratory analysis between the two field efforts.

This Phase II ESA was conducted concurrent with the preparation of a draft Phase I ESA update report, prepared by Environmental Design International, Inc. (EDI). The EDI report updated a prior 2003 Phase I ESA prepared by Vertex Engineering for the site owner and summarized and condensed available site documents and historical information. Recognized environmental conditions (RECs) and other potential areas of concern identified

during the update process were targeted for evaluation as part of this Phase II ESA, and are referenced in this document as they relate to the findings of the soil and groundwater investigation results. The Phase I ESA report is being finalized concurrent with the completion of this Phase II ESA report.

This Phase II ESA identified the following constituent of concern (COC) categories at the site: VOCs, SVOCs, and metals, including mercury. Although analysis of PCBs performed as part of this investigation did not reveal the presence of PCBs, these constituents are considered potential COCs in the vicinity of onsite electrical substations that are owned and controlled by Commonwealth Edison. These areas were not specifically targeted as part of the Phase II ESA. No pesticides were detected above TACO Tier 1 residential criteria; therefore, pesticides are not considered a COC for the site. The individual COCs detected at the site are consistent with what is known regarding the history of the site use.

The Phase II ESA identified concentrations of metals (arsenic, lead, and mercury), and SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(ah)anthracene, indeno(123-cd)pyrene, naphthalene) exceeding TACO Tier 1 residential and industrial/commercial direct contact criteria (ingestion and inhalation exposure routes). Lead, arsenic, mercury, selenium, and eight SVOC compounds exceeded the TACO Soil Component of the Groundwater Ingestion Exposure Route (Class I) criteria. Approximately 21 percent of soil samples that were analyzed for lead exceeded one or more TACO exposure criteria for lead. Approximately 36 percent of soil samples that were analyzed for SVOCs exceeded one or more TACO exposure criteria for at least one SVOC compound. The detected concentration of mercury in one sample (at 97 mg/kg, Area 19, boring location I19-1) was found to exceed the TACO residential and industrial commercial inhalation criteria. Naphthalene exceeded the TACO Tier 1 construction worker inhalation criteria in soil samples from four soil borings, while mercury exceeded the TACO Tier 1 construction worker inhalation criteria in 63 of 90 (70 percent of the) soil samples collected from the site.

The data indicate widespread exceedances of TACO Tier 1 residential criteria across the site in the vicinity of identified RECs and areas of concern, including current or former UST locations. In addition, the detected concentrations of lead and SVOCs exceeding Illinois TACO Tier 1 residential criteria were found at locations across the site, and at varying depth intervals within the fill. Approximately 58 percent of the soil samples collected from the site contained an exceedance of one or more TACO Tier 1 residential criteria. A general trend of higher SVOC concentrations in the northern portions of the site, and in the vicinity of underground storage tanks (USTs) and aboveground storage tanks (ASTs) is apparent from the data, but wide variability of these TACO exceedances is apparent in the fill material making it difficult to attribute COC detections to particular potential sources or RECs.

Documents reviewed as part of the Phase II ESA show that there have been five LUST incidents at the facility, which included petroleum releases to both soil and groundwater (incident numbers 911651, 931373, 931472, 983092, and 990177). Impacts from these releases were documented to remain in the subsurface, and closures for these LUST incidents were obtained by the owner from the Illinois Environmental Protection Agency (IEPA) through the use of industrial/commercial property use restrictions, exposure pathway exclusions, and prohibitions against the use of groundwater at the site for potable purposes (via the use of an established City of Chicago groundwater ordinance). The prior LUST investigative

data and results were considered in tandem with the Phase II ESA results and are briefly discussed in this Phase II ESA, where appropriate.

Although a Class I groundwater designation has not been officially established for the site by verifying the conductivity of the shallow saturated soil, the predominant sandy nature of the geologic material at the site is expected to qualify these materials as a Class I groundwater resource under Illinois regulations. An evaluation of the groundwater data collected from the site documented TACO Tier 1, Class I groundwater criteria exceedences for lead, arsenic, chromium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(123-cd)pyrene, and chloroform. Approximately 75 percent of the groundwater samples collected from the site contained an exceedance of one or more TACO Tier 1 residential criteria, principally for lead.

The concentrations of identified COCs exceeding the applicable TACO Tier 1 residential and industrial/commercial criteria represent potential exposure pathways for future a future residential development as well as industrial/commercial and construction worker activities on the property, as detailed in Section 3.4.

The detected soil and groundwater impacts exceeding Illinois TACO Tier 1 residential and industrial/commercial criteria will require additional investigation, reporting, monitoring, and special soil handling and disposal to complete a residential redevelopment of the site and obtain a no further remediation (NFR) letter from Illinois EPA assuming a residential property use. The existing USTs will require removal if they are taken out of service, and residual impacted soils or groundwater associated with LUST incidents will also require removal and/or related remedial activities prior to residential development.

In the event that soil in these areas will require excavation, the presence of COCs above construction worker exposure criteria would necessitate the use of worker caution advisories, site-specific safety plans and appropriate protective equipment, monitoring for vapor and dust exposures, and the supervision of a trained health and safety professional.

Significant portions of the property are covered by buildings and include other structures such as utility corridors and tunnels that were not evaluated as part of the Phase II ESA. The potential for environmental impacts from interior building conditions and related utilities and subsurface structures will need to be evaluated during future demolition and removal activities to assess the potential for impacts to subsurface soil and groundwater media.

General conclusions regarding the nature and extent of COCs relative to TACO exposure pathways have been provided for the 76 locations investigated. Given the large property size, the varied history of the 34 separate land parcels that comprise the site, and the variable nature of the site fill, it is expected that significant variances of subsurface constituent concentrations will be present in the subsurface media.

There is a high potential for the discovery of unknown conditions, as development and redevelopment proceeds, given the significant gaps in knowledge regarding historical chemical and waste management practices at the site. It is reasonable to assume that other variations, like the discovery of mercury at Area 19, will be encountered.

# 1 Site Characterization

## 1.1 Introduction

CH2M HILL, Inc. (CH2M HILL) prepared this Phase II environmental site assessment (ESA) report on behalf of Chicago 2016 for the Michael Reese Hospital facility in Chicago, Illinois. The purpose of this Phase II ESA was to identify and characterize soil and groundwater conditions that may need to be addressed (through additional characterization, management, or remediation) pursuant to proposed site redevelopment. The report documents site investigation procedures, associated results, and key findings pertaining to Michael Reese Hospital located at 2929 South Ellis Avenue, Chicago, Illinois. This ESA focuses solely on environmental conditions at the Michael Reese Hospital facility (hereafter referred to as the "property" or "site").

This report characterizes the general nature and extent of constituents of concern (COCs) in soil and groundwater at the site, based on findings at the specific boring locations selected to evaluate potential sources of subsurface impacts at the site. (Environmental conditions within the buildings [such as asbestos, chemicals, biohazards, radiological wastes] as well as those existing below buildings or in association with building utilities were specifically excluded from this evaluation).

## 1.2 Site Description

The property is located in Cook County in northeast Illinois. Figure 1 shows the general location of the property with respect to the surrounding geography. Figure 2 shows the current layout of the property, including existing buildings and surrounding properties. The 37.8-acre property with public roadways occupies a 43-acre area. According to a recent National Survey Service Inc. survey, the property is comprised of 34 different parcels.

The Prairie Shores Apartments is located directly west of the property. A separate hospital facility is located immediately north of the property. Interstate 55, commercial areas, and the McCormick Place Convention Center are located further to the north. The Chicago Transit Authority, Metra, and freight trains rail lines and convention center truck parking are located on the adjacent properties to the east. Various residential and commercial properties are located to the south.

## 1.3 Site Physical Characteristics

Site topography, geology, and hydrogeology are briefly described below.

### 1.3.1 Topography

Site topography is reported on the United States Geological Survey (USGS) 7.5-minute topographic map of the Jackson Park Quadrangle (Figure 1). Ground elevation at the site fluctuates approximately 10 feet between 595 and 605 feet mean sea level (MSL). The

southeast side of the site along Lake Park Avenue is built up with a retaining wall separating the street from the railroad tracks, which are approximately 10 to 12 feet below the street level. On the north side of the site, the parks, Administrative Service Center (ASC) Building, parking lots, and railroad tracks are generally flat. The hospital facility also includes a tunnel passageway that roughly bisects the site from north to south.

Surface water flows into the storm drains that discharge to the combined storm and sanitary sewer system and is managed by the Metropolitan Water Reclamation District of Greater Chicago. Water that infiltrates through the soil is suspected to travel east toward Lake Michigan through the unconsolidated fill material and sand layer.

### 1.3.2 Geology

Regional geology generally consists of unconsolidated glacial deposits about 50 feet thick overlying Silurian bedrock. The site is underlain by the Chicago Lake Plain sediments and the Wadsworth Till Member—a clayey gray till. The Wadsworth Till Member is a glacial till and a part of the Wedron Formation. In the Chicago area, undisturbed Chicago Lake Plain sediments are primarily fine-grained silt and clay.

A review of the soil boring logs completed prior to, and during, the site investigation shows that site soils consist of surficial fill material underlain by sandy lake deposits. Surficial granular fill and lake sediments form a relatively permeable layer approximately 20 to 30 feet thick. Borings completed to a depth of 30 feet below ground surface (bgs) show that clay is present below the fill and sandy lake sediments at approximately 25 to 30 feet bgs.

### 1.3.3 Hydrogeology

Four major groundwater aquifers are recognized in northeastern Illinois: the Pleistocene glacial drift (shallow) aquifer, Silurian dolomite aquifer, Cambro-Ordovician aquifer, and Cambrian Mt. Simon sandstone aquifer. Historical site information indicated shallow groundwater generally flows northeast toward Lake Michigan. Unless disturbed or breached, the native clay underlying the shallow fill and sandy lake deposits forms an effective aquitard that inhibits significant vertical migration of shallow groundwater into the clay. Water levels measured as part of the site investigation are discussed in Section 3.2.

## 1.4 Site History

The Michael Reese Hospital facility originated as a few wooden buildings (in the 1880s) and expanded to the current size and structures by the 1980s. The hospital currently consists of 26 buildings, associated parking lots, and open space. Of the 26 buildings, eight are unoccupied.

Because the facility expanded over time, the past ownership history of the parcels is varied. The land was well developed at the time of the first records for the site (1911 Sanborn map and 1929 topographic map). Former businesses occupying portions of the current property include Keeley Brewing Company, Swigart Paper Company, H. R. Elliot & Co. Printing, several gas stations, dry cleaners, and a machine shop.

## 1.5 Recognized Environmental Conditions and Other Historic Considerations

To plan and implement this Phase II ESA, previous Phase I ESAs were reviewed and a Phase I ESA update was prepared. The Phase I ESA update report was prepared by Environmental Design International, Inc. (EDI). To support this activity, a new record review was performed, and Sanborns and topographic maps were ordered and reviewed (and are included in the Phase I ESA update report). The locations of the onsite and nearby offsite recognized environmental conditions (RECs) are shown on Figures 3 and 4, respectively.

The primary documents consulted or reviewed for the purpose of the Phase II ESA are:

- VERTEX Engineering Services, Inc. 2003. *Phase I Environmental Site Assessment Report.* June 17.
- EDI. 2008. *Phase I Environmental Site Assessment Update Report.* Draft, May 2008; Final, July 2008.

The Phase I ESA update report (EDI 2008) includes references and summaries of extensive file information that was gathered during the historical research. The above sources summarize previous environmental investigations and remediation measures and should be consulted for additional historical background and REC details.

Key findings of the Phase I ESA update report are:

- Identifying existing underground storage tanks (USTs) and five related leaking underground storage tank (LUST) incidents
- Identifying eight areas within the existing interior building structures containing exhibiting poor housekeeping and discarded biological, chemical, and pharmaceutical products
- Identifying two former dry cleaners, two former filling stations, five locations where USTs or aboveground storage tanks (ASTs) were located, two paint shops, and a machine shop.

EDI also identified four offsite RECs that had the potential to impact the site.

Additional information reviewed by CH2M HILL and considered in the Phase II ESA included the prior LUST investigation reports and the presence of at least 11 USTs that are known to be present on the property. Eight of these USTs are in use and two are documented as abandoned in place. Additionally, one UST is reported to be present beneath the ASC Building. Historical documents also indicate that nine USTs were removed from the property in the 1990s with oversight from the City of Chicago Department of Environment or the Office of the Illinois State Fire Marshal. Leaks from the UST systems were documented in seven of these removals, resulting in the recording of five LUST incidents with the Illinois Emergency Management Agency (incident numbers 911651, 931373, 931472, 983092, and 990177). In two instances, two tanks were grouped together according to LUST incident. Varying degrees of contaminated soil removal and

confirmation sampling followed the removal of these LUSTs. No further remediation (NFR) determinations have subsequently been granted by the Illinois Environmental Protection Agency (IEPA) for these five incidents. In four of the five incidents, contamination remains in place, and the approved remedy relies on engineered barriers such as a concrete or asphalt surface, an industrial/commercial use of the property, and the City of Chicago prohibition on the use of site groundwater for potable purposes to close the exposure pathway from the contamination to any potential receptors. (As a result of issuance of the NRFs, these LUSTs are considered historic RECs).

Historical documents also indicate that two gas stations and two dry cleaners were previously located on the property. No information is available regarding the quantity or status of any tanks associated with these properties. Four additional USTs were shown on the property on the 1911 or 1950 historic Sanborn maps. No documents indicating the removal of these USTs is available. The 1950 Sanborn maps identified a paint shop near the northwest corner of the Bensinger Building, a building adjoined to the General Services Building. The 1911 Sanborn maps identified a paint shop between the Bensinger Building and Main Reese Building and a machine shop near the Acute Care Building. The RECs and areas of concern identified by CH2M HILL are described in Table 1 identified by area in Table 2. The locations of onsite and nearby offsite RECs are illustrated in Figures 3 and 4, respectively. These additional areas of concern were evaluated by the borings and sampling conducted as part of this Phase II ESA.

The Phase I ESA update report and available historical information indicate that the site has the following:

- A long history of industrial and commercial site use dating back to the 1800s, including significant gaps in the historical record pertaining to historic chemical and waste handling practices that could have occurred on the various parcels that comprise the 37.8-acre site
- Five documented LUST incidents involving seven USTs, four of which involved closures of petroleum impacts in place;
- RECs, historical RECs, and other areas of concern where historical activities may have caused an impact to soil and groundwater media
- Documentation of potential interior building hazards that have the potential to affect subsurface media

## 1.6 Sampling Location Selection

The Phase II ESA scope of work, including proposed boring locations and analytical parameters, was based on a site visit conducted on April 2, 2008; site information provided by Chicago 2016 (including a 2003 Phase I ESA completed by Vertex Engineering in June 2003); and additional historical information sources obtained by CH2M HILL (including environmental database search results, regulatory agency records, aerial photographs, and Sanborn maps). Additional Phase IIb boring locations were selected based on the results of the Phase IIa sampling activities as well as the findings of the draft EDI Phase I ESA update

(May 30, 2008) and additional independent review of the Sanborn maps by CH2M HILL. (Note that this Phase II ESA was conducted in parallel with the Phase I ESA update.)

As a result of site review activities, soil and groundwater samples were collected from 76 boring locations at the following:

- Past or present facility UST and AST locations
- Historical gasoline station, machine shop, paint shop, and dry cleaner locations
- Along the property's perimeter and in central property areas not specifically associated with potential sources of site contamination to provide geographical coverage

The selected perimeter boring locations were placed nominally downgradient or side-gradient of identified offsite REC locations (assuming an easterly groundwater flow direction) to have the potential to identify impacts that could be migrating into the property.

The borings advanced during the Phase II ESA were assigned geographic area designations (Areas 1 through 20) for data presentation and evaluation purposes. Table 2 summarizes the individual boring identifiers, area designations, RECs, historical RECs, or other areas of historical activities of possible concern associated with the general area designations, as well as the sample analyses associated with each boring location. Boring locations are shown on Figure 5.

# 2 Investigation Methodology

## 2.1 Background

This Phase II ESA was conducted to assess the condition of soil and groundwater media at the site, compare the Phase II analytical results with established Illinois Tiered Approach to Corrective Action Objectives (TACO) Tier 1 cleanup criteria, and identify/characterize conditions that may require additional investigation, management, or remediation in conjunction with site redevelopment. In so doing, it also would identify COCs within site soil and groundwater that can be used to streamline future site environmental work.

Work was conducted pursuant to CH2M HILL's proposal dated May 2, 2008, and the directive from Chicago 2016 to streamline the Phase IIb effort to more broadly assess nature of the contamination present. Fieldwork was conducted in two phases from May 5 to May 14 (Phase IIa), and June 12 to 14, 2008 (Phase IIb), with the results from the Phase IIa were used to scope and guide the the Phase IIb work. A total of 127 soil samples and 53 groundwater samples were collected for laboratory analysis between the two field efforts. As stated in Section 1.6, a summary of sampling and analyses performed is provided in Table 2 and boring locations are shown on Figure 5.

Broad spectrum chemical analyses consisting of volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and metals were analyzed to characterize the quality of site soil and groundwater. Soil around one transformer (T520-2 on Table 1-1) was identified for sampling, and three surface soils samples were obtained in the vicinity of this transformer and analyzed for PCBs. The remainder of the exterior electrical transformer substations owned by Commonwealth Edison were fenced and not accessible to soil sampling.

## 2.2 Field and Analytical Procedures

### 2.2.1 Field Procedures

This section describes the field procedures that CH2M HILL followed during the site investigation conducted at the property in May and June 2008.

#### Pre-Investigation Activities

Before collecting samples, Everest Engineering Company (Everest) under contract with CH2M HILL directed Raimonde Drilling Corporation (RDC) and Testing Services Corporation (TSC) in the contacting of the Chicago Utility Alert Network (DIGGER). Everest contracted TBE Group, an independent utilities locator, to locate utilities on the site near proposed boring locations. CH2M HILL representatives met with representatives of Michael Reese Hospital to locate utilities in the vicinity of proposed soil sampling locations. Investigation activities did not begin until utility locations were clearly identified. After utilities had been located, sampling locations were finalized and marked.

In the case of Areas 12, 13, and 19, three borings were located outside the property on City of Chicago right-of-way. CH2M HILL subcontractors procured permits for drilling at these locations.

During the initial site visit on April 2, 2008, several existing monitoring wells were identified at the site. These existing monitoring wells were installed for the prior LUST investigations in the 1990s and are shown on Figures 5 and 6. Because the monitoring wells had not been used for an extended time, CH2M HILL field team members and TSC drillers made an attempt to open the well cover and lid. Only five monitoring wells could be opened successfully without compromising the well completion. The status of each well was recorded in the field logbook. Table 2 includes a listing of the existing monitoring wells that were able to be opened and sampled, and Table 3 includes the water level and total depth observations for these wells.

Once each well was located and opened, the air space at the well opening was monitored with a photoionization detector (PID), and the water level and total well depth was measured. No PID readings above background levels were noted.

### Collection of Surface Soil Samples

Three surface soil samples were collected for PCBs analysis at Transformer T520-2 (Figure 5) using a hand trowel. Equipment was decontaminated prior to sampling at each designated location via the method described below. Surface soil samples were collected approximately 0 to 6 inches bgs. After collecting each soil sample, the resulting holes were backfilled with remaining cuttings, and sod was placed over the backfilled material.

### Collection of Soil Samples from Borings

Subsurface soil samples were collected using a truck or track-mounted Geoprobe® or hollow stem auger techniques. Subsurface soil samples were collected in 4-foot-long, 1.75-inch-diameter samplers with disposable acetate liners or in 24-inch-long, 2-inch-diameter split spoons. After retrieving each sample, the acetate liner or half of the split spoon was removed, and the headspace of each 1-foot depth interval was screened with a PID. No PID readings above background were recorded during the course of both subsurface sampling events. In the absence of elevated PID readings, the subsurface soil samples were collected for chemical analysis from the depth of observed visual evidence of discoloration or a specified default interval in the event that no PID readings or discoloration were observed. One to two soil samples were collected per boring, as indicated on the boring logs (Appendix A).

Each Phase IIa boring extended to 12 feet bgs, or to below the water table in the case that groundwater grab samples were being collected. During Phase IIb, each boring extended to 8 feet bgs or to below the observed water table if a groundwater grab sample was collected.

A sample for VOC analysis was obtained directly from the soil core using a disposable T-handle. The soil was placed in four 40-milliliter jars with preservatives of methyl alcohol (MeOH), sodium sulfate ($NaHSO_4$), and deionized water and one 2-ounce jar with no preservative. After collecting samples for VOC analyses, soil was extracted from the acetate liner and classified for lithology, color, and moisture content. These observations were

recorded in the field soil boring logs. Soil was then transferred into the appropriate sample containers for analysis of the remaining constituents.

After all soil samples were collected from a borehole, the hole was backfilled with the remaining soil core. If needed, bentonite chips or pellets were used to fill the remaining void. After completely backfilling the borehole, the surface was restored to asphalt in the case of boreholes that were drilled through concrete or asphalt or sod, as it was removed prior to drilling for all borings in which the borehole diameter exceeded 2 inches. Procedures for handling investigation-derived waste (IDW) are described below.

### Installation of Temporary Wells

Temporary wells were installed for collecting groundwater grab samples at 44 boring locations. Temporary wells were constructed from 1-inch inside diameter Schedule 40 polyvinyl chloride (PVC) with a 5-foot screen consisting of 0.01-inch slotted screen. Native or fill materials from the sidewalls of the borehole were allowed to collapse around the screen. Water levels or the presence of wet soil recovered in the soil core samples were noted on the boring logs and are included in the boring logs in Appendix A. Native or fill materials from soil cuttings and the sidewalls of the borehole were allowed to collapse in the borehole after the temporary well PVC and screen were pulled from the borehole. The boring was backfilled as described above.

#### *Monitoring Well Development*

Five existing monitoring wells that could be opened were developed prior to sampling using a combination of surging throughout the well screen and vigorously pumping to set the sand pack and remove fine-graded materials. Wells were pumped using a fixed 1-gallon per minute discharge rate until the well purge water cleared up or 3 well volumes were purged. Approximately 6 to 8 gallons of water were purged from each of five existing wells.

### Water Level Measurement

Water level measurements at the five accessible existing wells were collected prior to development and prior to groundwater sampling. Water level elevations (calculated using the top of casing [TOC] elevations provided in the prior LUST reports) are illustrated on Figure 7. Discussion of the shallow groundwater isocontours is presented in Section 4.

### Collection of Groundwater Samples

Well development was performed on existing monitoring wells prior to groundwater sampling. Groundwater samples were collected from the five accessible existing monitoring wells using low-flow groundwater sampling procedures as indicated in the field instructions. These procedures include low-flow purging the well at approximately 0.2 to 0.5 liter per minute and the frequent measurement of water quality parameters until the parameters stabilized within specific criteria:

- pH: within 10 percent
- Specific conductance: within 3 percent
- Dissolved oxygen: within 10 percent
- Turbidity: within 10 percent or as low as practicable given sampling conditions
- Oxidation-reduction potential: within 10 millivolts

The groundwater grab samples (from Phase IIa temporary wells) were collected using a peristaltic pump and tubing for initial screening purposes. Low-flow sampling procedures were used to stabilize parameters, particularly turbidity, to reduce the potential presence of particulates in the samples.

## Collection of Quality Control Samples

### *Trip Blanks*

Trip blanks were analyzed to assess the possibility for VOC contamination that could occur during sample shipment. Trip blanks were provided by the subcontracted laboratory. The trip blanks consisted of American Standards and Testing Methods Type I water purged with nitrogen to eliminate VOCs and preserved in hydrochloric acid. One set of trip blanks accompanied each sample cooler containing one or more VOC samples.

### *Field Duplicates*

Field duplicate samples were collected and analyzed to determine the reproducibility of field sampling and analysis. Duplicate groundwater samples were collected immediately after collecting the regular sample at a well. Duplicate samples were stored and analyzed in the same manner as the field samples. Approximately one field duplicate sample was collected per every 20 field samples.

### *MS/MSD*

Matrix spike/matrix spike duplicate (MS/MSD) samples were used by the subcontracted laboratory to assess the precision and accuracy of sample analytical procedures. MS/MSD samples were fortified by the laboratory in accordance with the specifications of the analytical methods. Samples were stored in the same manner and analyzed using the same methods as the field samples. The frequency of MS/MSD sample collection was approximately one for every 20 samples collected.

## Decontamination Procedures

Personnel wearing disposable nitrile gloves decontaminated soil and groundwater sampling equipment after each use according to the following procedure:

1. Wash with deionized or distilled water and laboratory-grade, nonphosphate detergent, using a brush if necessary to remove particulate matter and surface films.
2. Rinse with deionized or distilled water.
3. Wrap in aluminum foil, if appropriate, to prevent contamination if equipment was going to be stored and transported.

Drill rig augers and soiled portions of the drilling rig were decontaminated using a steam cleaner, and split spoons and core barrels were decontaminated by manual scrubbing with nonphosphate detergent solution and a potable water rinse. Acetate liners used for soil sampling were not reused and did not require decontamination. Water used in the decontamination process was containerized for disposal as IDW. Procedures for handling IDW are described below.

### *Sample Management Procedures*

Soil and groundwater samples collected at the property were placed in laboratory-grade containers, which were provided by Grace Analytical Laboratories of Berkeley, Illinois. Sample containers were labeled with the following information:

- Sample location number
- Depth interval
- Date and time of collection
- Initials of sampler
- Requested laboratory analysis

Samples were named with the following manner. The key elements in the sample identifier are:

- Site name: CS (for Confidential Site)
- Location identification (that is, U2)
- Matrix: GW for groundwater, SS for surface soil, or SO for subsurface soil
- Date for groundwater samples
- Depth for surface and subsurface soil samples: four digits – two for the top depth and two for the base depth (to the nearest foot)

  Example: A groundwater sample collected at boring location U1-1 on May 18, 2008 would be CS-U1-1-GW-051808.

  Example: A surface soil sample taken at location P5-2 at a depth of 4 to 6 feet bgs would be CS-P5-2-SS-0406.

Samples were placed in ice-filled coolers immediately after collection. Laboratory chain-of-custody forms were updated after each soil sample was collected. Soil samples, along with completed chain-of-custody forms, were delivered to Grace Analytical Laboratory for analysis.

## Handling of Investigation Derived Waste

IDW generated during the investigation consisted of acetate liners, decontamination water, excess soil cuttings, purge groundwater, and personal protective equipment (PPE). PPE, acetate liners, and temporary well PVC was disposed of in the general trash onsite by the field team after removing residual soil material, rinsing where appropriate, and careful inspection to ensure cleanliness of the items disposed. Soil cuttings were returned to the boring of origin after sample collection and soil classification. Decontamination water, purge water, and excess soil cuttings were placed in separate labeled drums daily during the course of the investigation. Five drums of IDW material were placed at the ASC Building loading dock, under the direction of a MRH facility representative, Jack Byrne.

During the site investigation field activities, all five drums were inspected by a Michael Reese Hospital representative to confirm the drums were appropriately stored in an area satisfactory to the facility management. The IDW materials will be stored at the designated location pending classification and disposal by Chicago 2016.

## 2.2.2 Laboratory Procedures

### Analytical Methods

Table 2 summarizes the laboratory analytical methods used to analyze the soil and groundwater samples during the Phase II ESA. Analyses were performed in accordance with requirements of 35 Illinois Administrative Code (IAC) 186 and within specified holding times. Quality control (QC) criteria as outlined in the methods and current Illinois and National Environmental Laboratory Accreditation programs have been met unless otherwise noted in the laboratory data packages. Grace Analytical Laboratory is an IEPA-certified laboratory (Grace Analytical Laboratories Accreditation #100246).

### Data Quality Objectives

The subcontracted laboratory was instructed to meet practical quantitation limits (PQLs) set forth in 35 IAC 740.415(d)(3). PQLs correspond to the lowest concentrations that a laboratory can measure within specified limits of precision and accuracy. Illinois TACO criteria limits were generally met by the laboratory during the analysis. Select SVOC compounds analyzed by Method 8270C during the first phase of sampling activities exceeded the TACO established criteria limits such as 2,4,6-trichlorophenol; 2,4-dinitrophenol; 2,4-dinitrotoluene; 2,6-dinitrotoluene; and bis(2-chloroethyl)ether; however, these SVOC compounds are not specifically known to be associated with site-related hazardous materials or documented site impacts. The detection limits reported by the laboratory for these compounds are generally below the residential and industrial/ commercial ingestion and inhalation criteria, and therefore the data are useful for Phase II ESA screening purposes. The data summary tables included in this Phase II ESA report do not highlight (that is, shade as an exceedance) instances where theses SVOC compounds were flagged as "U" (that is, undetected), but the reported "U" value exceeded the lowest TACO criteria (typically occurring for the soil threat to groundwater ingestion exposure pathway criteria).

## 2.2.3 Data Verification Procedures

The site investigation data were reviewed to assess accuracy, precision, and completeness using criteria analogous to that set forth in the U.S. Environmental Protection Agency (USEPA) *Functional Guidelines for Data Review*.

A CH2M HILL chemist reviewed QC summary forms and data reports to assess the quality of the data for the intended use. The data verification and review of QC information indicates that the data are acceptable for the intended use in Phase II ESA screening and evaluation.

# 3 Findings

## 3.1 Geology and Hydrogeology

Subsurface soils encountered in site borings generally consisted of loose to medium dense sand with variable silt and gravel content and other fill materials including debris, brick, and concrete. Fill or potentially reworked native soil material was observed in each boring extending to depths ranging from 4 to 12 feet bgs. Horizontally bedded sands, indicative of lake sediments, were observed near the bottom of a few of the direct-push technology borings. As indicated previously, site investigation soil boring logs are provided in Appendix A.

Existing monitoring wells water levels (May 5–7, 2008) indicate an easterly flow direction toward Lake Michigan in the shallow groundwater (Figure 7). Saturated conditions in the Phase II borings were generally encountered between 6 and 12 feet bgs across the site and indicate the presence of a continuous groundwater unit within the sandy geologic material. Although a Class I groundwater designation has not been officially established for the site by verifying the conductivity of the saturated soil, the predominant sandy geologic material at the site is expected to qualify the shallow aquifer as a Class I groundwater resource under Illinois regulations. No injection or withdrawal wells are known to be present at the site.

## 3.2 Analytical Results

Tables 5 and 6 present a summary of the COCs detected during the Phase II ESA, including a summary of the frequency of detection, and minimum, maximum, and mean-detected concentrations. These tables include a summary of TACO exceedances by individual COC and by TACO exposure route categories. Table 7 presents a summary of COCs that exceeded TACO criteria by individual investigative area and by TACO exposure route categories. Section 3.3 discusses the general nature and extent of detected analytes, while Section 3.4 discusses the results as they compare to TACO exposure route categories. Tables 8 through 14 summarize the specific soil analytical results that exceed the individual exposure pathways including comparison to the applicable TACO Tier 1 criteria for residential exposure, industrial/commercial exposure, construction worker exposure, and residential soil to Class 1 groundwater migration exposure pathway. Complete soil sampling results are summarized in Appendix B. Constituents that were detected in groundwater are summarized in Table 15 and compared to the TACO Tier 1, Class I groundwater standards, while complete groundwater sampling results are provided in Appendix C. Laboratory data packages are included in Appendix D.

## 3.3 Nature and Extent Evaluation

This Phase II ESA further delineated the impacts near the former USTs, near the RECs outlined in the Phase I ESA, and also evaluated additional perimeter and central geographic locations of the property. The nature and extent of identified impacts are described below.

### 3.3.1 Impacts

**Soil**

A review of the detected COCs in soil shown in Table 5 documents that 21 metals, cyanide, 2 pesticides, 21 SVOCs, and 10 VOCs were detected during the Phase II ESA. A number of the metals were found in all samples analyzed. Lead was detected in all of the soil samples at concentrations ranging from 1.9 to 7,400 milligrams per kilogram (mg/kg), with a mean concentration of 81 mg/kg. By comparison, the published TACO concentration of lead for counties within metropolitan statistical areas (that is, urban areas) is 36 mg/kg, indicating elevated lead levels above typical urban concentrations across the property.

Mercury was found in 80 percent of soil samples at concentrations ranging from 0.03 to 97 mg/kg, with a mean concentration of 0.4 mg/kg. By comparison, the published TACO concentration of mercury for counties within metropolitan statistical areas is 0.06 mg/kg, indicating elevated mercury levels above typical urban concentrations across the property.

A number of metal concentrations exceeded TACO exposure criteria and are discussed in Section 3.4. Two pesticides were detected among 19 samples but at concentrations below TACO criteria.

Among the 21 detected SVOCs in soil, the majority were polycyclic aromatic hydrocarbons (PAHs) and were detected in approximately 50 percent of soil samples, with chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene all detected at a frequency above 70 percent. Mean concentrations of the detected SVOCs typically ranged from 1 to 3 mg/kg, and are similar to the published TACO background values for PAHs. Several locations of elevated PAH compounds were identified during the Phase II ESA, and these were generally found near the locations of the current or past USTs, as well as former industrial portions of the property in the northern part of the site such as Areas 1, 2, 18, 4, and 8. A number of PAH concentrations exceeded TACO exposure criteria and are discussed in Section 3.4.

Among the 10 detected VOCs in soil, four of the compound are typical gasoline constituents (benzene, toluene, ethybenzene, and xylene [BTEX]), and two chlorinated solvents typically associated with painting, dry cleaning, or degreasing operations (tetrachloroethene and trichloroethene). Four additional VOCs, including chloroform were detected in site soil samples. The BTEX compounds were typically found in the vicinity of current or past UST locations in Areas 1 through 3, although low level xylene concentrations also were found near current or suspected UST locations in Areas 10, 11, 14, and 15. The two chlorinated solvent compounds were found in Areas 2, 4, 5, and 18 in the northern portion of the site. Historical offsite dry cleaners and on-site painting operations were present in these areas and may be representative of low-level impacts from these operations although a specific source cannot be identified from available information. Chloroform was found in soil samples associated with Areas 1 and 19, and may have a possible attribution to hospital operations, as it is potentially a medical-related compound.

Among the above referenced VOC compounds, none of them exceeded the most stringent TACO criteria, but are indicative of potential VOC impacts in the subsurface at the site.

**Groundwater**

A review of the detected COCs in groundwater shown in Table 6 documents that six metals, 10 PAHs, and one VOC were detected during the Phase II ESA. Lead was detected in 89 percent of the groundwater samples at concentrations ranging from 0.002 to 0.9 milligram per liter (mg/L), with a mean concentration of 0.030 mg/L. By comparison, the published TACO Class I groundwater criteria for lead is 0.0075 mg/L, while the Class II TACO groundwater criteria is 0.1 mg/L.

The detected PAHs in groundwater were found in 3 to 13 percent of groundwater samples analyzed, with the most frequently detected compound being benzo(b)fluoranthene.

Choroform was only found in one groundwater sample at location I15-1 and may be associated with hospital operations as it is potentially a medical-related compound. The location of chloroform in groundwater is downgradient of one location in Area 4 that was found to contain chloroform in soil.

Groundwater results are further discussed in Section 3.4.

### 3.3.2 Relevant Prior LUST Incident Information and Associated Impacts

Although the data from historic LUST incidents may not be representative of conditions today, they do provide valuable perspective relative to potential contamination in these areas when evaluating the results of the Phase II effort. For this reason, they are presented below.

Subsurface soil testing in April 1991 revealed that the 30,000-gallon power plant UST was leaking, as elevated total petroleum hydrocarbon (TPH) concentrations (greater than 100 mg/kg) were detected in soil borings located to the north, east and south of the UST. The UST was subsequently removed. Although the measured value cannot be ascertained because of the poor copy quality of the report, because of the shading used in the table, the most recent round of groundwater sampling (November 1995) indicates that the benzene concentration in the downgradient well exceeded 0.005 mg/L.

In August 1998, two soil borings were each advanced alongside the 1,000-gallon fuel oil UST and the 2,000-gallon UST at Klein/Kundstadter Pavilion and Rothschild Pavilion, respectfully. These four samples were analyzed for BTEX and polynuclear aromatic hydrocarbons (PAHs) and were found to contain concentrations of these contaminants below remediation objectives. The tanks were then abandoned in place.

The 6,000-gallon fuel oil UST located at Wexler/Singer Pavilion was upgraded in December 1998. Eight soil samples were obtained beneath the piping and analyzed for BTEX and PAHs to verify whether leaks had occurred from this UST system prior to its upgrade. No BTEX compounds were detected, but PAHs were measured above remediation objectives in four of the eight samples. Benzo(a)anthracene was measured between 0.386 and 3.18 mg/kg; benzo(a)pyrene between 0.290 and 2.87 mg/kg; and benzo(b)fluoranthene between 0.193 and 2.38 mg/kg. No other soil sampling was performed at this location.

Also in December 1998, the 550-gallon fuel oil UST located at the Levinson Building was removed. No release was recorded for this removal. Six sidewall and bottom samples were analyzed for BTEX and PNAs. No benzene, ethylbenzene, nor PAHs were detected in any of

the samples. Toluene was measured between 0.009 and 0.018 mg/kg in four of the six samples and xylenes were measured between 0.002 and 0.009 in all samples. These concentrations are below current TACO Tier 1 residential remediation objectives.

The 3,000-gallon fuel oil UST was also removed from the Bensinger Building in 1998. Visible petroleum staining was noted and LUST Incident 983092 was assigned to this release. An unknown quantity of soil was excavated and seven sidewall and bottom soil samples were obtained from the resultant excavation. The samples were analyzed for BTEX and PNAs. Analytical results indicated that no BTEX parameters were measured above laboratory detection limits, and PAHs were measured in three of the seven samples, albeit at concentrations below current TACO Tier 1 residential remediation objectives. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and benzo(k)fluoranthene were measured at concentrations between 0.180 and 0.562 mg/kg.

Although a LUST incident was not recorded during the December 1998 removals of the 3,000-gallon fuel oil UST at Baumgarten Pavilion and the 2,500-gallon UST at Blum Pavilion, subsequent BTEX and PNA analytical results of the excavation sidewalls and bottoms indicated PNA concentrations above the most stringent Tier 1 criteria. No BTEX exceedances were reported. PNA concentrations in one of the six Blum samples exceeded Tier 1 remediation objectives (ROs). Benzo(a)anthracene was measured at 2.15 mg/kg, benzo(a)pyrene at 2.42 mg/kg, benzo(b)fluoranthene at 2.92 mg/kg, dibenzo(a,h)anthracene at 0.449 mg/kg, and indeno(1,2,3-cd)pyrene was measured at 0.887 mg/kg. It is unknown where within the excavation this sample was obtained. This contamination was managed in place.

Although, no BTEX or PNA concentrations in the six Baumgarten samples exceeded Tier 1 ROs, this removal was also assigned LUST incident based on sample results. PAHs were detected in five of the six sidewall and bottom samples. Benzo(a)anthracene was measured between 0.325 and 0.690 mg/kg, benzo(a)pyrene between 0.097 and 0.613 mg/kg, and benzo(b)fluoranthene between 0.294 and 0.654 mg/kg. It is unknown where within the excavation this sample was obtained. This contamination was managed in place.

One soil boring was advance in July 1994 approximately 200 feet east of the ASC Building LUST site and analyzed for BTEX and PAHs from 1 to 3 feet bgs, 7 to 9 feet bgs, and 13 to 15 feet bgs. BTEX concentrations were measured below remediation objectives in the samples, but PNA concentrations were measured above the objectives. Benzo(a)anthracene was measured between 0.670 and 2.500 mg/kg, benzo(a)pyrene between 1.900 and 2.700 mg/kg, benzo(b)fluoranthene between 1.900 and 4.900 mg/kg, dibenzo(a,h)anthracene between 0.480 and 4.800 mg/kg, and indeno(1,2,3-cd)pyrene between 0.580 and 0.930 mg/kg. The concentrations of these compounds generally decreased with depth.

Petroleum contamination was encountered during the removal of the two gasoline USTs that were removed in the vicinity of 27th and South Ellis streets. The tanks were removed in May 1993, and a LUST incident was assigned to this site. The contaminated soil was excavated, and sidewall and bottom samples were collected and analyzed for BTEX only. Benzene contamination was detected at 0.064 mg/kg in one of the bottom samples, which is above the Tier 1 remediation objective of 0.03 mg/kg. This area was reportedly over-excavated and resampled, and the benzene concentration was subsequently measured below 0.03 mg/kg.

The above prior LUST incident information documents that petroleum releases have occurred and that residual petroleum impacts have been closed in place. Subsequent Phase II ESA data in the vicinity of these UST and LUST areas further characterize these areas.

## 3.4 Evaluation of Exposure Routes

An evaluation of the exposure routes was conducted for the soil and groundwater samples collected at the property in accordance with IEPA TACO guidance (35 IAC 742). This included a comparison of measured chemical concentrations in individual samples to Tier 1 criteria.

Exposure pathways considered for the Tier 1 comparison for site soils include incidental soil ingestion and inhalation for the residential, industrial/commercial and construction worker scenarios. The results were also compared to the soil migration to Class I groundwater standards.

Groundwater exposure pathways were considered by comparison to Tier 1 ingestion criteria for Class I groundwater standards. The evaluation of exposure pathways is summarized below.

### 3.4.1 Residential Soil Ingestion Exposure Route

Table 8 summarizes the locations of analytical results that exceed the Illinois TACO Tier 1 residential ingestion remediation objectives. The COCs exceeding the Illinois TACO Tier 1 residential ingestion remediation objectives include arsenic, lead, mercury, and several SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene). No VOCs, pesticides, or PCBs were detected above Tier 1 residential ingestion remediation objectives in any sample.

Arsenic was detected above cleanup objectives in eight soil samples (Figure 8), corresponding to the approximate locations of the former gas station at 30th and Cottage Grove streets, the interior portion of the property at 29 Street and Ellis Avenue, and near the former gasoline USTs at 27 Street and Lake Park Avenue. With the exception of boring CS-I19-1-SO-0608, all arsenic exceedences were found in shallow soils above 3 feet bgs.

The exceedance of the TACO Tier 1 residential ingestion criteria for mercury was detected in sample CS-I19-1-SO-0608, in the vicinity of South Ellis Avenue and East 29th Street.

Total lead concentrations were detected above residential ingestion standards in 20 of the 95 soil samples that were analyzed for lead, and the SVOCs were detected above ingestion standards in 45 of the 124 soil samples that were analyzed for SVOCs.

The detected concentrations of lead and SVOCs exceeding Illinois TACO Tier 1 residential criteria were found across the site and at varying depth intervals within the apparent fill soils. A general trend of higher SVOC concentrations in the northern portions of the site, and in the vicinity of USTs and ASTs is apparent from the data, but wide variability of these TACO exceedances is apparent in the fill material making it difficult to attribute COC detections to particular sources.

Direct contact with soils exceeding TACO Tier 1 residential ingestion criteria represents a potential exposure pathway for future residential development of the site.

### 3.4.2 Residential Soil Inhalation Exposure Route

Table 9 summarizes the location of analytical results that exceed the Illinois TACO Tier 1 residential inhalation remediation objectives. There is one exceedence of the Illinois TACO Tier 1 remediation objective for the residential inhalation exposure route from this investigation. The mercury concentration in soil boring CS-I19-1-SO-0608 was detected at 97 mg/kg, which is greater than the residential inhalation remediation objective of 10 mg/kg. This concentration also exceeds the industrial/commercial inhalation remediation objective. This boring is located in the vicinity of S. Ellis Avenue and E. 29th Street (Figure 8). This mercury concentration was detected between 6 and 8 feet bgs. Five borings were subsequently advanced in the vicinity of this boring during Phase IIb (borings I19-2 through I19-6), and mercury was not detected above residential inhalation remediation objectives. However, mercury concentrations above construction worker inhalation criteria were observed in four of the five additional Phase IIb borings in this area.

The concentration of mercury exceeding TACO Tier 1 residential inhalation criteria at location I19-1 represents a potential exposure pathway for future residential development of the site, particularly if subsurface structures are constructed in this area.

### 3.4.3 Construction Worker Soil Ingestion Exposure Route

Table 10 summarizes the locations of analytical results that exceed the Illinois TACO Tier 1 industrial/commercial ingestion remediation objectives. The lead concentration in four of the borings was measured above the construction worker ingestion exposure route value of 700 mg/kg. Additionally, the mercury concentration in CS-I19-1-SO-0608 was above the remediation objective of 61 mg/kg.

Figure 9 graphically displays the locations of soil results that exceed the Illinois TACO Tier 1 industrial/commercial (construction worker) values for soil inhalation and ingestion.

Direct contact with soils exceeding TACO Tier 1 construction worker ingestion criteria represents a potential exposure pathway for future construction workers.

### 3.4.4 Construction Worker Soil Inhalation Exposure Route

Table 11 summarizes the locations of analytical results that exceed the Illinois TACO Tier 1 industrial/commercial inhalation remediation objectives. The naphthalene concentration exceeded the 1.8 mg/kg construction worker exposure route value in four of the borings as shown on Figure 9, and the mercury concentration exceeded the construction worker remediation objective (0.1 mg/kg) in sixty three of ninety total samples that were analyzed for mercury across the site. Therefore, mercury concentrations across the site exceed the conservative TACO construction worker inhalation criteria. According to TACO, the TACO inhalation remediation objective for mercury only applies at sites where elemental mercury is a contaminant of concern. Based on the site use as a hospital, elemental mercury is considered a potential contaminant of concern.

Figure 9 graphically displays the locations of soil results that exceed the Illinois TACO Tier 1 industrial/commercial (construction worker) values for soil inhalation and ingestion.

Mercury concentrations exceeding TACO Tier 1 industrial/commercial inhalation criteria (at numerous locations across the site) represent a potential exposure pathway for future construction workers.

### 3.4.5 Industrial/Commercial Soil Ingestion Exposure Route

As shown in Table 12, lead, arsenic, and several SVOCs are detected throughout the site in concentrations that exceed Tier 1 industrial/commercial ingestion standards. Figure 10 graphically displays the locations of soil results that exceed the Illinois TACO Tier 1 industrial/commercial values for soil inhalation and ingestion.

The concentrations of lead, arsenic, and several SVOCs exceeding TACO Tier 1 industrial/commercial ingestion criteria represent a potential exposure pathway for future construction workers in the vicinity of these locations.

### 3.4.6 Industrial/Commercial Soil Inhalation Exposure Route

Table 13 summarizes the locations of analytical results that exceed the Illinois TACO Tier 1 industrial/commercial inhalation remediation objectives. As previously discussed, only one analyte exceeded the industrial/commercial inhalation remediation objective—the mercury concentration of 97 mg/kg in CS-I19-1-SO-0608 exceeds the 16 mg/kg remediation objective. Figure 10 graphically displays the locations of soil results that exceed the Illinois TACO Tier 1 industrial/commercial values for soil inhalation and ingestion.

The concentration of mercury exceeding TACO Tier 1 industrial/commercial inhalation criteria at location I19-1 represents a potential exposure pathway for future construction workers in the vicinity of this boring, particularly if subsurface structures are constructed in this area.

### 3.4.7 Soil Component of the Groundwater Ingestion Exposure Route

Table 14 summarizes the location of analytical results that exceed the Illinois TACO Tier 1 value for the soil component of the groundwater exposure route (Class 1). No VOC concentrations were found to exceed the soil component of the groundwater ingestion exposure route remediation objectives. Concentrations of at least one SVOC or metal contaminant, however, exceed their respective TACO Tier 1 value for the soil component of the groundwater exposure route (Class 1) in 65 of the soil samples, indicating a widespread distribution of these COCs across the site. Figure 11 graphically displays the locations of soil results that exceed the Illinois TACO Tier 1 value for the soil component of the groundwater exposure route (Class 1). Results of toxicity characteristic leaching procedure (TCLP) analysis of select samples that exhibited elevated lead, chromium, or mercury concentrations did not exceed Resource Conservation and Recovery Act hazardous waste criteria. The TCLP lead results for the samples exceeded the TACO Tier 1 soil component of the groundwater exposure route (Class 1). Mercury was not detected in the TCLP analysis.

The concentrations of SVOC and metals exceeding TACO Tier 1 soil component of the groundwater exposure route (Class 1) in 65 soil samples from locations across the site locations represents a potential exposure pathway for future groundwater use at the site. However, the City of Chicago has an IEPA approved groundwater ordinance in place that

can be used in a site closure to restrict consumption of groundwater. The use of the ordinance as a potential closure approach does not address the potential for soil to impact groundwater that may be removed from the site during construction dewatering or ongoing basement dewatering (i.e. sump) activities.

### 3.4.8 Groundwater Ingestion Exposure Route

Table 15 summarizes the locations of analytical results that exceed the Illinois TACO Tier 1 Class 1 groundwater remediation objectives. Forty six temporary groundwater monitoring wells were sampled between 5/6/08 and 6/13/08. The lead concentration exceeded the Tier 1 Class I groundwater remediation objective of 0.0075 mg/l in 26 of the 37 samples. Additionally, mercury was detected above the Class 1 groundwater remediation objective in CS-I19-1, at the same location as the mercury inhalation exceedence (boring I19-1). However, groundwater samples collected from five borings that were subsequently advanced in the vicinity of boring I19-1 during Phase IIb (borings I19-2 through I19-6) did not detect the presence of mercury in the associated groundwater samples, indicating that the mercury groundwater impacts in this area were limited in extent. Five other sampling locations across the site had detectable concentrations of mercury in groundwater that did not exceed Class I groundwater objectives (U4-1, P5-1, P5-5, U14-2, and I18-1), indicating potential low level mercury impacts across the site.

Four groundwater samples collected during the Phase II ESA exhibited concentrations of SVOCs above Class 1 groundwater remediation objectives, and one water sample (CS-P5-5) contained an arsenic and chromium above the remediation objective. Chloroform was detected in one sampling location (I5-1) above Class 1 groundwater remediation objectives. Based on the above sample results, the presence of lead exceeding Class 1 groundwater criteria is common across the site, but exceedances of the other groundwater COCs are more limited in extent. The highest detected concentration of lead in groundwater was found at location U2-2, in the immediate vicinity of the former site gasoline USTs that were previously removed. The elevated lead concentration is potentially associated with the past storage and release of leaded gasoline in this area. Prior sampling results did not indicate that lead was evaluated in the LUST closure.

The concentrations of lead, mercury, arsenic, chromium, chloroform and SVOCs (principally PAHs) exceeding TACO Tier 1 Class 1 groundwater criteria in groundwater samples from across the site represents a potential exposure pathway for future groundwater use at the site. However, the City of Chicago has an IEPA approved groundwater ordinance in place that can be used in a site closure to restrict consumption of groundwater. The use of the ordinance as a potential closure approach does not address the potential for impacted groundwater that may be removed from the site during construction dewatering or ongoing basement dewatering (i.e., sump) activities.

# 4 Conclusions

This Phase II ESA characterized site environmental quality conditions at 76 borings spread across the 37.8-acre property, producing analytical data for 127 soil samples and 53 groundwater samples. Borings were placed to evaluate potential sources of subsurface impacts such as known past LUST locations and historic areas of potential impacts (i.e. former gasoline stations), as well as borings that were intended to cover geographic areas of the site such as perimeter and central areas. The results have been used to assess conditions that may need to be addressed during site development.

## 4.1 Characterization and Criteria Exceedances

The investigation detected varying levels of metals (most notably lead and mercury), SVOCs (specifically PAHs), and BTEX and a few chlorinated VOCs in soil samples. Lead and PAHs were found at concentrations indicative of impacts at sites close to and away from prior LUST and UST sites.

Among the twenty one detected SVOCs in soil, the majority were PAHs, and were detected in approximately 50 percent of soil samples, with chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene all detected at a frequency above 70 percent. Mean concentrations of the detected SVOCs typically ranged from 1 to 3 mg/kg, and are similar to the published TACO background values for PAHs. A number of locations of elevated PAH compounds were identified during the Phase II ESA, and these were generally found near the locations of the current or past USTs, as well as former industrial portions of the Property in the northern part of the site such as Area 1, Area 2, Area 18, Area 4, and Area 8.

Two pesticides were detected among nineteen samples that were analyzed for pesticides, but at concentrations below TACO criteria. Although analysis of PCBs performed as part of this investigation did not reveal the presence of PCBs in three surface samples, these constituents are considered potential COCs in the vicinity of onsite electrical substations that are owned and controlled by Commonwealth Edison.

Mercury was found in 80 percent of soil samples at concentrations ranging from 0.03 to 97.0 mg/kg, with a mean concentration of 0.4 mg/kg. By comparison, the published TACO concentration of mercury for counties within metropolitan statistical areas is 0.06 mg/kg, indicating elevated mercury levels above typical urban concentrations across the Property. Mercury is not associated with a previously identified potential source.

BTEX compounds were typically found in the vicinity of current or past UST locations in Areas 1 through 3, although low level xylene concentrations were also found near current or suspected UST locations in Areas 10, 11, 14 and 15. The two chlorinated solvent compounds were found in Areas 2, 4, 5, and 18 in the northern portion of the site. Historic off-site dry cleaners and on-site painting operations were present in these areas, and may be representative of low level impacts from these operations, although a specific source cannot be identified. Chloroform was found in soil samples associated with Areas 1 and 19, and

may have a possible attribution to hospital operations as it is potentially a medical related compound.

Four groundwater samples collected during the Phase II ESA exhibited concentrations of SVOCs above Class 1 groundwater remediation objectives, and one water sample (CS-P5-5) contained an arsenic and chromium above the remediation objective. Chloroform was detected in one sampling location (I5-1) above Class 1 groundwater remediation objectives.

The lead concentration exceeded the Tier 1 Class I groundwater remediation objective of 0.0075 mg/l in 26 of the 376 samples. Additionally, mercury was detected above the Class 1 groundwater remediation objective in CS-I19-1, at the same location as the mercury inhalation exceedence (boring I19-1). However, groundwater samples collected from five borings that were subsequently advanced in the vicinity of boring I19-1 during Phase IIb (borings I19-2 through I19-6) did not detect the presence of mercury in the associated groundwater samples, indicating that the mercury groundwater impacts in this area were limited in extent. Five other sampling locations across the site had detectable concentrations of mercury in groundwater that did not exceed Class I groundwater objectives (U4-1, P5-1, P5-5, U14-2, and I18-1), indicating potential low level mercury impacts across the site. Based on the above sample results, the presence of lead exceeding Class 1 groundwater criteria is common across the site, but exceedances of the other groundwater COCs are more limited in extent. Other than one detection of chloroform, no VOCs were detected in groundwater.

Although a Class I groundwater designation has not been officially established for the site by verifying the conductivity of the shallow aquifer, the predominant sandy geologic material at the site is expected to qualify the shallow saturated soil as a Class I groundwater resource under Illinois regulations. An evaluation of the groundwater data collected from the site documented Tier 1, Class I groundwater criteria exceedences for lead, arsenic, chromium, six SVOCs, and chloroform.

The study identified the following constituents above TACO Tier 1 residential and industrial/commercial direct contact criteria (ingestion and inhalation exposure routes):

- Metals: arsenic, lead, and mercury
- SVOCs: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k) fluoranthene, chrysene, dibenz(ah)anthracene, indeno(123-cd)pyrene, naphthalene)

In addition to the above COCs, detected selenium and carbazole concentrations exceeded the TACO Soil Component of the Groundwater Ingestion Exposure Route (Class I) criteria.

## 4.2 Implications for Site Development

The concentrations of identified COCs exceeding the applicable TACO Tier 1 residential and industrial/commercial criteria represent potential exposure pathways for future a future residential development as well as industrial/commercial and construction worker activities on the Property, as detailed in Section 3.4.

The detected soil and groundwater impacts exceeding Illinois TACO Tier 1 residential and industrial/commercial criteria will require additional investigation, reporting, monitoring, and special soil handling and disposal in order to complete a residential re-development of

the site and obtain a no further remediation (NFR) letter from Illinois EPA assuming a residential property use. The existing USTs will require removal if they are taken out of service, and residual impacted soils or groundwater associated with LUST incidents will also require removal and/or related remedial activities prior to residential development.

In the event that soils in these areas will require excavation, the presence of COCs above construction worker exposure criteria would necessitate the use of worker caution advisories, site specific safety plans and appropriate protective equipment, monitoring for vapor and dust exposures, and the supervision of a trained health and safety professional.

Significant portions of the property are covered by buildings and include other structures such as utility corridors and tunnels that were not evaluated as part of the Phase II ESA. The potential for environmental impacts from interior building conditions and related utilities and subsurface structures will need to be evaluated during future demolition and removal activities in order to assess the potential for impacts to subsurface soil and groundwater media.

General conclusions regarding the nature and extent of COCs relative to TACO exposure pathways have been provided for the 76 locations investigated. Given the large property size, the varied history of the 34 separate land parcels that make up the site, and the variable nature of the site fill, it is expected that significant variances of subsurface constituent concentrations will be present in the subsurface media.

There is a high potential for the discovery of unknown conditions, as development and redevelopment proceeds, given the significant gaps in knowledge regarding historic chemical and waste management practices at the site. It is reasonable to assume that other variations, like the discovery of mercury at Area 19, will be encountered.

This document has been prepared exclusively for use by Chicago 2016 (and the City of Chicago) and may not be relied upon by others without written authorization.

# Figures

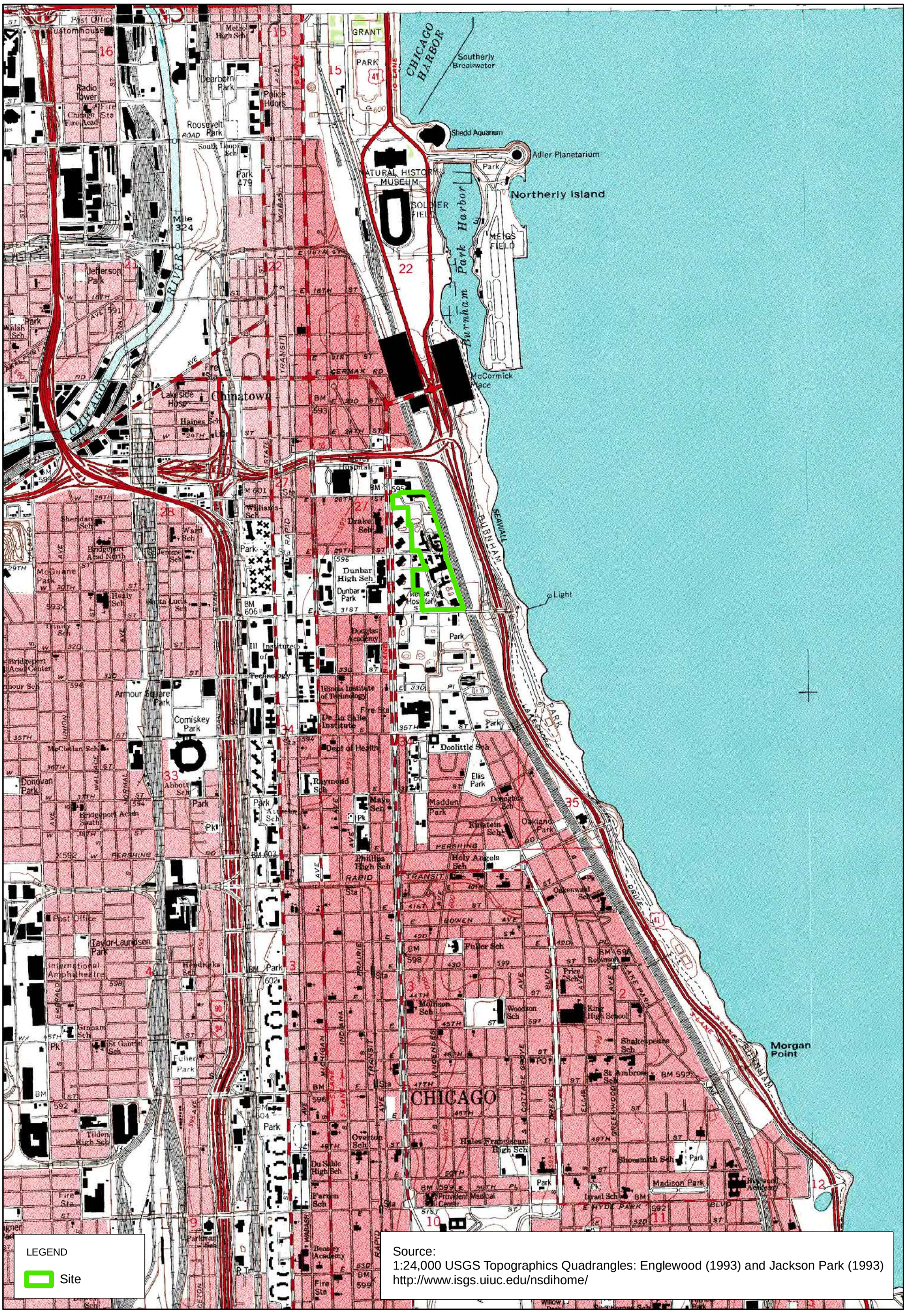
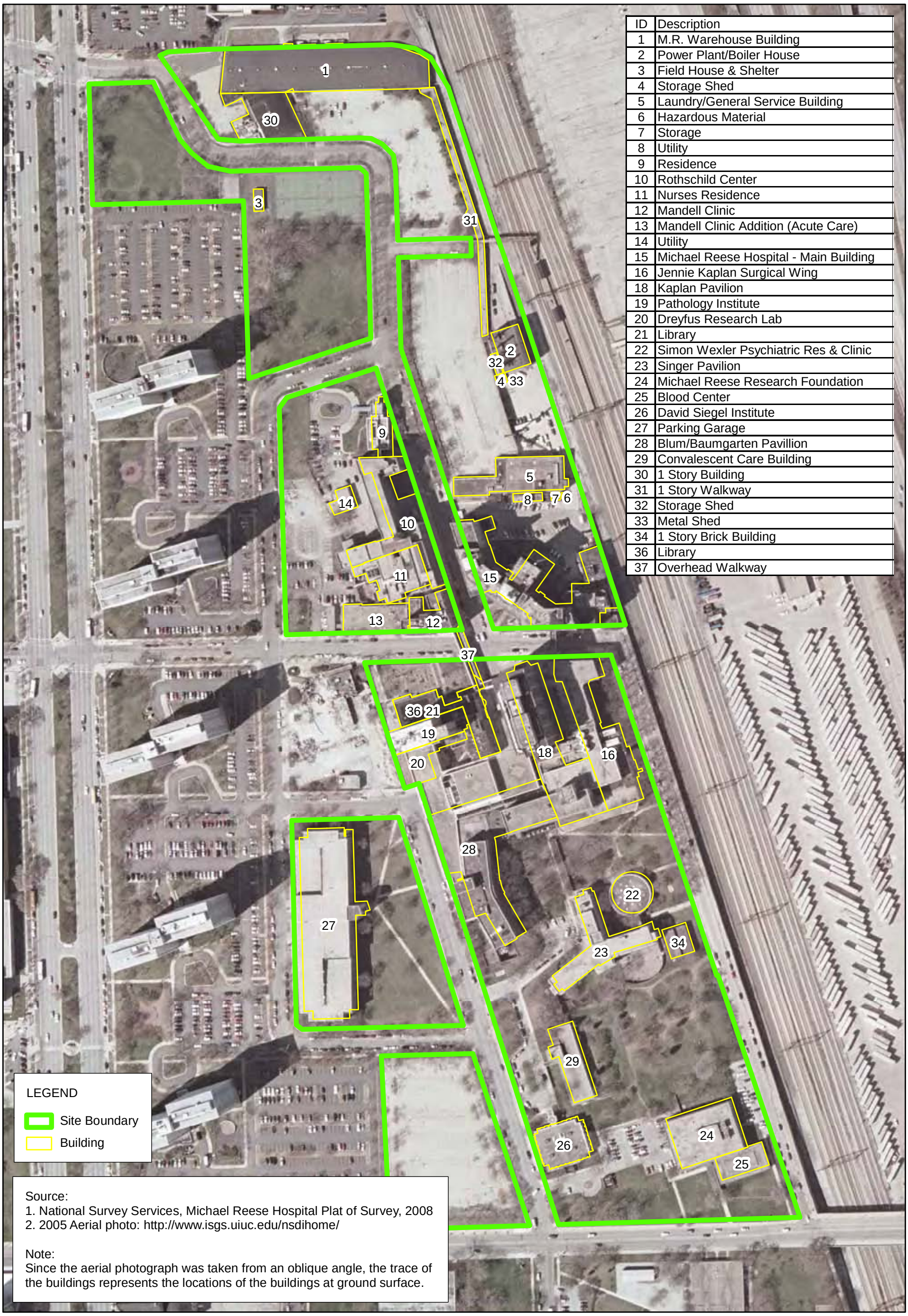



Figure 1
Site Location
*Michael Reese Hospital Site, Chicago, Illinois*

File Path: \\Corvus\Groups\GIS\Projects\ConfidentialSite2008\GIS\MapDocs\Fig1.mxd, Date: July 10, 2008 10:04:11 AM, User: KBUCKVOL

CH2MHILL




| ID | Description |
|---|---|
| 1 | M.R. Warehouse Building |
| 2 | Power Plant/Boiler House |
| 3 | Field House & Shelter |
| 4 | Storage Shed |
| 5 | Laundry/General Service Building |
| 6 | Hazardous Material |
| 7 | Storage |
| 8 | Utility |
| 9 | Residence |
| 10 | Rothschild Center |
| 11 | Nurses Residence |
| 12 | Mandell Clinic |
| 13 | Mandell Clinic Addition (Acute Care) |
| 14 | Utility |
| 15 | Michael Reese Hospital - Main Building |
| 16 | Jennie Kaplan Surgical Wing |
| 18 | Kaplan Pavilion |
| 19 | Pathology Institute |
| 20 | Dreyfus Research Lab |
| 21 | Library |
| 22 | Simon Wexler Psychiatric Res & Clinic |
| 23 | Singer Pavilion |
| 24 | Michael Reese Research Foundation |
| 25 | Blood Center |
| 26 | David Siegel Institute |
| 27 | Parking Garage |
| 28 | Blum/Baumgarten Pavillion |
| 29 | Convalescent Care Building |
| 30 | 1 Story Building |
| 31 | 1 Story Walkway |
| 32 | Storage Shed |
| 33 | Metal Shed |
| 34 | 1 Story Brick Building |
| 36 | Library |
| 37 | Overhead Walkway |

Source:
1. National Survey Services, Michael Reese Hospital Plat of Survey, 2008
2. 2005 Aerial photo: http://www.isgs.uiuc.edu/nsdihome/

Note:
Since the aerial photograph was taken from an oblique angle, the trace of the buildings represents the locations of the buildings at ground surface.

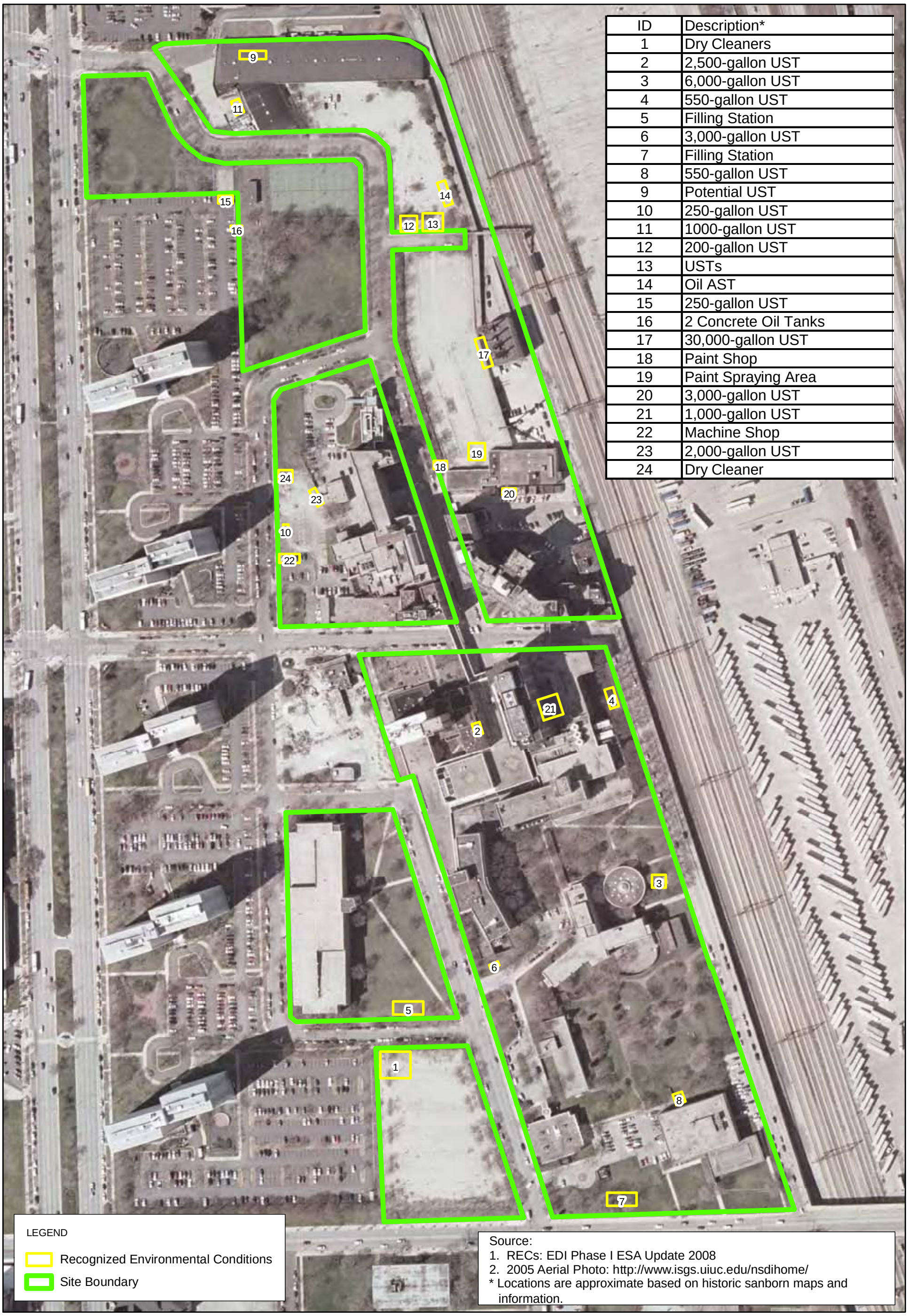
N

0 150 300
Feet

Figure 2
Facility Layout
*Michael Reese Hospital Site, Chicago, Illinois*

CH2MHILL

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| ID | Description* |
|---|---|
| 1 | Dry Cleaners |
| 2 | 2,500-gallon UST |
| 3 | 6,000-gallon UST |
| 4 | 550-gallon UST |
| 5 | Filling Station |
| 6 | 3,000-gallon UST |
| 7 | Filling Station |
| 8 | 550-gallon UST |
| 9 | Potential UST |
| 10 | 250-gallon UST |
| 11 | 1000-gallon UST |
| 12 | 200-gallon UST |
| 13 | USTs |
| 14 | Oil AST |
| 15 | 250-gallon UST |
| 16 | 2 Concrete Oil Tanks |
| 17 | 30,000-gallon UST |
| 18 | Paint Shop |
| 19 | Paint Spraying Area |
| 20 | 3,000-gallon UST |
| 21 | 1,000-gallon UST |
| 22 | Machine Shop |
| 23 | 2,000-gallon UST |
| 24 | Dry Cleaner |

Figure 3
Onsite Recognized Environmental Conditions
*Michael Reese Hospital Site, Chicago, Illinois*

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| ID | Description* |
|---|---|
| 25 | 2618 S. Martin Luther King Dr - LUST Incident |
| 26 | 300 E 29th - LUST |
| 27 | 2872 S. Calumet - LUST |
| 28 | Filling Station |
| 29 | 2501 S. Martin Luther King Dr - LUST Incident |

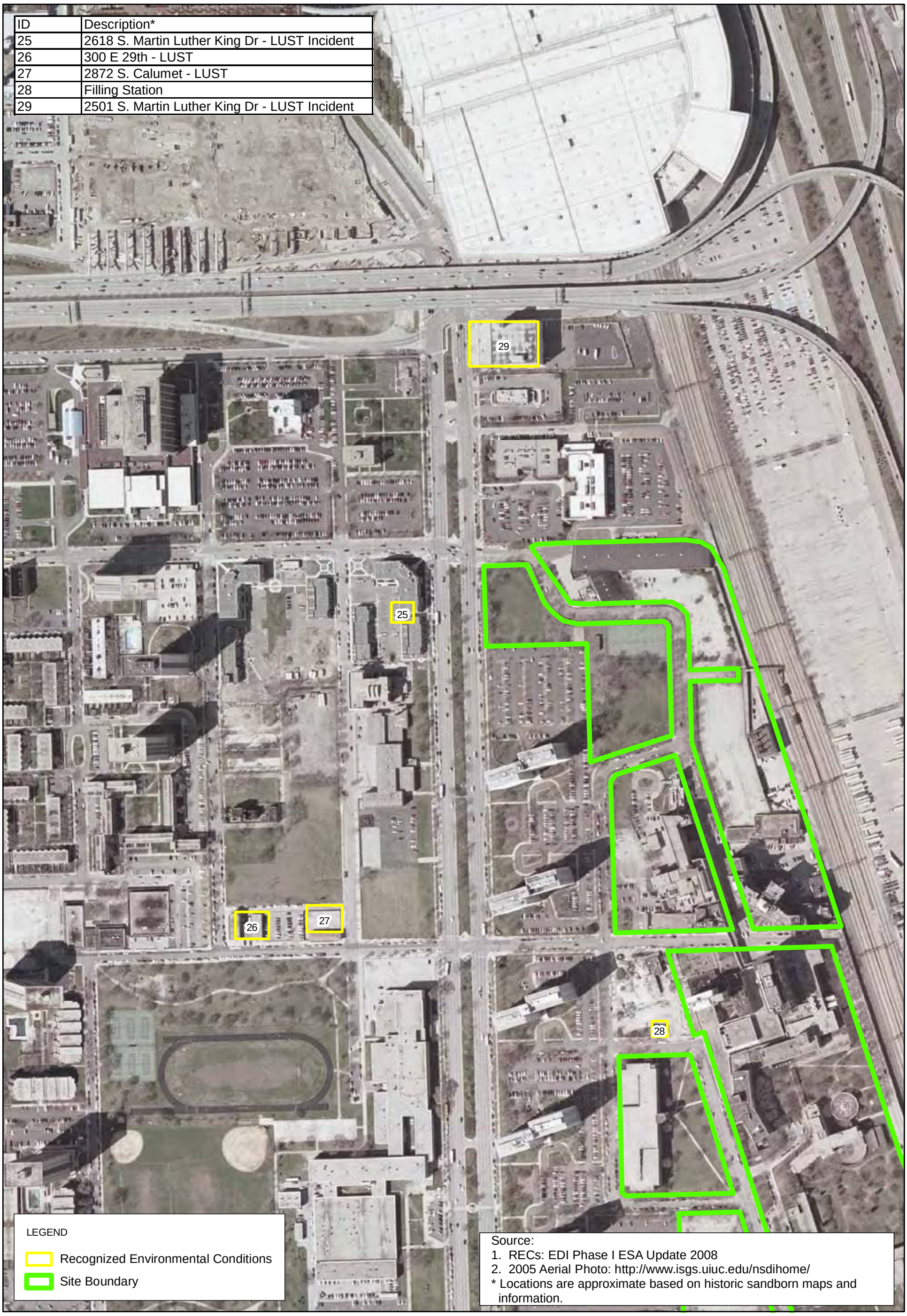



Figure 4
Nearby Offsite Recognized Environmental Conditions
*Michael Reese Hospital Site, Chicago, Illinois*

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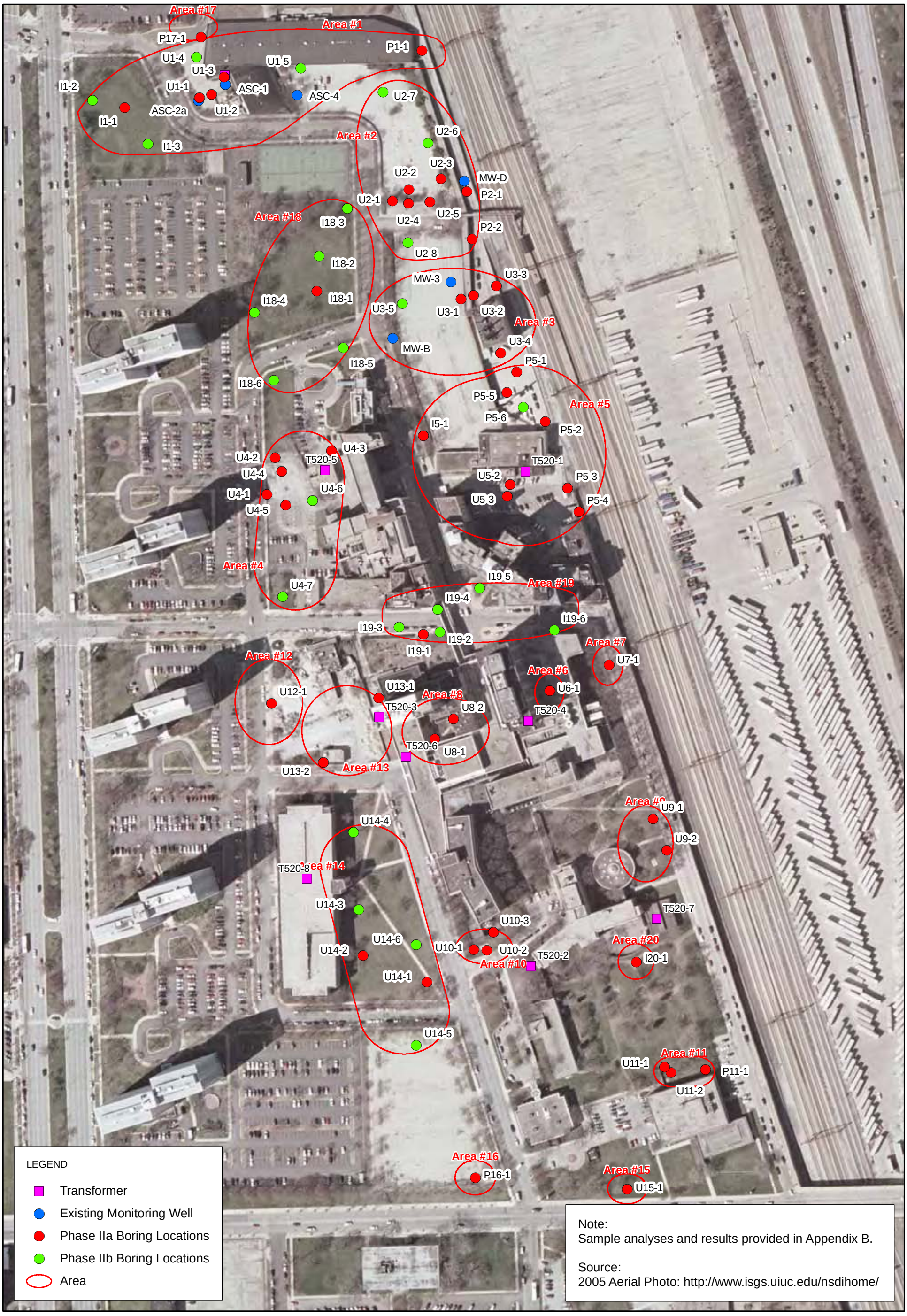



Figure 5
Phase II ESA Boring and Sample Locations
*Michael Reese Hospital Site, Chicago, Illinois*

CH2MHILL

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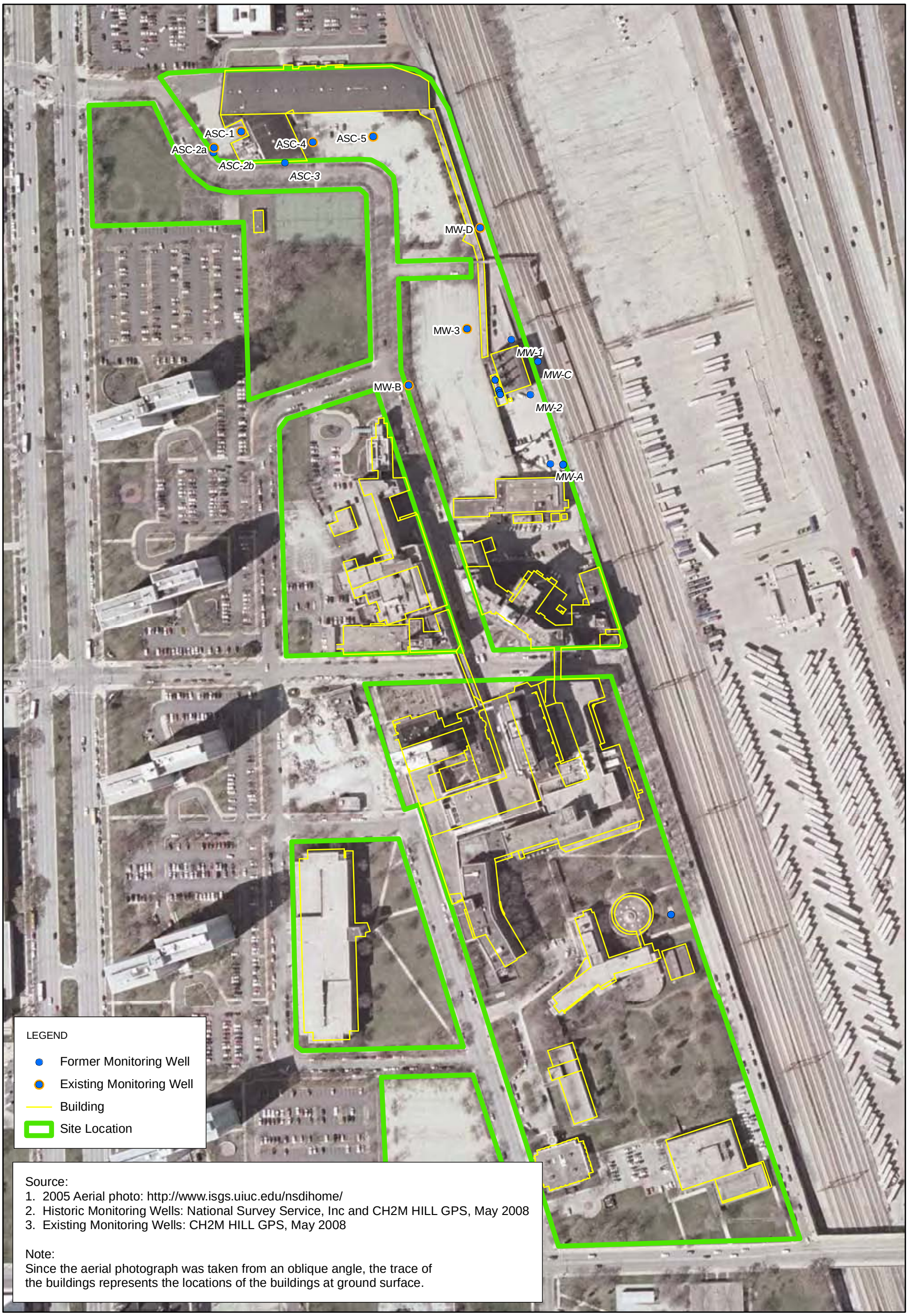



Figure 6
Pre-Existing and Existing Monitoring Wells
*Michael Reese Hospital Site, Chicago, Illinois*

CH2MHILL

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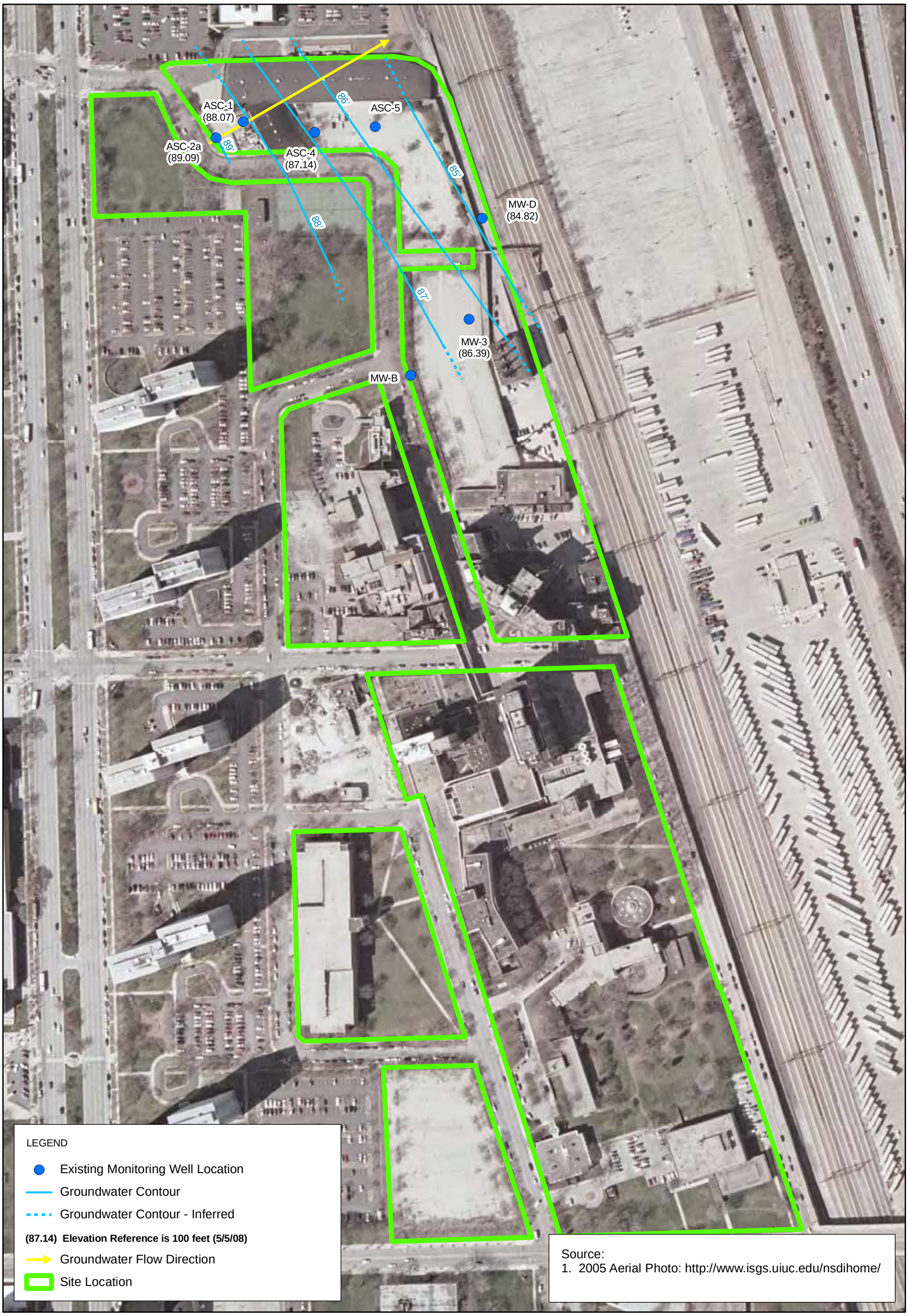



Figure 7
Groundwater Contour Map
*Michael Reese Hospital Site, Chicago, Illinois*

CH2MHILL

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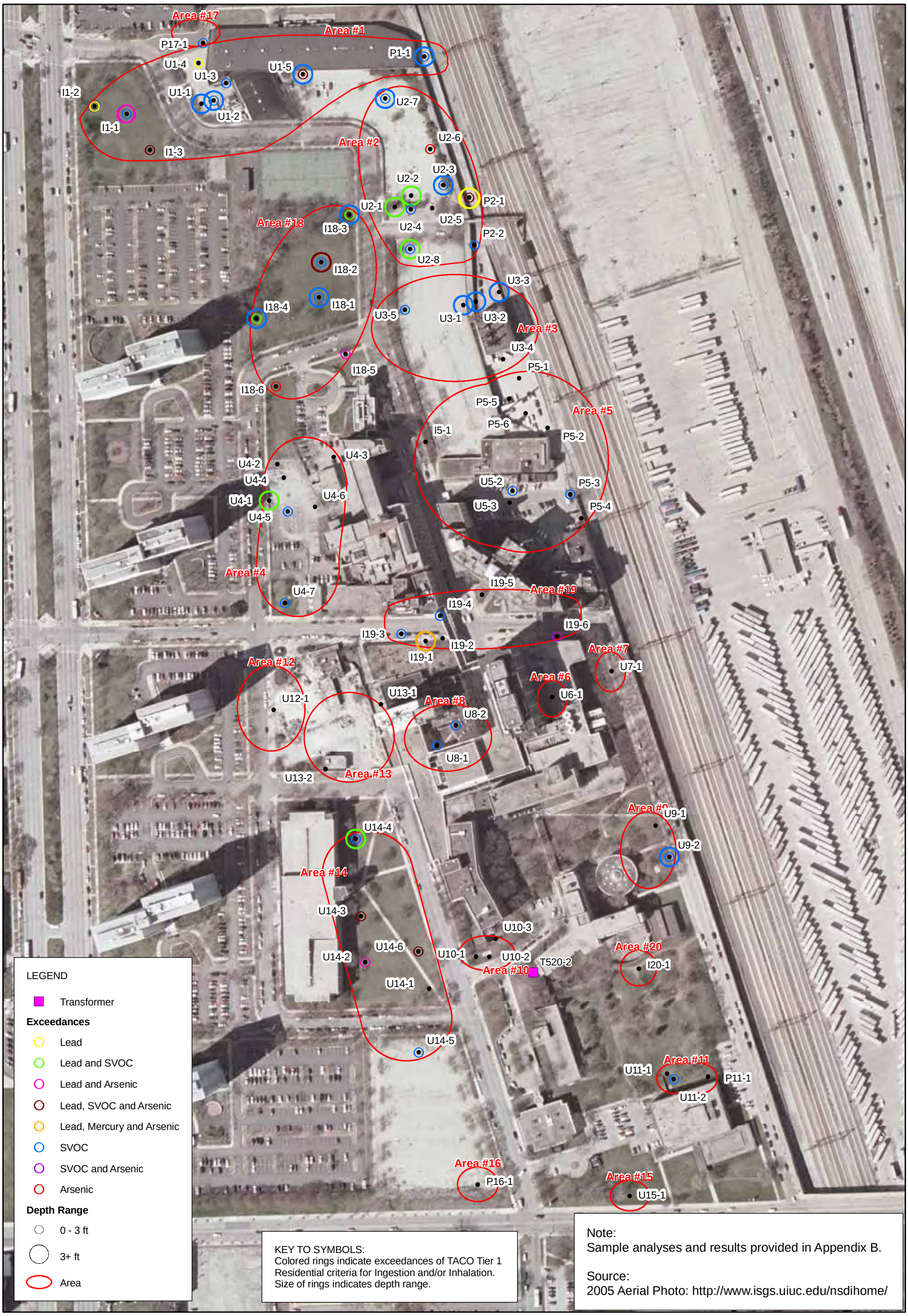



Figure 8
TACO Tier 1 Residential Soil Ingestion and Inhalation Exceedances
*Michael Reese Hospital Site, Chicago, Illinois*

CH2MHILL

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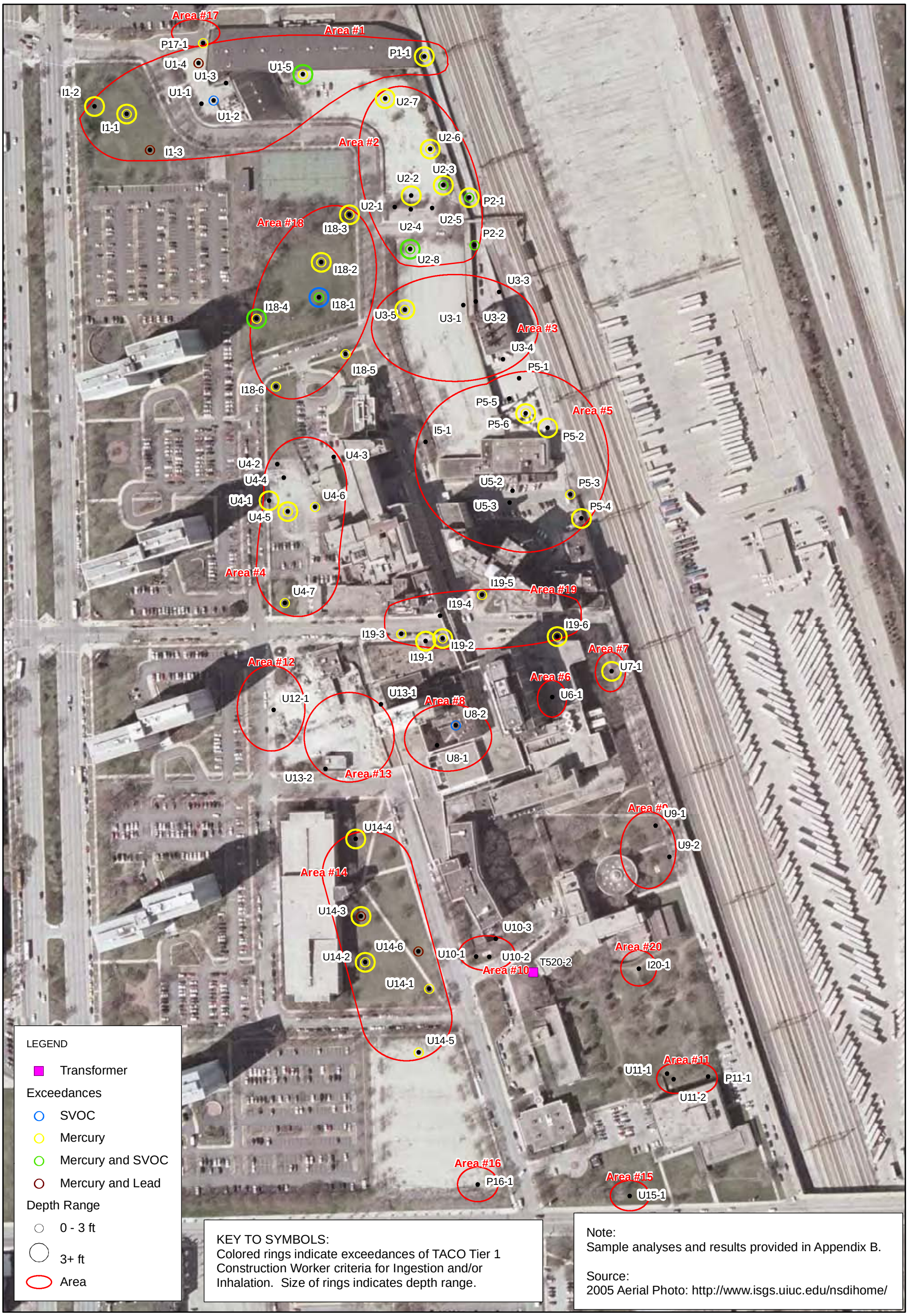



Figure 9
TACO Tier 1 Construction Worker Soil Ingestion and Inhalation Exceedances
*Michael Reese Hospital Site, Chicago, Illinois*

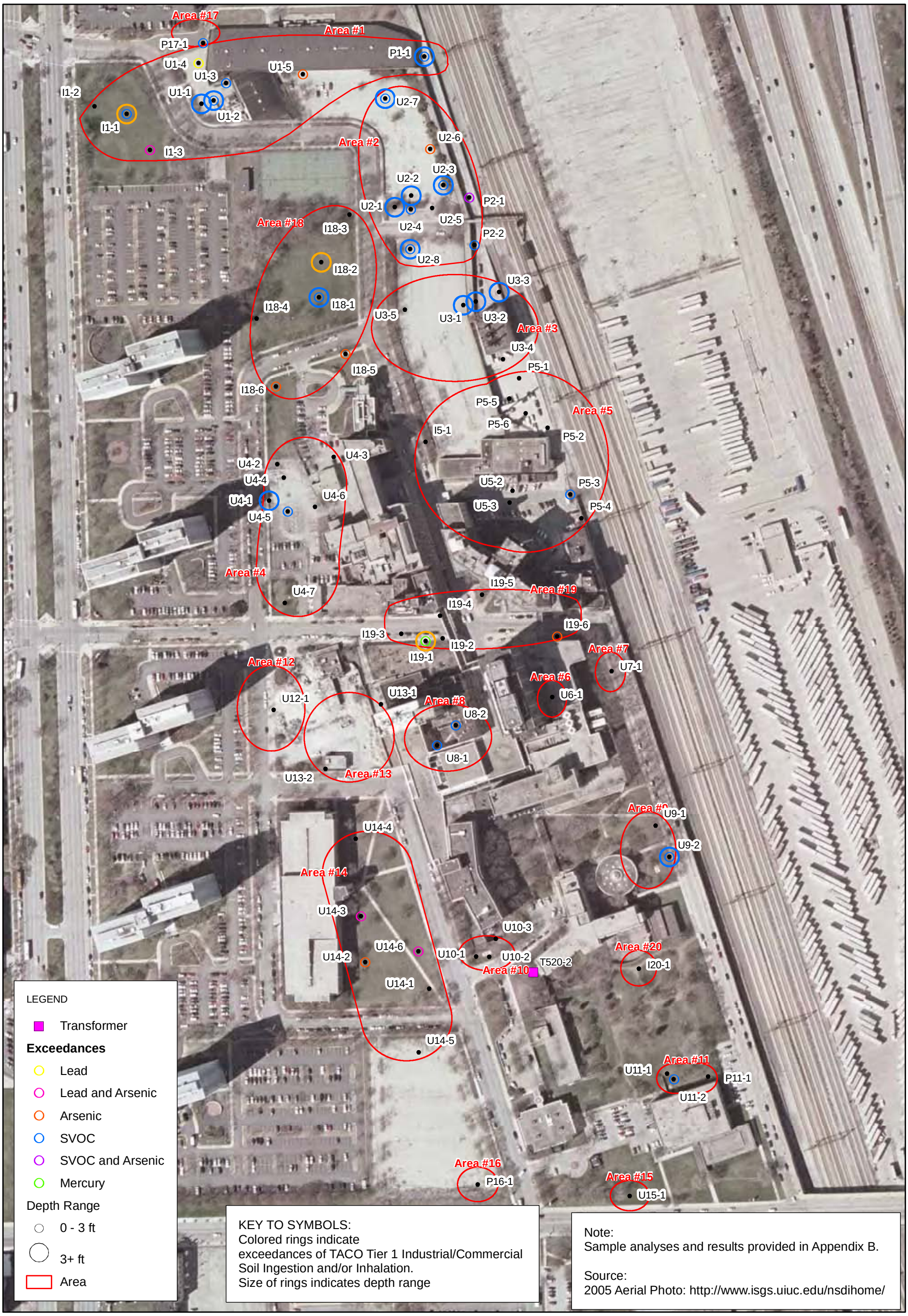



Figure 10
TACO Tier 1 Industrial/Commercial Soil Ingestion and Inhalation Exceedances
*Michael Reese Hospital Site, Chicago, Illinois*

CH2MHILL

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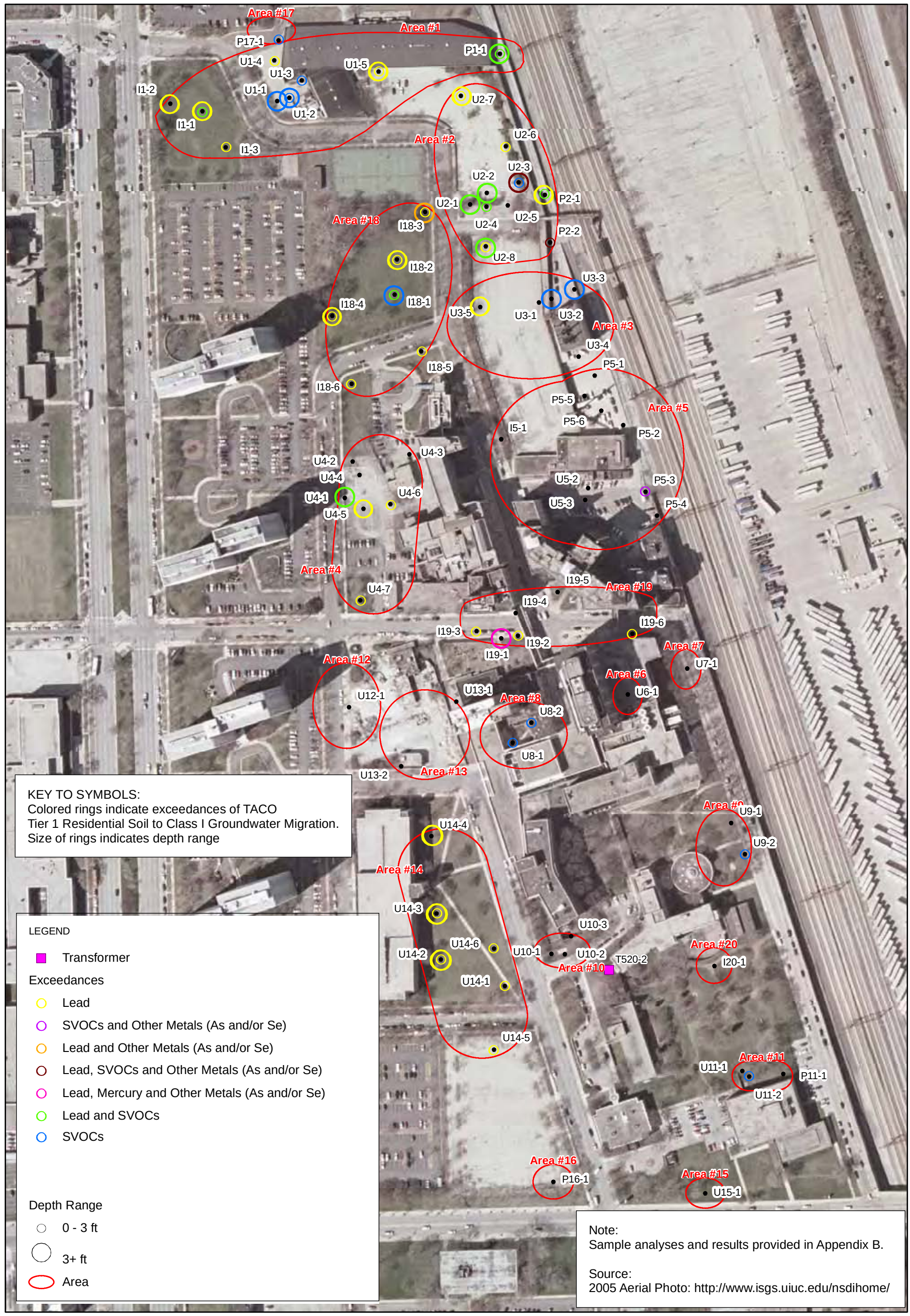



Figure 11
TACO Tier 1 Soil Component of the Class I Groundwater Ingestion Exceedances
*Michael Reese Hospital Site, Chicago, Illinois*



CH2MHILL

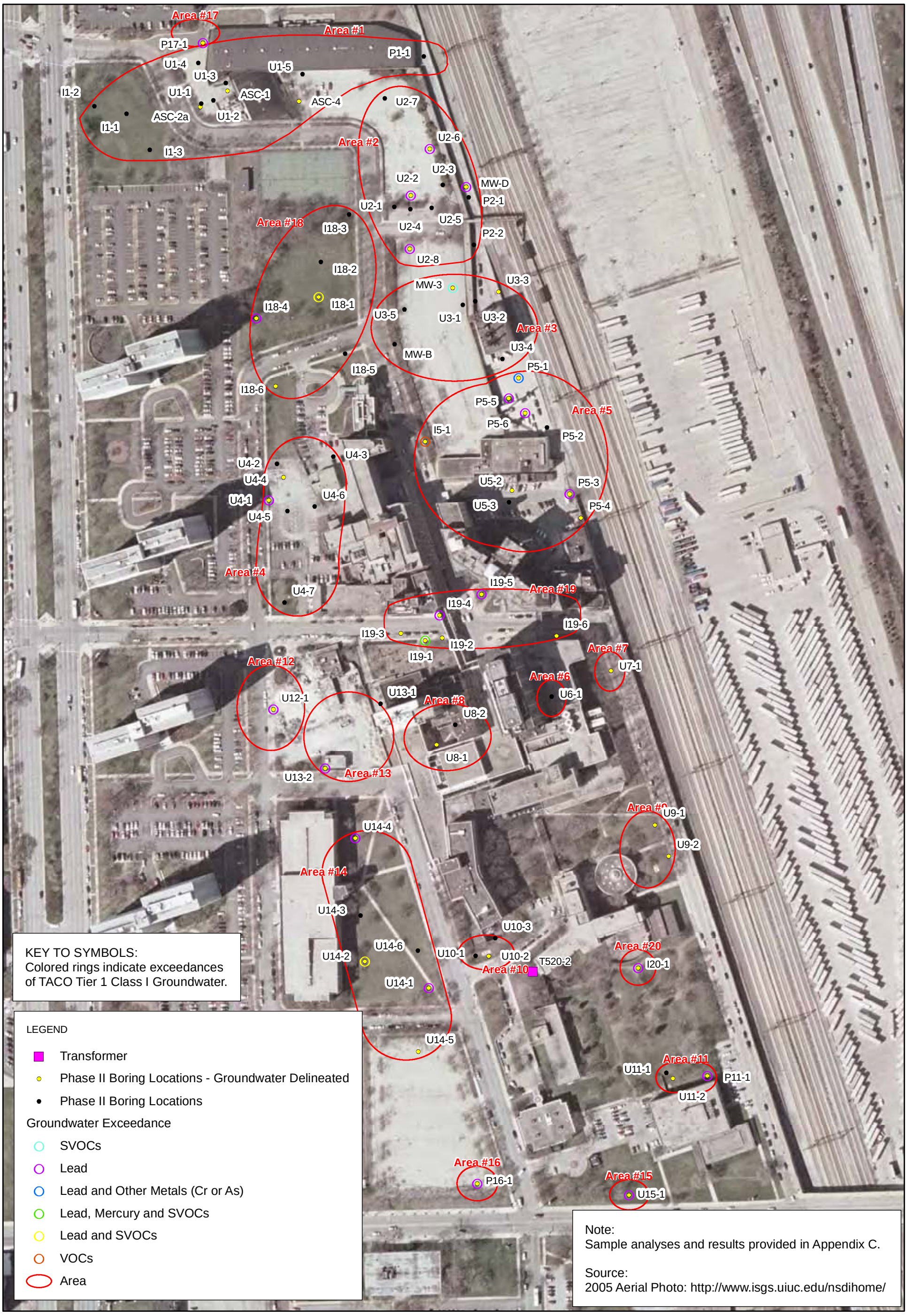



Figure 12
TACO Tier 1 Class I Groundwater Exceedances
*Michael Reese Hospital Site, Chicago, Illinois*

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File Path: \\Corvus\Groups\GIS\Projects\ConfidentialSite2008\GIS\MapDocs\Fig12.mxd, Date: July 8, 2008 10:16:00 AM, User: KBUCKVOL

# Tables

TABLE 1
Listing of Potential Sources (RECs, Historic RECs, and Other Historic Activities of Potential Interest)
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| Item of Interest | Location | REC Determination | Note |
|---|---|---|---|
| 6,000-gallon UST, in use | Wexler/Singer Pavilion | Yes. Tank and piping leak detection upgraded. BTEX, PAHs sampled along piping runs (~100 ft). Documented PNA release beneath product piping to building. | This area was investigated during Phase II ESA. |
| 30,000-gallon UST, in use | Power Plant | Yes. Documented release. LUST Incident 911651. TPH > 100 ppm north, south, and west of building. This area of contamination approximately 600' x 300'. Engineered barrier, institutional controls required. Benzene above Tier 1 Class 1 RO in downgradient MW near east property boundary. | This area was investigated during Phase II ESA. |
| 1,000-gallon UST, removed | ASC | Yes. Documented release. LUST Incident 931472. Engineered barrier, institutional controls required PAHs in soil in ASC-5. Downgradient (1-3, 7-9' bgs), PAHs above Class I in MW ASC-5 downgradient. | This area was investigated during Phase II ESA. |
| 3,000-gallon UST, removed | 27th and Lake Park Ave (27th and Ellis) | Yes. Documented release. LUST Incident 931373. | This area was investigated during Phase II ESA. |
| 7,500-gallon UST, removed | 27th and Lake Park Ave (27th and Ellis) | Yes. Documented release. LUST Incident 931373. | This area was investigated during Phase II ESA. |
| 2,500-gallon UST, in use | Blum | Yes. Documented release. LUST Incident 990177. Six BTEX, PAH soil samples collected & analyzed by EMPE. No BTEX exceedance, two samples with PAHs above Tier 1 residential. No sample location figure or further investigation documented. Engineered barrier required, industrial/commercial required. | This area was investigated during Phase II ESA. |
| 3,000-gallon UST, in use | Baumgarten | Yes. Documented release. LUST Incident 990177. Engineered barrier required; industrial/commercial required. | This area was investigated during Phase II ESA. |
| 3,000-gallon UST, in use | GSB/Bensinger | Yes. Documented release. LUST Incident 983092. Seven BTEX, PAH soil samples collected & analyzed by EMPE. No BTEX or PAH exceedances. No sample location figure or further investigation documented. Some PAHs left. Engineered barrier required, industrial/commercial required. | This area was investigated during Phase II ESA. |
| Machine shop with gas engine | Cottage Grove & 29th | Yes | This area was investigated during Phase II ESA. |
| 200-gallon gasoline UST | Brewery Ave & 27th | Yes. | This area was investigated during Phase II ESA. |
| Paint spraying area | West of Michael Reese (MR) laundry | Yes. | This area was investigated during Phase II ESA. |
| 250-gallon gasoline UST | S. Iglehart Pl and 27th | Yes. | This area was investigated during Phase II ESA. |
| Two underground Concrete Oil Tanks | S. Iglehart Pl and 27th | Yes. | This area was investigated during Phase II ESA. |
| Filling Station | 25th and S. Parkway--north of property | Yes. | This area was investigated during Phase II ESA. |
| Filling Station | NW corner of 31st & S. Ellis | Yes. | This area was investigated during Phase II ESA. |
| 1,000-gallon UST | 2920 S. Vernon--Offsite to west | Yes. | This area was investigated during Phase II ESA. |
| Filling Station | NW corner of 29th Place and Cottage Grove | Yes. | This area was investigated during Phase II ESA. |
| Oil Tanks | 27th & S. Ellis | Yes. | This area was investigated during Phase II ESA. |
| Filling Station | NW corner of 30th and Cottage Grove | Yes. | This area was investigated during Phase II ESA. |
| Dry Cleaner 1 | 2816 Cottage Grove | Yes. | This area was investigated during Phase II ESA. |
| Dry Cleaner 2 | 449 E 30th | Yes. | This area was investigated during Phase II ESA. |
| 2,000-gallon UST, closed in place | Rothschild | No. No release documented. Two sidewall soil samples obtained & analyzed in 1998. New UST installed. | This area was investigated during Phase II ESA. |
| 1,000-gallon UST, closed in place | Klein/Kundstadter Pavilion | No. No release documented. Two sidewall soil samples obtained & analyzed in 1998. | This area was investigated during Phase II ESA. |
| 550-gallon UST, in use | Levinson | No. No release documented. Six BTEX, PAH samples obtained & analyzed in 1998. | This area was investigated during Phase II ESA. |
| 2,000-gallon UST, in use | Rothschild | No. No release documented. | This area was investigated during Phase II ESA. |
| 1,000-gallon UST, in use | ASC | No. No release documented. | This area was investigated during Phase II ESA. |
| 550-gallon UST, potentially closed in place | Beneath western footprint of ASC | No. No release documented. | This area was investigated during Phase II ESA. |
| UST of unknown volume, removed | Meyer | No. No release documented. | This area was investigated during Phase II ESA. |
| Washed Fuel Co. | Lake Park and 25th--north of property | No. | This property does not appear on the Sanborn Maps after 1911 and, based on location and direction from the property, is not likely be an environmental concern. Northern property boundary was investigated during Phase II ESA. |
| 120-gallon gasoline UST #1 | 2423 S. Park Ave--north of property | No. | This property does not appear on the Sanborn Maps after 1911 and, based on location and direction from the property, is not likely be an environmental concern. Northern property boundary was investigated during Phase II ESA. |
| Paint and carpenter shop | Michael Reese Nurses home | No. | This shop was located with an enclosed building. No spills have been documented at this location. Although this use is not a REC, this area was investigated during the Phase II ESA |
| Cosmopolitan Fuel Co | 2435 S. Park Ave, north of property | No. | This property does not appear on the Sanborn Maps after 1911 and, based on location and direction from the property, is not likely be an environmental concern. Northern property boundary was investigated during Phase II ESA. |
| 120-gallon gasoline UST #2 | Hygenic Ice Co., north of property | No. | This property does not appear on the Sanborn Maps after 1950 and, based on location and direction from the property, is not likely be an environmental concern. Northern property boundary was investigated during Phase II ESA. |
| Cooper shop, Pitch kettle | Conrad Seipp Brewing Co. | No. | This shop was located with an enclosed building. No spills have been documented at this location. Although this use is not a REC, this area was investigated during the Phase II ESA |
| 120-gallon gasoline UST #3 | Carpenter shop north of Hygenic Ice Co.--north of property | No. | This property does not appear on the Sanborn Maps after 1911 and, based on location and direction from the property, is not likely be an environmental concern. Northern property boundary was investigated during Phase II ESA. |
| City Fuel Co Coal Shed | North of Hygenic Ice Co--north of property | No. | This property does not appear on the Sanborn Maps after 1911 and, based on location and direction from the property, is not likely be an environmental concern. Northern property boundary was investigated during Phase II ESA. |
| Coal Bins | South of MR boiler room (north of Main Reese) | No. | No history of spill. This area was investigated in Phase II ESA |
| Filling Station | West of Illinois Central facility (near former Cosmopolitan Fuel Co. | No. | This property does not appear on the Sanborn Maps after 1950 and, based on location and direction from the property, is not likely be an environmental concern. Northern property boundary was investigated during Phase II ESA. |
| City Truck Dumping | North of Swigart Paper Co.--north of property | No. | This property does not appear on the Sanborn Maps after 1950 and, based on location and direction from the property, is not likely be an environmental concern. Northern property boundary was investigated during Phase II ESA. |
| Auto Service | 24th and S. Parkway--north of property | No. | This property does not appear on the Sanborn Maps after 1950 and, based on location and direction from the property, is not likely be an environmental concern. Northern property boundary was investigated during Phase II ESA. |
| Oil Tanks | Sealtest Ice Cream Co, SW Corner of 24th and Lake Park--north of property | No. | Based on location and direction from the property is not likely be an environmental concern. Northern property boundary was investigated during Phase II ESA. |
| Substation #2 | West of Simon/Wexler | No. | No spills recorded. One transformer area was investigated in Phase II ESA |
| 500-gallon UST, unknown status | Unknown | No. | IEPA lists an additional 500-gallon UST registered to the property that is not accounted for in the above UST count. No information regarding the location or status of this tank is available. |

TABLE 2
Soil and Groundwater Analyses by Location
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | | Soil | | | | | | | | | | | Groundwater | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Boring or Well ID | Area | Items of Interest [1] | PCBs | VOCs | BTEX | PAH | RCRA Metals and pH | Lead | MTBE | TAL METAL | TCLP/SPLP Metals | SVOC | PEST. | VOCs | BTEX | PAH | RCRA Metals | Lead | MTBE |
| U1-1 | 1 | Pitch Kettle and 1,000-gallon UST | | | 1 | 1 | | | | | | | | | | | | | |
| U1-2 | 1 | | | | 2 | 2 | | | | | | | | | | | | | |
| U1-3 | 1 | | | | 1 | 1 | | | | | | | | | | | | | |
| U1-4 | 1 | | | | | 2 | 2 | | | | | | | | | | | | |
| U1-5 | 1 | | | | | 2 | 2 | | | | | | | | | | | | |
| P1-1 | 1 | | | 2 | | | | | | 2 | 1 | 2 | 2 | | | | | | |
| I1-1 | 1 | | | 2 | | | | | | 2 | 1 | 2 | 2 | | | | | | |
| I1-2 | 1 | | | | | 2 | 2 | | | | | | | | | | | | |
| I1-3 | 1 | | | | | 2 | 2 | | | | | | | | | | | | |
| ASC-1 | 1 | | | | | | | | | | | | | | 1 | 1 | | | |
| ASC-2a | 1 | | | | | | | | | | | | | | 1 | 1 | | | |
| ASC-4 | 1 | | | | | | | | | | | | | | 1 | 1 | | | |
| U2-1 | 2 | Cooper Shop, 200-gallon UST, USTs, and Oil AST | | | 1 | 1 | | 1 | 1 | | | | | | | | | | |
| U2-2 | 2 | | | | 1 | 1 | | 1 | 1 | | | | | | 1 | 1 | | 1 | 1 |
| U2-3 | 2 | | | | 2 | | | | 2 | 2 | 1 | 2 | 2 | | | | | | |
| U2-4 | 2 | | | | 1 | 1 | | 1 | 1 | | | | | | | | | | |
| U2-5 | 2 | | | | 1 | 1 | | 1 | 1 | | | | | | | | | | |
| U2-6 | 2 | | | 1 | | 2 | 2 | | | | | | | | | 1 | | 1 | |
| U2-7 | 2 | | | | | 2 | 2 | | | | | | | | | | | | |
| U2-8 | 2 | | | | | 2 | 2 | | | | | | | | | 1 | | 1 | |
| MW-D | 2 | | | | | | | | | | | | | | 1 | | 1 | | 1 |
| P2-1 | 2 | | | 2 | | | | | | 2 | 1 | 2 | 2 | | | | | | |
| P2-2 | 2 | | | 1 | | 1 | 1 | | | | | | | | | | | | |
| U3-1 | 3 | 30,000-gallon UST | | | 1 | 1 | | | | | | | | | | | | | |
| U3-2 | 3 | | | | 1 | 1 | | | | | | | | | | | | | |
| U3-3 | 3 | | | | 2 | 2 | | | | | | | | | 1 | 1 | | | |
| U3-4 | 3 | | | | 1 | 1 | | | | | | | | | | | | | |
| U3-5 | 3 | | | | | 2 | 2 | | | | | | | | | | | | |
| MW-3 | 3 | | | | | | | | | | | | | | 1 | 1 | | | |
| U4-1 | 4 | 250-gallon UST, Dry Cleaner, Machine Shop, and 2,000-gallon UST | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | 1 | | |
| U4-2 | 4 | | | | 1 | 1 | | | | | | | | | | | | | |
| U4-3 | 4 | | | | 1 | 1 | | | | | | | | | | | | | |
| U4-4 | 4 | | | | 1 | 1 | | | | | | | | | 1 | 1 | | | |
| U4-5 | 4 | | | | 2 | | | | | 2 | 1 | 2 | 2 | | | | | | |
| U4-6 | 4 | | | | | 2 | 2 | | | | | | | | | | | | |
| U4-7 | 4 | | | | | 2 | 2 | | | | | | | | | | | | |
| U5-2 | 5 | Paint Shop, Paint Spraying Area, 3,000-gallon UST, and Chlorinated Compound Encountered in Soil Investigation | | | 2 | 2 | | | | | | | | | 1 | 1 | | | |
| U5-3 | 5 | | | 1 | | 1 | 1 | | | | | | | | | | | | |
| P5-1 | 5 | | | 2 | | | | | | 2 | 1 | 2 | 2 | 1 | | 1 | 1 | | |
| P5-2 | 5 | | | 1 | | 1 | 1 | | | | | | | | | | | | |
| P5-3 | 5 | | | 1 | | 1 | 1 | | | | | | | | | | | | |
| P5-4 | 5 | | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | 1 | | |
| P5-5 | 5 | | | 2 | | | | | | 2 | 1 | 2 | 2 | 1 | | 1 | 1 | | |
| P5-6 | 5 | | | 2 | | 2 | 2 | | | | | | | 1 | | | 1 | | |
| I5-1 | 5 | | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | 1 | | |
| U6-1 [2] | 6 | AST 6 and 1,000-gallon UST | | | | | | | | | | | | | | | | | |
| U7-1 | 7 | 550-gallon UST | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | 1 | | |
| U8-1 | 8 | 2,500-gallon UST | | | 2 | 2 | | | | | | | | | 1 | 1 | | | |
| U8-2 | 8 | | | | 1 | 1 | | | | | | | | | | | | | |
| U9-1 | 9 | 6,000-gallon UST | | | 1 | 1 | | | | | | | | | 1 | 1 | | | |
| U9-2 | 9 | | | | 2 | 2 | | | | | | | | | 1 | 1 | | | |
| U10-1 | 10 | 3,000-gallon UST | | | 1 | 1 | | | | | | | | | | | | | |
| U10-2 | 10 | | | | 1 | 1 | | | | | | | | | 1 | 1 | | | |
| U10-3 | 10 | | | | 1 | 1 | | | | | | | | | | | | | |
| U11-1 | 11 | 550-gallon UST | | | 1 | 1 | | | | | | | | | | | | | |
| U11-2 | 11 | | | | 2 | 2 | | | | | | | | | 1 | 1 | | | |
| P11-1 | 11 | | | 2 | | | | | | 2 | 1 | 2 | 2 | 1 | | 1 | 1 | | |
| U12-1 | 12 | Filling Station | | | 1 | 1 | | 1 | 1 | | | | | | 1 | 1 | | 1 | 1 |
| U13-1 | 13 | Filling Station | | | 1 | 1 | | 1 | 1 | | | | | | | | | | |
| U13-2 | 13 | | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | 1 | | |
| U14-1 | 14 | Filling Station and Dry Cleaner | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | 1 | | |
| U14-2 | 14 | | | 2 | | 2 | 2 | | | | | | | 1 | | 1 | 1 | | |
| U14-3 | 14 | | | | | 2 | 2 | | | | | | | | | | | | |
| U14-4 | 14 | | | 1 | | 2 | 2 | | | | | | | 1 | | | 1 | | |
| U14-5 | 14 | | | 1 | | 2 | 2 | | | | | | | 1 | | | 1 | | |
| U14-6 | 14 | | | | | 2 | 2 | | | | | | | | | | | | |
| U15-1 | 15 | Filling Station | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | 1 | | |
| P16-1 | 16 | None - Perimeter Boring | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | 1 | | |
| P17-1 | 17 | Potential UST | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | 1 | | |
| I18-1 | 18 | 250-gallon UST, 2 Concrete Oil Tanks, and Dry Cleaners | | 2 | | | | | | 2 | 1 | 2 | 2 | 1 | | 1 | 1 | | |
| I18-2 | 18 | | | | | 2 | 2 | | | | | | | | | | | | |
| I18-3 | 18 | | | | | 2 | 2 | | | | | | | | | | | | |
| I18-4 | 18 | | | 1 | | 2 | 2 | | | | | | | 1 | | 1 | | 1 | |
| I18-5 | 18 | | | | | 2 | 2 | | | | | | | | | | | | |
| I18-6 | 18 | | | 1 | | 2 | 2 | | | | | | | 1 | | | | 1 | |
| I19-1 | 19 | Mercury Detection | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | 1 | | |
| I19-2 | 19 | | | | | 2 | 2 | 1 | | | | | | | | | 1 | | |
| I19-3 | 19 | | | | | 2 | 2 | | | | | | | | | | 1 | | |
| I19-4 | 19 | | | | | 2 | 2 | 1 | | | | | | | | | 1 | | |
| I19-5 | 19 | | | | | 2 | 2 | | | | | | | | | | 1 | | |
| I19-6 | 19 | | | | | 2 | 2 | 1 | | | | | | | | | 1 | | |
| I20-1 | 20 | None - Interior Boring | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | 1 | | |
| T520-2 | | Transformer - ComEd | 3 | | | | | | | | | | | | | | | | |

Notes:
[1] RECs, other historic activities of potential interest, or Phase IIa detections.
[2] Refusal at 6 inches. No samples collected.
Not analyzed

TABLE 3
Data Collected at Existing Monitoring Wells
*Phase II ESA, Micheal Reese Hospital Site, Chicago, Illinois*

| Well ID | Depth to Water (bgs) | Depth to Bottom (bgs) |
|---|---|---|
| ASC-1 | 6.35' | 18.93' |
| ASC-2a | 8.37' | 18.20' |
| ASC-4 | 11.39' | 19.70' |
| MW-D | 10.58' | 21.48' |
| MW-3 | 16.23' | 30.33' |

bgs = below ground surface

TABLE 4
Analytical Testing Methods
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| Sample Analyte Groups | Abbreviation/Acronym | Sample Analysis Method |
|---|---|---|
| Volatile Organic Carbons | VOCs | SW8260B |
| Semi-Volatile Organic Carbon | SVOCs | SW8270C |
| Poly Aromatic Hydrocarbons | PAHs | SW8270C by SIM |
| RCRA Metals | RCRA | SW6020/SW7471A |
| Target Analyte List Metals | TAL Metals | SW6020 |
| Organochlorine Pesticides | Pest. | SW8081A |
| pH | pH | SW9045C |
| TCLP Metals | TCLP Metals | SW6020 |
| SPLP Metals | SPLP Metals | SW6020 |
| Cyanide | Cyanide | SW9012A |
| Moisture | Moisture | ASTM D 2974 |

TABLE 5

Frequency of Detection, Concentration Ranges, and TACO Exceedances in Soil [1]

*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | Soil | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Number of Samples Analyzed | Number of Samples Detected for Analyte | Frequency of Detection (as %) | Minimum Detected Concentration (Mg/Kg) | Maximum Detected Concentration (Mg/Kg) | Mean Concentration (Mg/Kg) | Number of Samples Exceeding TACO Residential Ingestion Criteria | Number of Samples Exceeding TACO Residential Inhalation Criteria | Number of Samples Exceeding TACO Industrial/Commercial Ingestion Criteria | Number of Samples Exceeding TACO Industrial/Commercial Inhalation Criteria | Number of Samples Exceeding TACO Construction Worker Ingestion Criteria | Number of Samples Exceeding TACO Construction Worker Inhalation Criteria | Number of Samples Exceeding TACO Soil Component of the Groundwater Ingestion Route Criteria | Percent of Samples Exceeding One or More TACO Criteria |
| **Metals** | | | | | | | | | | | | | | |
| Aluminum | 19 | 19 | 100% | 930.0 | 5600.0 | 2563.6 | | | | | | | | |
| Arsenic | 90 | 85 | 94% | 1.1 | 33.0 | 5.4 | 13 | | 13 | | | | 1 | 14% |
| Barium | 90 | 90 | 100% | 2.4 | 860.0 | 42.9 | | | | | | | | |
| Beryllium | 19 | 6 | 32% | 0.6 | 0.8 | 0.7 | | | | | | | | |
| Cadmium | 90 | 40 | 44% | 0.5 | 32.0 | 1.2 | | | | | | | | |
| Calcium | 20 | 20 | 100% | 5200.0 | 86000.0 | 32170.7 | | | | | | | | |
| Chromium | 90 | 90 | 100% | 2.5 | 75.0 | 7.6 | | | | | | | | |
| Cobalt | 19 | 18 | 95% | 1.8 | 5.8 | 2.9 | | | | | | | | |
| Copper | 19 | 15 | 79% | 3.8 | 150.0 | 21.4 | | | | | | | | |
| Iron | 19 | 19 | 100% | 3200.0 | 18000.0 | 7073.4 | | | | | | | | |
| Lead | 95 | 95 | 100% | 1.9 | 7400.0 | 81.0 | 20 | | 4 | | 4 | | 51 | 21% |
| Magnesium | 19 | 19 | 100% | 3000.0 | 42000.0 | 14146.4 | | | | | | | | |
| Manganese | 19 | 19 | 100% | 48.0 | 480.0 | 158.1 | | | | | | | | |
| Mercury | 90 | 72 | 80% | 0.03 | 97.0 | 0.4 | 1 | 1 | | 1 | 1 | 63 | 1 | 70% |
| Nickel | 19 | 19 | 100% | 3.0 | 16.0 | 6.9 | | | | | | | | |
| Potassium | 19 | 19 | 100% | 170.0 | 1100.0 | 405.9 | | | | | | | | |
| Selenium | 90 | 12 | 13% | 1.2 | 3.6 | 1.6 | | | | | | | 5 | 6% |
| Silver | 90 | 1 | 1% | 2.5 | 2.5 | 2.5 | | | | | | | | |
| Sodium | 19 | 19 | 100% | 65.0 | 1800.0 | 262.4 | | | | | | | | |
| Vanadium | 19 | 19 | 100% | 5.7 | 21.0 | 11.1 | | | | | | | | |
| Zinc | 19 | 19 | 100% | 10.0 | 380.0 | 58.2 | | | | | | | | |
| **Other Analyses** | | | | | | | | | | | | | | |
| Cyanide | 19 | 1 | 5% | 0.340 | 0.340 | 0.34 | | | | | | | | |
| **Pesticides** | | | | | | | | | | | | | | |
| 4,4´-DDT | 19 | 1 | 5% | 0.02 | 0.02 | 0.021 | | | | | | | | |
| Methoxychlor | 19 | 1 | 5% | 0.13 | 0.13 | 0.125 | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | 19 | 1 | 5% | 1.93 | 1.93 | 1.93 | | | | | | | | |
| Acenaphthene | 124 | 53 | 43% | 0.05 | 81.90 | 0.57 | | | | | | | | |
| Acenaphthylene | 124 | 61 | 49% | 0.05 | 36.00 | 0.23 | | | | | | | | |
| Anthracene | 124 | 76 | 61% | 0.09 | 326.00 | 1.20 | | | | | | | | |
| Benzo (a) anthracene | 124 | 58 | 47% | 0.03 | 56.20 | 1.09 | 29 | | 10 | | | | 25 | 23% |
| Benzo (a) pyrene | 124 | 56 | 45% | 0.03 | 81.60 | 1.28 | 28 | | 28 | | 6 | | 13 | 23% |
| Benzo (b) fluoranthene | 124 | 58 | 47% | 0.02 | 71.00 | 1.16 | 28 | | 11 | | | | 15 | 23% |
| Benzo (g,h,i) perylene | 124 | 52 | 42% | 0.04 | 32.30 | 0.71 | | | | | | | | |
| Benzo (k) fluoranthene | 124 | 53 | 43% | 0.01 | 24.20 | 0.56 | 6 | | | | | | | 5% |
| Bis(2-ethylhexyl)phthalate | 19 | 1 | 5% | 4.72 | 4.72 | 4.72 | | | | | | | | |
| Carbazole | 19 | 4 | 21% | 0.72 | 8.66 | 2.48 | | | | | | | 4 | |
| Chrysene | 124 | 92 | 74% | 0.06 | 541.00 | 2.06 | 2 | | | | | | 1 | 2% |
| Dibenz (a,h) anthracene | 124 | 4 | 3% | 2.06 | 6.84 | 3.52 | 4 | | 4 | | | | 4 | 3% |
| Dibenzofuran | 19 | 1 | 5% | 2.88 | 2.88 | 2.88 | | | | | | | | |
| Di-n-butyl phthalate | 19 | 1 | 5% | 3.93 | 3.93 | 3.93 | | | | | | | | |
| Fluoranthene | 124 | 88 | 71% | 0.06 | 1200.00 | 2.49 | | | | | | | | |
| Fluorene | 124 | 59 | 48% | 0.03 | 158.00 | 0.41 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 124 | 87 | 70% | 0.03 | 127.00 | 0.87 | 45 | | 7 | | | | 3 | 36% |
| Naphthalene | 124 | 56 | 45% | 0.06 | 148.00 | 0.35 | | | | | | 6 | 1 | 5% |
| Phenanthrene | 124 | 100 | 81% | 0.05 | 1120.00 | 1.89 | | | | | | | | |
| Pyrene | 124 | 98 | 79% | 0.05 | 1270.00 | 2.76 | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | |
| 2-Butanone | 47 | 3 | 6% | 0.009 | 0.526 | 0.045 | | | | | | | | |
| Benzene | 82 | 4 | 5% | 0.007 | 0.029 | 0.015 | | | | | | | | |
| Bromodichloromethane | 47 | 1 | 2% | 0.012 | 0.012 | 0.012 | | | | | | | | |
| Carbon disulfide | 47 | 4 | 9% | 0.006 | 0.180 | 0.037 | | | | | | | | |
| Chloroform | 47 | 2 | 4% | 0.006 | 0.055 | 0.018 | | | | | | | | |
| Ethylbenzene | 82 | 5 | 6% | 0.006 | 0.023 | 0.012 | | | | | | | | |
| Tetrachloroethene | 47 | 5 | 11% | 0.006 | 0.021 | 0.009 | | | | | | | | |
| Toluene | 82 | 6 | 7% | 0.007 | 0.049 | 0.021 | | | | | | | | |
| Trichloroethene | 47 | 3 | 6% | 0.009 | 0.010 | 0.009 | | | | | | | | |
| Xylenes, total | 82 | 32 | 39% | 0.006 | 0.120 | 0.013 | | | | | | | | |
| Totals number of samples exceeding one or more criteria (Multiple exceedances within one sample are not duplicated) | | | | | | | 63 | 1 | 47 | 1 | 11 | 64 | 64 | |
| Approximate Percentage of Samples Exceeding TACO Criteria for the Pathway (Assumes an Average Sample Number Set of 109* | | | | | | | 58% | 1% | 43% | 1% | 10% | 59% | 59% | |

1. Table only includes detected analytes

*Corresponding to the Average of 124 PAH Samples plus 95 Lead Samples

TABLE 6

Frequency of Detection, Concentration Ranges, and TACO Exceedances in Groundwater[1]

*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | Groundwater | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Analyte | Number of Samples Analyzed | Number of Samples Detected for Analyte | Frequency of Detection (%) | Minimum Detected Concentration (mg/L) | Maximum Detected Concentration (mg/L) | Mean Concentration (mg/L) | Number of Samples Exceeding TACO Tier 1, Class I Groundwater Criteria | Percent of Samples Exceeding One or More TACO Criteria |
| Metals | | | | | | | | |
| Arsenic | 29 | 16 | 55% | 0.004 | 0.073 | 0.017 | 1 | 3% |
| Barium | 29 | 29 | 100% | 0.013 | 0.390 | 0.072 | 0 | 0% |
| Chromium | 29 | 19 | 66% | 0.005 | 0.400 | 0.016 | 1 | 3% |
| Lead | 37 | 33 | 89% | 0.002 | 0.900 | 0.030 | 26 | 70% |
| Mercury | 29 | 6 | 21% | 0.00025 | 0.011 | 0.001 | 1 | 3% |
| Selenium | 29 | 12 | 41% | 0.004 | 0.012 | 0.008 | 0 | 0% |
| SVOCs | | | | | | | | |
| Benzo (a) anthracene | 39 | 1 | 3% | 0.0052 | 0.005 | 0.005 | 1 | 3% |
| Benzo (a) pyrene | 39 | 1 | 3% | 0.0126 | 0.013 | 0.013 | 1 | 3% |
| Benzo (b) fluoranthene | 39 | 5 | 13% | 0.0001 | 0.020 | 0.001 | 4 | 10% |
| Benzo (g,h,i) perylene | 39 | 1 | 3% | 0.0051 | 0.005 | 0.005 | 0 | 0% |
| Benzo (k) fluoranthene | 39 | 2 | 5% | 0.0004 | 0.011 | 0.002 | 2 | 5% |
| Chrysene | 39 | 1 | 3% | 0.0052 | 0.005 | 0.005 | 1 | 3% |
| Fluoranthene | 39 | 1 | 3% | 0.0096 | 0.010 | 0.010 | 0 | 0% |
| Indeno(1,2,3-cd)pyrene | 39 | 1 | 3% | 0.0043 | 0.004 | 0.004 | 1 | 3% |
| Phenanthrene | 39 | 1 | 3% | 0.0026 | 0.003 | 0.003 | 0 | 0% |
| Pyrene | 39 | 1 | 3% | 0.0096 | 0.010 | 0.010 | 0 | 0% |
| VOCs | | | | | | | | |
| Chloroform | 26 | 1 | 4% | 0.006 | 0.006 | 0.006 | 1 | 4% |
| | | | | | | | | |
| Totals number of samples exceeding Class I groundwater criteria (Multiple exceedances within one sample are not duplicated) | | | | | | | 28 | |
| Approximate Percentage of Samples Exceeding TACO Class I groundwater criteria * | | | | | | | 76% | |

Note 1. Table only includes detected analytes.

*Percentage based on 37 samples (i.e. lead)

TABLE 7
Soil and Groundwater TACO Exceedances by Area
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| Investigation Area | Constituents Exceeding TACO Tier 1 Soil & Class I Groundwater Exceedances | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Residential Criteria | | Construction Worker Criteria | | Industrial/Commercial Criteria | | Soil to Groundwater Migration | Groundwater |
| | Ingestion | Inhalation | Ingestion | Inhalation | Ingestion | Inhalation | | |
| Area 1 | Arsenic,<br>Lead,<br>Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluorathene,<br>Indeno(1,2,3-cd)pyrene | | Lead | Mercury,<br>Naphthalene | Arsenic,<br>Lead,<br>Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene | | Lead,<br>Benzo(a)anthracene,<br>Benzo (a) pyrene,<br>Benzo(b)fluoranthene,<br>Carbazole | |
| Area 2 | Arsenic,<br>Lead,<br>Benzo(a) anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene,<br>Benzo(k)fluoranthene,<br>Chrysene,<br>Dibenz(a,h)anthracene,<br>Indeno(1,2,3-cd)pyrene | | Benzo(a)pyrene | Mercury,<br>Naphthalene | Arsenic,<br>Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene,<br>Dibenz(a,h) anthracene,<br>Indeno(1,2,3-cd)pyrene | | Lead,<br>Selenium,<br>Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene,<br>Carbazole,<br>Chrysene,<br>Dibenz(a,h)anthracene,<br>Indeno(1,2,3-cd)pyrene,<br>Naphthalene | Lead |
| Area 3 | Benzo(a)anthracene,<br>Benzo(a) pyrene,<br>Benzo(b)fluoranthene,<br>Indeno (1,2,3-cd) pyrene | | | Mercury | Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene | | Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene | Benzo(b)fluoranthene,<br>Benzo(k)fluoranthene |
| Area 4 | Lead,<br>Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene,<br>Benzo(k) fluoranthene,<br>Indeno (1,2,3-cd) pyrene | | | Mercury | Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene | | Lead,<br>Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene | Lead |
| Area 5 | Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene,<br>Indeno (1,2,3-cd) pyrene | | | Mercury | Benzo(a)pyrene | | Selenium,<br>Benzo(a)anthracene | Arsenic,<br>Chromium,<br>Lead,<br>Chloroform |
| Area 6 | | | | | | | | |
| Area 7 | | | | Mercury | | | | |
| Area 8 | Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene,<br>Benzo(k) fluoranthene,<br>Indeno (1,2,3-cd)pyrene | | Benzo(a)pyrene | | Benzo(a)pyrene,<br>Benzo(b)fluoranthene,<br>Indeno(1,2,3-cd)pyrene | | Benzo(a)anthracene,<br>Benzo(a) pyrene,<br>Benzo(b)fluoranthene,<br>Indeno(1,2,3-cd)pyrene | |
| Area 9 | Benzo(a)anthracene,<br>Benzo(a)pyrene,<br>Benzo(b)fluoranthene,<br>Indeno (1,2,3-cd) pyrene | | | | Benzo(a)pyrene | | Benzo(a)anthracene | |
| Area 10 | | | | | | | | |

TABLE 7
Soil and Groundwater TACO Exceedances by Area
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| Investigation Area | Constituents Exceeding TACO Tier 1 Soil & Class I Groundwater Exceedances | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Residential Criteria | | Construction Worker Criteria | | Industrial/Commercial Criteria | | Soil to Groundwater Migration | Groundwater |
| | Ingestion | Inhalation | Ingestion | Inhalation | Ingestion | Inhalation | | |
| Area 11 | Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene | | | | Benzo(a)pyrene | | Benzo(a)anthracene | Lead |
| Area 12 | | | | | | | | Lead |
| Area 13 | | | | | | | | Lead |
| Area 14 | Arsenic, Lead, Indeno(1,2,3-cd)pyrene | | Lead | Mercury | Arsenic, lead | | Lead | Lead, Benzo(b)fluoranthene |
| Area 15 | | | | | | | | Lead |
| Area 16 | | | | | | | | Lead |
| Area 17 | Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Indeno (1,2,3-cd) pyrene | | | Mercury | Benzo(a)pyrene | | Benzo(a)anthracene | Lead |
| Area 18 | Arsenic, Lead, Benzo(a) anthroacene, Benzo(a)pyrene, Benzo(b) fluoranthene, Benzo(k) fluoranthene, Dibenz(a,h) anthracene, Indeno(1,2,3-cd)pyrene | | Benzo(a)pyrene | Mercury, Naphthalene | Arsenic, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenz(a,h)anthracene | | Lead, Selenium, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b) fluoranthene, Carbazole, Dibenz(a,h)anthracene | Lead, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Indeno(1,2,3-cd)pyrene |
| Area 19 | Arsenic, Lead, Mercury, Indeno(1,2,3-cd)pyrene | Mercury | Mercury | Mercury | Arsenic | Mercury | Arsenic, Lead, Mercury, Selenium | Lead, Mercury, Benzo(b)fluoranthene |
| Area 20 | | | | | | | | Lead |

TABLE 8
TACO Tier 1 Residential Soil Ingestion Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | I1-1 | I1-1 | I1-2 | I1-3 | I1-3 | P1-1 | P1-1 | U1-1 | U1-2 | U1-2 | U1-3 | U1-4 | U1-5 | U1-5 | P2-1 | P2-1 |
| | | Sample Date | 5/6/08 | 5/6/08 | 6/12/08 | 6/12/08 | 6/12/08 | 5/13/08 | 5/13/08 | 5/7/08 | 5/7/08 | 5/14/08 | 5/7/08 | 6/13/08 | 6/13/08 | 6/13/08 | 5/13/08 | 5/13/08 |
| | | Sample Depth | 02 to 03 | 08 to 09 | 05 to 06 | 00 to 01 | 01 to 03 | 00 to 02 | 06 to 07 | 06 to 07 | 01 to 06 | 06 to 07 | 01 to 03 | 01 to 02 | 01 to 02 | 04 to 05 | 00 to 03 | 00 to 03 |
| Analyte | Tier 1 Res Ingestion [1] | Units | | | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | | | |
| Arsenic | 13 | mg/kg | | 13 | | 13 | | | | | | | | | 15 | | | 27 |
| Lead | 400 | mg/kg | | 430 | 490 | 1200 | | | | | | | | 7400 | 550 | | | 660 |
| Mercury | 23 | mg/kg | | | | | | | | | | | | | | | | |
| SVOCs | | | | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 1.1 | mg/kg | 3.53 | | | | | 3.47 | 3.43 | 9.21 | 5.98 | 6.09 | 3.05 | | | | 31.5 | 4.02 |
| Benzo (a) pyrene | 1.3 | mg/kg | 8.69 | | | | | 1.59 | 1.44 | 11.1 | 2.71 | 4.97 | 6.42 | | | | 23.6 | |
| Benzo (b) fluoranthene | 1.5 | mg/kg | 4.19 | | | | | 1.94 | 1.55 | 7.5 | 8.58 | 6.21 | 4.4 | | | | 32.3 | 4.48 |
| Benzo (k) fluoranthene | 9 | mg/kg | | | | | | | | | | | | | | | 10.2 | |
| Chrysene | 88 | mg/kg | | | | | | | | | | | | | | | | |
| Dibenz (a,h) anthracene | 0.2 | mg/kg | | | | | | | | | | | | | | | 4.65 | |
| Indeno(1,2,3-cd)pyrene | 0.9 | mg/kg | 1.55 | | | 1.4 | 1.28 | | | 7.37 | 2.72 | | 5.76 | | 2.93 | 4.07 | 13.3 | 1.97 |

TABLE 8
TACO Tier 1 Residential Soil Ingestion Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | P2-1 | P2-2 | U2-1 | U2-2 | U2-3 | U2-3 | U2-4 | U2-6 | U2-7 | U2-7 | U2-8 | U2-8 | U3-1 | U3-2 | U3-3 | U3-5 |
| | | Sample Date | 5/13/08 | 5/13/08 | 5/7/08 | 5/7/08 | 5/7/08 | 5/14/08 | 5/7/08 | 6/13/08 | 6/13/08 | 6/13/08 | 6/13/08 | 6/13/08 | 5/8/08 | 5/13/08 | 5/13/08 | 6/13/08 |
| | | Sample Depth | 07 to 08 | 00 to 01 | 10 to 12 | 06 to 09 | 02 to 03 | 04 to 07 | 02 to 03 | 01 to 03 | 01 to 02 | 04 to 06 | 01 to 03 | 04 to 06 | 11 to 12 | 07 to 08 | 05 to 07 | 01 to 02 |
| Analyte | Tier 1 Res Ingestion [1] | Units | | | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | | | |
| Arsenic | 13 | mg/kg | | | | | | | | 32 | | | | | | | | |
| Lead | 400 | mg/kg | 440 | | 440 | 420 | | | | | | | | 660 | | | | |
| Mercury | 23 | mg/kg | | | | | | | | | | | | | | | | |
| SVOCs | | | | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 1.1 | mg/kg | | 56.2 | 3.52 | 5.71 | 34.4 | 20.3 | 2.96 | | | | | | 1.82 | 18.2 | 21.3 | |
| Benzo (a) pyrene | 1.3 | mg/kg | | 34.2 | 4.67 | 8.49 | 81.6 | 8.27 | 4.36 | | | | | | 1.44 | 13.3 | 14.8 | |
| Benzo (b) fluoranthene | 1.5 | mg/kg | | 31.2 | 3.54 | 6.82 | 65.3 | 11.5 | 3.78 | | | | | | 1.64 | 11.1 | 16 | |
| Benzo (k) fluoranthene | 9 | mg/kg | | 10.2 | | | 20.7 | | | | | | | | | | | |
| Chrysene | 88 | mg/kg | | | | | | | | | 132 | | | 541 | | | | |
| Dibenz (a,h) anthracene | 0.2 | mg/kg | | | | | 6.84 | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 0.9 | mg/kg | | | 3.23 | 6.19 | 16.2 | | 3.32 | | 12.7 | 8.43 | 8.33 | 127 | | 3.82 | 4.54 | 4.42 |

TABLE 8
TACO Tier 1 Residential Soil Ingestion Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 4 | 4 | 4 | 5 | 5 | 8 | 8 | 9 | 9 | 11 | 14 | 14 | 14 | 14 | 14 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | U4-1 | U4-5 | U4-7 | P5-3 | U5-2 | U8-1 | U8-2 | U9-2 | U9-2 | U11-2 | U14-2 | U14-3 | U14-4 | U14-4 | U14-4 | U14-5 |
| | | Sample Date | 5/8/08 | 5/8/08 | 6/12/08 | 5/12/08 | 5/12/08 | 5/12/08 | 5/12/08 | 5/8/08 | 5/8/08 | 5/9/08 | 5/6/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 |
| | | Sample Depth | 05 to 07 | 00 to 04 | 01 to 02 | 01 to 03 | 02 to 04 | 01 to 03 | 00 to 02 | 01 to 03 | 10 to 12 | 00 to 02 | 02 to 03 | 01 to 02 | 01 to 02 | 08 to 09 | 08 to 09 | 00 to 01 |
| Analyte | Tier 1 Res Ingestion [1] | Units | | | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | | | |
| Arsenic | 13 | mg/kg | | | | | | | | | | | 13 | 19 | | | | |
| Lead | 400 | mg/kg | 550 | | | | | | | | | | 600 | 1000 | | | 680 | |
| Mercury | 23 | mg/kg | | | | | | | | | | | | | | | | |
| SVOCs | | | | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 1.1 | mg/kg | 18.8 | | | 4.78 | 1.6 | 6.19 | 1.37 | 3.61 | 1.77 | 2.34 | | | | | | |
| Benzo (a) pyrene | 1.3 | mg/kg | 12.6 | 1.63 | | 3.81 | | 5.49 | 59.4 | 2.42 | 1.3 | 2.03 | | | | | | |
| Benzo (b) fluoranthene | 1.5 | mg/kg | 14.8 | | | 4.64 | 1.55 | 6.12 | 71 | 2.53 | | 2.3 | | | | | | |
| Benzo (k) fluoranthene | 9 | mg/kg | 14.9 | | | | | | 24.2 | | | | | | | | | |
| Chrysene | 88 | mg/kg | | | | | | | | | | | | | | | | |
| Dibenz (a,h) anthracene | 0.2 | mg/kg | | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 0.9 | mg/kg | 5.83 | | 1.24 | 1.71 | | 2.52 | 28.7 | 0.939 | | 0.91 | | 2.02 | 3.53 | 4.35 | 2.02 | 1.78 |

TABLE 8
TACO Tier 1 Residential Soil Ingestion Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 14 | 17 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 19 | 19 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | U14-6 | P17-1 | I18-1 | I18-1 | I18-2 | I18-2 | I18-3 | I18-3 | I18-4 | I18-4 | I18-5 | I18-6 | I19-1 | I19-4 | I19-6 |
| | | Sample Date | 6/12/08 | 5/14/08 | 5/6/08 | 5/6/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/13/08 | 6/13/08 | 6/12/08 | 6/12/08 | 5/7/08 | 6/12/08 | 6/12/08 |
| | | Sample Depth | 01 to 02 | 01 to 03 | 00 to 01 | 08 to 09 | 01 to 03 | 04 to 05 | 02 to 03 | 04 to 06 | 01 to 02 | 08 to 10 | 01 to 02 | 01 to 02 | 06 to 08 | 01 to 02 | 00 to 01 |
| Analyte | Tier 1 Res Ingestion [1] | Units | | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | | |
| Arsenic | 13 | mg/kg | 13 | | | | | 13 | | | | | 16 | 20 | 33 | | 30 |
| Lead | 400 | mg/kg | 1000 | | | | | 470 | 610 | | 440 | | 460 | | 560 | | |
| Mercury | 23 | mg/kg | | | | | | | | | | | | | 97 | | |
| SVOCs | | | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 1.1 | mg/kg | | 4.82 | 24 | 8.27 | | | | | | | | | | | |
| Benzo (a) pyrene | 1.3 | mg/kg | | 3.63 | 46.7 | 21.4 | | | | | | | | | | | |
| Benzo (b) fluoranthene | 1.5 | mg/kg | | 4.75 | 26.8 | 9.79 | | | | | | | | | | | |
| Benzo (k) fluoranthene | 9 | mg/kg | | | 12.1 | | | | | | | | | | | | |
| Chrysene | 88 | mg/kg | | | | | | | | | | | | | | | |
| Dibenz (a,h) anthracene | 0.2 | mg/kg | | | 2.06 | 2.34 | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 0.9 | mg/kg | 1.07 | 1.53 | 7.22 | 4.39 | 1.39 | 2.09 | 4.86 | 1.07 | 0.913 | 3.1 | | | | 1.99 | 1.77 |

TABLE 9
TACO Tier 1 Residential Soil Inhalation Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 19 |
|---|---|---|---|
| | | Boring | I19-1 |
| | | Sample Date | 5/7/08 |
| | | Sample Depth | 06 to 08 |
| Analyte | Tier 1 Res Inhalation [1] | Units | |
| METALs | | | |
| Mercury | 10 | mg/kg | 97 |

Notes:
[1] 10 mg/kg is the TACO Tier 1 Residential Soil Inhalation Screening Limit. However, according to TACO, if elemental mercury is documented to be a contaminant of concern at the site, the 0.1 mg/kg TACO criteria for construction worker exposure may apply to the residential exposure pathway. Table 11 summarizes the sample locations that exceed the 0.1 mg/kg criterion.

TABLE 10
TACO Tier 1 Construction Worker Ingestion Exceedances for Soil
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 1 | 1 | 2 | 2 | 2 | 8 | 14 | 14 | 18 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | I1-3 | U1-4 | P2-1 | P2-2 | U2-3 | U8-2 | U14-3 | U14-6 | I18-1 | I18-1 | I19-1 |
| | | Sample Date | 06/12/08 | 06/13/08 | 05/13/08 | 05/13/08 | 05/07/08 | 05/12/08 | 06/12/08 | 06/12/08 | 05/06/08 | 05/06/08 | 05/07/08 |
| | | Sample Depth | 00 to 01 | 01 to 02 | 00 to 03 | 00 to 01 | 02 to 03 | 00 to 02 | 01 to 02 | 01 to 02 | 00 to 01 | 08 to 09 | 06 to 08 |
| Analyte | CW Ingestion SL[1] | Units | | | | | | | | | | | |
| METALs | | | | | | | | | | | | | |
| Lead | 700 | mg/kg | 1200 | 7400 | | | | | 1000 | 1000 | | | |
| Mercury | 61 | mg/kg | | | | | | | | | | | 97 |
| SVOCs | | | | | | | | | | | | | |
| Benzo (a) pyrene | 17 | mg/kg | | | 23.6 | 34.2 | 81.6 | 59.4 | | | 46.7 | 21.4 | |

Notes:
[1] CW Ingestion SL is Construction Worker Ingestion Screening Level for TACO Tier 1 Soil

TABLE 11
TACO Tier 1 Construction Worker Inhalation Exceedances for Soil
*Phase II ESA, Michael Reese Hospital Site, Chicago, IL*

| | | Area | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | I1-1 | I1-1 | I1-2 | I1-3 | I1-3 | P1-1 | P1-1 | U1-2 | U1-4 | U1-5 | U1-5 | P2-1 | P2-1 | P2-2 |
| | | Sample Date | 5/6/08 | 5/6/08 | 6/12/08 | 6/12/08 | 6/12/08 | 5/13/08 | 5/13/08 | 5/7/08 | 6/13/08 | 6/13/08 | 6/13/08 | 5/13/08 | 5/13/08 | 5/13/08 |
| | | Sample Depth | 02 to 03 | 08 to 09 | 05 to 06 | 00 to 01 | 01 to 03 | 00 to 02 | 06 to 07 | 01 to 06 | 01 to 02 | 01 to 02 | 04 to 05 | 00 to 03 | 07 to 08 | 00 to 01 |
| Analyte | CW Inhalation SL[1] | Units | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | |
| Mercury | 0.1 | mg/kg | 0.45 | 0.29 | 0.8 | 0.7 | 0.58 | 0.47 | 0.35 | | 0.44 | 0.76 | 0.3 | 0.32 | 0.43 | 0.36 |
| SVOCs | | | | | | | | | | | | | | | | |
| Naphthalene | 1.8 | mg/kg | | | | | | | | 2.26 | | | 2.51 | | | |

Notes:
[1] CW Inhalation SL is Construction Worker Inhalation Screening Limit

TABLE 11
TACO Tier 1 Construction Worker Inhalation Exceedances for Soil
*Phase II ESA, Michael Reese Hospital Site, Chicago, IL*

| | | Area | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | U2-2 | U2-3 | U2-3 | U2-6 | U2-6 | U2-7 | U2-7 | U2-8 | U2-8 | U3-5 | U3-5 | U4-1 | U4-5 | U4-5 |
| | | Sample Date | 5/7/08 | 5/7/08 | 5/14/08 | 6/13/08 | 6/13/08 | 6/13/08 | 6/13/08 | 6/13/08 | 6/13/08 | 6/13/08 | 6/13/08 | 5/8/08 | 5/8/08 | 5/8/08 |
| | | Sample Depth | 06 to 09 | 02 to 03 | 04 to 07 | 01 to 03 | 04 to 06 | 01 to 02 | 04 to 06 | 01 to 03 | 04 to 06 | 01 to 02 | 04 to 07 | 05 to 07 | 00 to 04 | 05 to 06 |
| Analyte | CW Inhalation SL[1] | Units | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | |
| Mercury | 0.1 | mg/kg | 0.33 | 0.15 | 1.7 | 0.59 | 0.12 | 0.68 | 0.13 | 0.21 | 0.58 | 0.24 | 0.41 | 1 | 0.2 | 0.83 |
| SVOCs | | | | | | | | | | | | | | | | |
| Naphthalene | 1.8 | mg/kg | | | | | | | | 2.05 | 148 | | | | | |

Notes:
[1] CW Inhalation SL is Construction Worker Inhalation Screening Limit

TABLE 11
TACO Tier 1 Construction Worker Inhalation Exceedances for Soil
*Phase II ESA, Michael Reese Hospital Site, Chicago, IL*

| | | Area | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 7 | 14 | 14 | 14 | 14 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | U4-6 | U4-7 | P5-2 | P5-3 | P5-4 | P5-4 | P5-6 | P5-6 | U7-1 | U14-1 | U14-1 | U14-2 | U14-2 | U14-3 |
| | | Sample Date | 6/12/08 | 6/12/08 | 5/12/08 | 5/12/08 | 5/12/08 | 5/12/08 | 6/13/08 | 6/13/08 | 5/7/08 | 5/9/08 | 5/9/08 | 5/6/08 | 5/6/08 | 6/12/08 |
| | | Sample Depth | 00 to 02 | 01 to 02 | 05 to 06 | 01 to 03 | 10 to 12 | 10 to 12 | 01 to 02 | 04 to 05 | 03 to 04 | 01 to 03 | 01 to 03 | 02 to 03 | 08 to 09 | 01 to 02 |
| Analyte | CW Inhalation SL[1] | Units | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | |
| Mercury | 0.1 | mg/kg | 0.68 | 0.96 | 0.18 | 0.46 | 0.27 | 0.78 | 1.5 | 0.3 | 0.19 | 0.7 | 0.58 | 0.73 | 0.29 | 1.7 |
| SVOCs | | | | | | | | | | | | | | | | |
| Naphthalene | 1.8 | mg/kg | | | | | | | | | | | | | | |

Notes:
[1] CW Inhalation SL is Construction Worker Inhalation Screening Limit

TABLE 11
TACO Tier 1 Construction Worker Inhalation Exceedances for Soil
*Phase II ESA, Michael Reese Hospital Site, Chicago, IL*

| | | Area | 14 | 14 | 14 | 14 | 14 | 17 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | U14-3 | U14-4 | U14-4 | U14-5 | U14-6 | P17-1 | I18-1 | I18-2 | I18-2 | I18-3 | I18-3 | I18-4 | I18-4 | I18-5 |
| | | Sample Date | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 | 5/14/08 | 5/6/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/13/08 | 6/13/08 | 6/12/08 |
| | | Sample Depth | 04 to 06 | 08 to 09 | 08 to 09 | 00 to 01 | 01 to 02 | 01 to 03 | 00 to 01 | 01 to 03 | 04 to 05 | 02 to 03 | 04 to 06 | 01 to 02 | 08 to 10 | 01 to 02 |
| Analyte | CW Inhalation SL[1] | Units | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | |
| Mercury | 0.1 | mg/kg | 0.56 | 0.29 | 0.26 | 0.35 | 2.2 | 0.54 | 0.1 | 0.54 | 0.29 | 0.57 | 0.17 | 0.62 | 0.6 | 0.18 |
| SVOCs | | | | | | | | | | | | | | | | |
| Naphthalene | 1.8 | mg/kg | | | | | | | 3.94 | | | | | | 1.92 | |

Notes:
[1] CW Inhalation SL is Construction Worker Inhalation Screening Limit

TABLE 11
TACO Tier 1 Construction Worker Inhalation Exceedances for Soil
*Phase II ESA, Michael Reese Hospital Site, Chicago, IL*

| | | Area | 18 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | I18-6 | I19-1 | I19-2 | I19-2 | I19-3 | I19-5 | I19-6 | I19-6 |
| | | Sample Date | 6/12/08 | 5/7/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 |
| | | Sample Depth | 01 to 02 | 06 to 08 | 01 to 02 | 08 to 10 | 00 to 02 | 01 to 02 | 00 to 01 | 08 to 09 |
| Analyte | CW Inhalation SL[1] | Units | | | | | | | | |
| METALS | | | | | | | | | | |
| Mercury | 0.1 | mg/kg | 0.45 | 97 | 1.4 | 0.72 | 0.49 | 0.46 | 0.97 | 0.12 |
| SVOCs | | | | | | | | | | |
| Naphthalene | 1.8 | mg/kg | | | | | | | | |

Notes:
[1] CW Inhalation SL is Construction Worker Inhalation Screening Limit

TABLE 12
TACO Tier 1 Industrial/Commercial Soil Ingestion Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | I1-1 | I1-1 | I1-3 | P1-1 | P1-1 | U1-1 | U1-2 | U1-2 | U1-3 | U1-4 | U1-5 | P2-1 | P2-1 | P2-2 |
| | | Sample Date | 5/6/08 | 5/6/08 | 6/12/08 | 5/13/08 | 5/13/08 | 5/7/08 | 5/7/08 | 5/14/08 | 5/7/08 | 6/13/08 | 6/13/08 | 5/13/08 | 5/13/08 | 5/13/08 |
| | | Sample Depth | 02 to 03 | 08 to 09 | 00 to 01 | 00 to 02 | 06 to 07 | 06 to 07 | 01 to 06 | 06 to 07 | 01 to 03 | 01 to 02 | 01 to 02 | 00 to 03 | 00 to 03 | 00 to 01 |
| Analyte | Ind/Comm Ingestion SL[1] | Units | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | |
| Arsenic | 13 | mg/kg | | 13 | 13 | | | | | | | | 15 | | 27 | |
| Lead | 800 | mg/kg | | | 1200 | | | | | | | 7400 | | | | |
| SVOCs | | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 8 | mg/kg | | | | | | 9.21 | | | | | | 31.5 | | 56.2 |
| Benzo (a) pyrene | 1.3 | mg/kg | 8.69 | | | 1.59 | 1.44 | 11.1 | 2.71 | 4.97 | 6.42 | | | 23.6 | | 34.2 |
| Benzo (b) fluoranthene | 8 | mg/kg | | | | | | | 8.58 | | | | | 32.3 | | 31.2 |
| Dibenz (a,h) anthracene | 0.8 | mg/kg | | | | | | | | | | | | 4.65 | | |
| Indeno(1,2,3-cd)pyrene | 8 | mg/kg | | | | | | | | | | | | 13.3 | | |

Notes:
[1] Ind/Comm Ingestion SL is Industrial/Commercial Ingestion Screening Limit

TABLE 12
TACO Tier 1 Industrial/Commercial Soil Ingestion Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | U2-1 | U2-2 | U2-3 | U2-3 | U2-4 | U2-6 | U2-7 | U2-7 | U2-8 | U2-8 | U3-1 | U3-2 | U3-3 | U4-1 |
| | | Sample Date | 5/7/08 | 5/7/08 | 5/7/08 | 5/14/08 | 5/7/08 | 6/13/08 | 6/13/08 | 6/13/08 | 6/13/08 | 6/13/08 | 5/8/08 | 5/13/08 | 5/13/08 | 5/8/08 |
| | | Sample Depth | 10 to 12 | 06 to 09 | 02 to 03 | 04 to 07 | 02 to 03 | 01 to 03 | 01 to 02 | 04 to 06 | 01 to 03 | 04 to 06 | 11 to 12 | 07 to 08 | 05 to 07 | 05 to 07 |
| Analyte | Ind/Comm Ingestion SL[1] | Units | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | |
| Arsenic | 13 | mg/kg | | | | | | 32 | | | | | | | | |
| Lead | 800 | mg/kg | | | | | | | | | | | | | | |
| SVOCs | | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 8 | mg/kg | | | 34.4 | 20.3 | | | | | | | | 18.2 | 21.3 | 18.8 |
| Benzo (a) pyrene | 1.3 | mg/kg | 4.67 | 8.49 | 81.6 | 8.27 | 4.36 | | | | | | 1.44 | 13.3 | 14.8 | 12.6 |
| Benzo (b) fluoranthene | 8 | mg/kg | | | 65.3 | 11.5 | | | | | | | | 11.1 | 16 | 14.8 |
| Dibenz (a,h) anthracene | 0.8 | mg/kg | | | 6.84 | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 8 | mg/kg | | | 16.2 | | | | 12.7 | 8.43 | 8.33 | 127 | | | | |

Notes:
[1] Ind/Comm Ingestion SL is Industrial/Commercial Ingestion Screening Limit

TABLE 12
TACO Tier 1 Industrial/Commercial Soil Ingestion Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 4 | 5 | 8 | 8 | 9 | 9 | 11 | 14 | 14 | 14 | 17 | 18 | 18 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | U4-5 | P5-3 | U8-1 | U8-2 | U9-2 | U9-2 | U11-2 | U14-2 | U14-3 | U14-6 | P17-1 | I18-1 | I18-1 | I18-2 |
| | | Sample Date | 5/8/08 | 5/12/08 | 5/12/08 | 5/12/08 | 5/8/08 | 5/8/08 | 5/9/08 | 5/6/08 | 6/12/08 | 6/12/08 | 5/14/08 | 5/6/08 | 5/6/08 | 6/12/08 |
| | | Sample Depth | 00 to 04 | 01 to 03 | 01 to 03 | 00 to 02 | 01 to 03 | 10 to 12 | 00 to 02 | 02 to 03 | 01 to 02 | 01 to 02 | 01 to 03 | 00 to 01 | 08 to 09 | 04 to 05 |
| Analyte | Ind/Comm Ingestion SL[1] | Units | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | |
| Arsenic | 13 | mg/kg | | | | | | | | 13 | 19 | 13 | | | | 13 |
| Lead | 800 | mg/kg | | | | | | | | | 1000 | 1000 | | | | |
| SVOCs | | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 8 | mg/kg | | | | | | | | | | | | 24 | 8.27 | |
| Benzo (a) pyrene | 1.3 | mg/kg | 1.63 | 3.81 | 5.49 | 59.4 | 2.42 | 1.3 | 2.03 | | | | 3.63 | 46.7 | 21.4 | |
| Benzo (b) fluoranthene | 8 | mg/kg | | | | 71 | | | | | | | | 26.8 | 9.79 | |
| Dibenz (a,h) anthracene | 0.8 | mg/kg | | | | | | | | | | | | 2.06 | 2.34 | |
| Indeno(1,2,3-cd)pyrene | 8 | mg/kg | | | | 28.7 | | | | | | | | | | |

Notes:
[1] Ind/Comm Ingestion SL is Industrial/Commercial Ingestion Screening Limit

TABLE 12
TACO Tier 1 Industrial/Commercial Soil Ingestion Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 18 | 18 | 19 | 19 |
|---|---|---|---|---|---|---|
| | | Boring | I18-5 | I18-6 | I19-1 | I19-6 |
| | | Sample Date | 6/12/08 | 6/12/08 | 5/7/08 | 6/12/08 |
| | | Sample Depth | 01 to 02 | 01 to 02 | 06 to 08 | 00 to 01 |
| Analyte | Ind/Comm Ingestion SL[1] | Units | | | | |
| METALS | | | | | | |
| Arsenic | 13 | mg/kg | 16 | 20 | 33 | 30 |
| Lead | 800 | mg/kg | | | | |
| SVOCs | | | | | | |
| Benzo (a) anthracene | 8 | mg/kg | | | | |
| Benzo (a) pyrene | 1.3 | mg/kg | | | | |
| Benzo (b) fluoranthene | 8 | mg/kg | | | | |
| Dibenz (a,h) anthracene | 0.8 | mg/kg | | | | |
| Indeno(1,2,3-cd)pyrene | 8 | mg/kg | | | | |

Notes:
[1] Ind/Comm Ingestion SL is Industrial/Commercial Ingestion Screening Limit

TABLE 13
TACO Tier 1 Industrial/Commercial Inhalation Exceedances for Soil
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 19 |
|---|---|---|---|
| | | Boring | I19-1 |
| | | Sample Date | 5/7/08 |
| | | Sample Depth | 06 to 08 |
| Analyte | Ind/Comm Inhalation SL[1] | Units | |
| METALS | | | |
| Mercury | 16 | mg/kg | 97 |

Notes:
[1] Ind/Comm Inhalation SL is Industrial/Commercial Inhalation Screening Limit

TABLE 14
TACO Tier 1 Soil Component of the Class I Groundwater Migration Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | I1-1 | I1-1 | I1-2 | I1-3 | I1-3 | P1-1 | P1-1 | U1-1 | U1-2 | U1-2 | U1-3 | U1-4 | U1-5 |
| | | Sample Date | 5/6/08 | 5/6/08 | 6/12/08 | 6/12/08 | 6/12/08 | 5/13/08 | 5/13/08 | 5/7/08 | 5/7/08 | 5/14/08 | 5/7/08 | 6/13/08 | 6/13/08 |
| | | Sample Depth | 02 to 03 | 08 to 09 | 05 to 06 | 00 to 01 | 01 to 03 | 00 to 02 | 06 to 07 | 06 to 07 | 01 to 06 | 06 to 07 | 01 to 03 | 01 to 02 | 01 to 02 |
| Analyte | Tier 1 Soil Class 1 [1,2] | Units | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | |
| Arsenic | between 30 and 32 | mg/kg | | | | | | | | | | | | | |
| Lead | 107 | mg/kg | 290 | 430 | 490 | 1200 | 340 | 240 | 260 | | | | | 7400 | 550 |
| Mercury | 6.4 | mg/kg | | | | | | | | | | | | | |
| Selenium | between 1.3 and 4.5 | mg/kg | | | | | | | | | | | | | |
| **TCLP Metals** | | | | | | | | | | | | | | | |
| Lead | 0.0075 | mg/l | | | | 0.0865 | | | | | | | | 0.185 | |
| **SVOCs** | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 2 | mg/kg | 3.53 | | | | | 3.47 | 3.43 | 9.21 | 5.98 | 6.09 | 3.05 | | |
| Benzo (a) pyrene | 8 | mg/kg | 8.69 | | | | | | | 11.1 | | | | | |
| Benzo (b) fluoranthene | 5 | mg/kg | | | | | | | | 7.5 | 8.58 | 6.21 | | | |
| Carbazole | 0.6 | mg/kg | 0.717 | | | | | | | | | | | | |
| Chrysene | 160 | mg/kg | | | | | | | | | | | | | |
| Dibenz (a,h) anthracene | 2 | mg/kg | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 14 | mg/kg | | | | | | | | | | | | | |
| Naphthalene | 12 | mg/kg | | | | | | | | | | | | | |

Notes:
[1] Tier 1 Res Class 1 is TACO Tier 1 Soil Component of the Class 1 Groundwater Groundwater Migration
[2] For inorganic parameters, 742.Appendix B, Table C "pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route is used

TABLE 14
TACO Tier 1 Soil Component of the Class I Groundwater Migration Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | U1-5 | P2-1 | P2-1 | P2-1 | P2-2 | U2-1 | U2-2 | U2-3 | U2-3 | U2-4 | U2-6 | U2-7 | U2-7 |
| | | Sample Date | 6/13/08 | 5/13/08 | 5/13/08 | 5/13/08 | 5/13/08 | 5/7/08 | 5/7/08 | 5/7/08 | 5/14/08 | 5/7/08 | 6/13/08 | 6/13/08 | 6/13/08 |
| | | Sample Depth | 04 to 05 | 00 to 03 | 00 to 03 | 07 to 08 | 00 to 01 | 10 to 12 | 06 to 09 | 02 to 03 | 04 to 07 | 02 to 03 | 01 to 03 | 01 to 02 | 04 to 06 |
| Analyte | Tier 1 Soil Class 1 [1,2] | Units | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | |
| Arsenic | between 30 and 32 | mg/kg | | | | | | | | | | | | | |
| Lead | 107 | mg/kg | 230 | 190 | 660 | 440 | 170 | 440 | 420 | | 300 | 160 | 340 | 120 | 390 |
| Mercury | 6.4 | mg/kg | | | | | | | | | | | | | |
| Selenium | between 1.3 and 4.5 | mg/kg | | | | | 1.7 | | | | 3.6 | | | | |
| **TCLP Metals** | | | | | | | | | | | | | | | |
| Lead | 0.0075 | mg/l | | | | | | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 2 | mg/kg | | 31.5 | 4.02 | | 56.2 | 3.52 | 5.71 | 34.4 | 20.3 | 2.96 | | | |
| Benzo (a) pyrene | 8 | mg/kg | | 23.6 | | | 34.2 | | 8.49 | 81.6 | 8.27 | | | | |
| Benzo (b) fluoranthene | 5 | mg/kg | | 32.3 | | | 31.2 | | 6.82 | 65.3 | 11.5 | | | | |
| Carbazole | 0.6 | mg/kg | | 4.59 | | | | | | | | | | | |
| Chrysene | 160 | mg/kg | | | | | | | | | | | | | |
| Dibenz (a,h) anthracene | 2 | mg/kg | | 4.65 | | | | | | 6.84 | | | | | |
| Indeno(1,2,3-cd)pyrene | 14 | mg/kg | | | | | | | | 16.2 | | | | | |
| Naphthalene | 12 | mg/kg | | | | | | | | | | | | | |

Notes:

[1] Tier 1 Res Class 1 is TACO Tier 1 Soil Component of the Class 1 Groundwater Groundwater Migration

[2] For inorganic parameters, 742.Appendix B, Table C "pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route is used

TABLE 14
TACO Tier 1 Soil Component of the Class I Groundwater Migration Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 8 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | U2-8 | U2-8 | U3-2 | U3-3 | U3-5 | U4-1 | U4-5 | U4-6 | U4-7 | P5-3 | U8-1 | U8-2 | U9-2 |
| | | Sample Date | 6/13/08 | 6/13/08 | 5/13/08 | 5/13/08 | | 5/8/08 | 5/8/08 | 6/12/08 | 6/12/08 | 5/12/08 | 5/12/08 | 5/12/08 | 5/8/08 |
| | | Sample Depth | 01 to 03 | 04 to 06 | 07 to 08 | 05 to 07 | 04 to 07 | 05 to 07 | 05 to 06 | 00 to 02 | 01 to 02 | 01 to 03 | 01 to 03 | 00 to 02 | 01 to 03 |
| Analyte | Tier 1 Soil Class 1 [1,2] | Units | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | |
| Arsenic | between 30 and 32 | mg/kg | | | | | | | | | | | | | |
| Lead | 107 | mg/kg | 160 | 660 | | | 210 | 550 | 140 | 240 | 310 | | | | |
| Mercury | 6.4 | mg/kg | | | | | | | | | | | | | |
| Selenium | between 1.3 and 4.5 | mg/kg | | | | | | | | | | 2 | | | |
| **TCLP Metals** | | | | | | | | | | | | | | | |
| Lead | 0.0075 | mg/l | | | | | | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 2 | mg/kg | | | 18.2 | 21.3 | | 18.8 | | | | 4.78 | 6.19 | | 3.61 |
| Benzo (a) pyrene | 8 | mg/kg | | | 13.3 | 14.8 | | 12.6 | | | | | | 59.4 | |
| Benzo (b) fluoranthene | 5 | mg/kg | | | 11.1 | 16 | | 14.8 | | | | | 6.12 | 71 | |
| Carbazole | 0.6 | mg/kg | | | | | | | | | | | | | |
| Chrysene | 160 | mg/kg | | 541 | | | | | | | | | | | |
| Dibenz (a,h) anthracene | 2 | mg/kg | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 14 | mg/kg | | 127 | | | | | | | | | | 28.7 | |
| Naphthalene | 12 | mg/kg | | 148 | | | | | | | | | | | |

Notes:

[1] Tier 1 Res Class 1 is TACO Tier 1 Soil Component of the Class 1 Groundwater Groundwater Migration

[2] For inorganic parameters, 742.Appendix B, Table C "pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route is used

TABLE 14
TACO Tier 1 Soil Component of the Class I Groundwater Migration Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 11 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | U11-2 | U14-1 | U14-1 | U14-2 | U14-2 | U14-3 | U14-3 | U14-4 | U14-4 | U14-5 | U14-6 | P17-1 | I18-1 |
| | | Sample Date | 5/9/08 | 5/9/08 | 5/9/08 | 5/6/08 | 5/6/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 | 5/14/08 | 5/6/08 |
| | | Sample Depth | 00 to 02 | 01 to 03 | 01 to 03 | 02 to 03 | 08 to 09 | 01 to 02 | 04 to 06 | 08 to 09 | 08 to 09 | 00 to 01 | 01 to 02 | 01 to 03 | 00 to 01 |
| Analyte | Tier 1 Soil Class 1 [1,2] | Units | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | |
| Arsenic | between 30 and 32 | mg/kg | | | | | | | | | | | | | |
| Lead | 107 | mg/kg | | 320 | 320 | 600 | 180 | 1000 | 380 | 210 | 680 | 210 | 1000 | | 180 |
| Mercury | 6.4 | mg/kg | | | | | | | | | | | | | |
| Selenium | between 1.3 and 4.5 | mg/kg | | | | | | | | | | | | | |
| **TCLP Metals** | | | | | | | | | | | | | | | |
| Lead | 0.0075 | mg/l | | | | | | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 2 | mg/kg | 2.34 | | | | | | | | | | | 4.82 | 24 |
| Benzo (a) pyrene | 8 | mg/kg | | | | | | | | | | | | | 46.7 |
| Benzo (b) fluoranthene | 5 | mg/kg | | | | | | | | | | | | | 26.8 |
| Carbazole | 0.6 | mg/kg | | | | | | | | | | | | | 8.66 |
| Chrysene | 160 | mg/kg | | | | | | | | | | | | | |
| Dibenz (a,h) anthracene | 2 | mg/kg | | | | | | | | | | | | | 2.06 |
| Indeno(1,2,3-cd)pyrene | 14 | mg/kg | | | | | | | | | | | | | |
| Naphthalene | 12 | mg/kg | | | | | | | | | | | | | |

Notes:

[1] Tier 1 Res Class 1 is TACO Tier 1 Soil Component of the Class 1 Groundwater Groundwater Migration

[2] For inorganic parameters, 742.Appendix B, Table C "pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route is used

TABLE 14
TACO Tier 1 Soil Component of the Class I Groundwater Migration Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 19 | 19 | 19 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | I18-1 | I18-2 | I18-2 | I18-3 | I18-3 | I18-3 | I18-4 | I18-4 | I18-5 | I18-6 | I19-1 | I19-2 | I19-3 | I19-6 |
| | | Sample Date | 5/6/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/12/08 | 6/13/08 | 6/13/08 | 6/12/08 | 6/12/08 | 5/7/08 | 6/12/08 | 6/12/08 | 6/12/08 |
| | | Sample Depth | 08 to 09 | 01 to 03 | 04 to 05 | 02 to 03 | 04 to 06 | 01 to 02 | 08 to 10 | 01 to 02 | 01 to 02 | 06 to 08 | 01 to 02 | 00 to 02 | 00 to 01 |
| Analyte | Tier 1 Soil Class 1 [1,2] | Units | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | |
| Arsenic | between 30 and 32 | mg/kg | | | | | | | | | | 33 | | | |
| Lead | 107 | mg/kg | | 390 | 470 | 610 | 230 | 440 | 110 | 460 | 390 | 560 | 310 | 140 | 320 |
| Mercury | 6.4 | mg/kg | | | | | | | | | | 97 | | | |
| Selenium | between 1.3 and 4.5 | mg/kg | | | | | 1.3 | | | | | 2 | | | |
| **TCLP Metals** | | | | | | | | | | | | | | | |
| Lead | 0.0075 | mg/l | | | | | | | | | | 0.0737 | | | |
| **SVOCs** | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 2 | mg/kg | 8.27 | | | | | | | | | | | | |
| Benzo (a) pyrene | 8 | mg/kg | 21.4 | | | | | | | | | | | | |
| Benzo (b) fluoranthene | 5 | mg/kg | 9.79 | | | | | | | | | | | | |
| Carbazole | 0.6 | mg/kg | 1.32 | | | | | | | | | | | | |
| Chrysene | 160 | mg/kg | | | | | | | | | | | | | |
| Dibenz (a,h) anthracene | 2 | mg/kg | 2.34 | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 14 | mg/kg | | | | | | | | | | | | | |
| Naphthalene | 12 | mg/kg | | | | | | | | | | | | | |

Notes:

[1] Tier 1 Res Class 1 is TACO Tier 1 Soil Component of the Class 1 Groundwater Groundwater Migration

[2] For inorganic parameters, 742.Appendix B, Table C "pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route is used

TABLE 15
TACO Tier 1 Class I Groundwater Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 2 | 2 | 2 | 2 | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | MW-D | U2-2 | U2-6 | U2-6 | U2-8 | MW3 | U4-1 | I5-1 | P5-1 | P5-3 | P5-5 | P5-6 | P11-1 | U12-1 | U13-2 |
| | | Sample Date | 5/14/08 | 5/14/08 | 6/13/08 | 6/13/08 | 6/13/08 | 5/6/08 | 5/8/08 | 5/13/08 | 5/12/08 | 5/12/08 | 5/7/08 | 6/13/08 | 5/8/08 | 5/13/08 | 5/13/08 |
| Analyte | GW Class I SL [1] | Units | | | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | | | |
| Arsenic | 0.05 | mg/L | | | | | | | | | 0.073 | | | | | | |
| Chromium | 0.1 | mg/L | | | | | | | | | 0.4 | | | | | | |
| Lead | 0.0075 | mg/L | 0.02 | 0.9 | 0.195 | 0.031 | 0.025 | | 0.19 | | 0.24 | 0.032 | 0.12 | 0.008 | 0.04 | 0.026 | 0.015 |
| Mercury | 0.002 | mg/L | | | | | | | | | | | | | | | |
| SVOCs | | | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 0.00013 | mg/L | | | | | | | | | | | | | | | |
| Benzo (a) pyrene | 0.0002 | mg/L | | | | | | | | | | | | | | | |
| Benzo (b) fluoranthene | 0.00018 | mg/L | | | | | | 0.00063 | | | | | | | | | |
| Benzo (k) fluoranthene | 0.00017 | mg/L | | | | | | 0.00035 | | | | | | | | | |
| Chrysene | 0.0015 | mg/L | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 0.00043 | mg/L | | | | | | | | | | | | | | | |
| Chloroform | 0.0002 | mg/L | | | | | | | | 0.006 | | | | | | | |

Notes:
[1] GW Class I SL is TACO Class I Groundwater Screening Level

TABLE 15
TACO Tier 1 Class I Groundwater Exceedances
*Phase II ESA, Michael Reese Hospital Site, Chicago, Illinois*

| | | Area | 14 | 14 | 14 | 14 | 15 | 16 | 17 | 18 | 18 | 19 | 19 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Boring | U14-1 | U14-1 | U14-2 | U14-4 | U15-1 | P16-1 | P17-1 | I18-1 | I18-4 | I19-1 | I19-4 | I19-5 | I20-1 |
| | | Sample Date | 5/9/08 | 5/9/08 | 5/7/08 | 6/12/08 | 5/7/08 | 5/9/08 | 5/14/08 | 5/6/08 | 6/13/08 | 5/7/08 | 6/12/08 | 6/13/08 | 5/6/08 |
| Analyte | GW Class I SL [1] | Units | | | | | | | | | | | | | |
| METALS | | | | | | | | | | | | | | | |
| Arsenic | 0.05 | mg/L | | | | | | | | | | | | | |
| Chromium | 0.1 | mg/L | | | | | | | | | | | | | |
| Lead | 0.0075 | mg/L | 0.038 | 0.06 | 0.38 | 0.18 | 0.054 | 0.042 | 0.018 | 0.15 | 0.03 | 0.055 | 0.011 | 0.015 | 0.0083 |
| Mercury | 0.002 | mg/L | | | | | | | | | | 0.011 | | | |
| SVOCs | | | | | | | | | | | | | | | |
| Benzo (a) anthracene | 0.00013 | mg/L | | | | | | | | 0.00523 | | | | | |
| Benzo (a) pyrene | 0.0002 | mg/L | | | | | | | | 0.0126 | | | | | |
| Benzo (b) fluoranthene | 0.00018 | mg/L | | | 0.00022 | | | | | 0.02 | | 0.00019 | | | |
| Benzo (k) fluoranthene | 0.00017 | mg/L | | | | | | | | 0.0108 | | | | | |
| Chrysene | 0.0015 | mg/L | | | | | | | | 0.00523 | | | | | |
| Indeno(1,2,3-cd)pyrene | 0.00043 | mg/L | | | | | | | | 0.00425 | | | | | |
| Chloroform | 0.0002 | mg/L | | | | | | | | | | | | | |

Notes:
[1] GW Class I SL is TACO Class I Groundwater Screening Level

# Appendix A
# Soil Boring Logs

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971 | I 1-1 | SHEET 1 OF 1 |

# SOIL BORING LOG

PROJECT : Michael Reese Hospital S — LOCATION : Chicago, IL

ELEVATION : NA — DRILLING CONTRACTOR : TSC — DATE: 5/6/2008

DRILLING METHOD AND EQUIPMENT USED : Mobile B-61: Hollow stem auger (4-1/4" ID)/solid stem auger (4" OD), 24" split spoon, 140 lb. autohammer

WATER LEVELS : 6.8 ft — START: 9:17; 5/6/08 — END : 10:25; 5/6/08 — LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (IN) | #/TYPE | STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N) | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|---|
| | | | | | | Headspace PID (ppm) |
| 1 | 0 - 2 | 11 | SS | 2 - 3 - 6 - 12 | 0.0 - 0.9' Clay (CL): black, moist, stiff, trace brick, trace roots, little to some silt | 0.0 Solid stem auger |
| 2 | | | | | | |
| 3 | 2 - 4 | 19 | SS | 7 - 6 - 6 - 4 | 2.0 - 3.6' Clay (CL): black and brown, moist, stiff, some silt, brick at bottom 4 inches | 0.0 Hollow stem auger<br>Sample ID: **CS-I1-1-SO-0203** @ 09:50 |
| 4 | | | | | | |
| 5 | 4 - 6 | 13 | SS | 3 - 1 - 1 - 2 | 4.0 - 5.1' Sand (SP - SM): fine to very fine grained, pebble to cobble sized brick, red and light gray, moist, very loose | 0.0 |
| 6 | | | | | | |
| 7 | 6 - 8 | 12 | SS | 3 - 2 - 1 - 3 | 6.0 - 7.0' Sand and Clay (SP - SM, CL): red, gray and black, moist, becomes wet at 6.8', very loose, light gray, fibrous fabric material at bottom | 0.0 WT=6.8' bgs |
| 8 | | | | | | |
| 9 | 8 - 10 | 12 | SS | 3 - 3 - 4 - 3 | 8.0 - 9.0' Sand (SP - SM): fine grained, light gray, wet, loose | 0.0<br>Sample ID: **CS-I1-1-SO-0809** @ 10:08 |
| 10 | | | | | | |
| 11 | 10 - 12 | 11 | ST | NA | | |
| 12 | | | | | End of Boring at 12.0' | |
| 13 | | | | | | |
| 14 | | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I1-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe

WATER LEVELS START : 15:03 6/12/2008 END : 15:07 6/12/08 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-4 | 2.7/4.0 | DPT | 0.0 - 0.5' Clay (CL): black, moist, stiff, organic<br>0.5 - 1.0' Gravel (GM): gray, black, moist, loose<br>1.0 - 2.7' Silty Sand (SM): light brown, (black at top with brick), moist, medium dense | Headspace PID (ppm)<br>0.5 0 - 1' CO - 0.0 ppm<br>0.5 1 - 2' /OC - 0.0 ppm<br>0.0 2 - 2.7' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-I1-2-SO-0102**@ 1510 |
| 4 | 4-8 | 2.6/2.6 | DPT | 2.7 -4.0' No Recovery<br>4.0 - 6.6' SAA, wet at 6.1' | 0.0 4 - 5'<br>0.0 5 - 6'<br>0.0 6 - 6.6'<br>Sample ID **CS-I1-2-SO-0506** @ 1513 |
| 8 | | | | End of Boring (6.6' bgs) | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I1-3 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe

WATER LEVELS START : 14:46 6/12/2008 END : 14:52 6/12/08 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.5' Clay (CL): black, moist, stiff, organic | Headspace PID (ppm) |
| | | | | 0.5 - 2.6' Gravel (GM): gray, clay and sand (SM, CL) black, | 0.0 0 - 1' CO - 0.0 ppm |
| | 0-4 | 2.6/4.0 | DPT | | 0.0 1 - 2' /OC - 0.0 ppm |
| | | | | 2.6 -4.0' No Recovery | 0.0 2 - 3' $H_2S$ - 0.0 ppm |
| 4 | | | | | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-I1-3-SO-0001**@ 1451 |
| | 4-8 | 1.0/1.0 | DPT | 4.0 - 5.0' Brick, fragmented | Sample ID **CS-I1-3-SO-0103** @ 1454 |
| | | | | End of boring (5.0' bgs) | |
| 8 | | | | | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | P1-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : P1-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0 ft START : 10:50 5/13/2008 END : 5/13/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-5 | 3.6/5.0 | DP 1 | 0.0-0.4' Gravel (GW): well graded, light grey, dry, loose<br>0.4-2.2' Gravelly Sand (SW): well graded, dark brown, dry to moist, loose<br>2.2-2.4' Gravel (GW): well graded, light grey, dry, loose<br>2.4-3.6' Sand (SP): some gravel, poorly graded, medium brown, dry to moist, loose<br>3.6-5.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>0.0 2 - 3' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-P1-1-SO-0002** @ 1058 |
| 5 | 5-10 | 2.8/5.0 | DP 2 | 5.0-5.6' Gravelly Sand (SP): poorly graded, medium brown, dry to moist, loose<br>5.6-6.0' Gravel (GW): well graded, light grey, dry, loose<br>6.0-7.8' Sand (SP): fine, some gravel, poorly graded, medium to dark brown, black, dry to moist, loose, possible staining from 6.8-7.0'<br>7.8-10.0' No Recovery | 0.0 5 - 6'<br>0.0 6 - 7'<br>Sample ID **CS-P1-1-SO-0607** @ 1105 |
| 10 | 10-12 | 1.9/1.9 | DP 3 | 10.0-11.9' Sand (SP): fine, poorly graded, medium brown, wet, loose | 0.0 10 - 11'<br>0.1 11 - 12'*<br>*No sample taken because the boring was in the water table |
| | | | | End of Boring (11.9' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U1-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U1-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 6.1 ft START : 8:00 5/7/2008 END : 5/7/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION<br>SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS<br>DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.<br>OVM (ppm): Breathing Zone / Above Hole |
|---|---|---|---|---|---|
| | | | | 0.0 - 0.4' Asphalt pieces, black, dry, loose<br>0.4 - 0.7' FILL, gravel, concrete pieces, light grey, dry, loose | Headspace PID (ppm)<br>0.3 VOC background<br>No elevated PID readings |
| | 0-5 | 2.1/5.0 | DP 1 | 0.7 - 2.1' Sandy Gravel (GW): light brown, dry to moist, loose<br>2.1 - 5.0' No Recovery | Sample ID **CS-U1-1-SO-0607** @ 9:00 |
| 5 | | | | 5.0 - 6.1' Sandy Gravel (GW): light brown, dry to moist, loose | 0.4 VOC background<br>No elevated PID readings |
| | 5-10 | 3.5/5.0 | DP 2 | 6.1 - 8.5' Sand (SP): poorly graded, light brown, dark brown at 6.1-6.6', wet, loose, well sorted<br>8.5 - 10.0' No Recovery | |
| 10 | | | | | |
| | 10-12 | 1.8/1.8 | DP 3 | 10.0 - 11.8' Sand (SP): poorly graded, light brown, wet, loose, well sorted | 0.3 VOC background<br>No elevated PID readings |
| | | | | End of Boring (11.8 bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U1-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U1-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 7.1 ft START : 9:10 5/7/2008 END : 5/7/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | 0-5 | 1.4/5.0 | DP 1 | 0.0 - 0.6' Asphalt pieces, black, dry, loose<br>0.6 - 1.4' Sand (SP): poorly graded, light brown, dry to moist, loose, well sorted, possible staining at 1.0'<br>1.4 - 5.0' No Recovery | Headspace PID (ppm)<br>0.3 VOC background<br>0.5 1-1.4'<br>Sample ID **CS-U1-2-SO-0106** @ 9:25 |
| 5 | 5-10 | 3.2/5.0 | DP 2 | 5.0 - 8.2' Sand (SP): poorly graded, light brown, dry to moist, firm to loose, well sorted, possible staining at 5.0-5.5'. Wet at 7.1'.<br>8.2 - 10.0' No Recovery | 0.5 VOC background<br>0.5 5-5.5'<br>Sample ID **CS-U1-2-SO-0607** @ 9:06 (5/14/08) |
| 10 | 10-12.6 | 2.6/2.6 | DP 3 | 10.0 - 12.6'' Sand (SP): poorly graded, light brown, moist, firm to loose, well sorted | 0.4 VOC background<br>No elevated PID readings |
| 15 | | | | End of Boring (12.6' bgs) | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U1-3 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U1-3

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 6.0 ft START : 9:40 5/7/2008 END : 5/7/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | 0-5 | 2.7/5.0 | DP 1 | 0.0 - 0.6' Sandy Gravel (GW): well graded, light grey, dry to moist, loose, poorly sorted<br>0.6 - 2.3' Gravelly Sand (SW): well graded, light brown to light grey, dry to moist, firm to loose, poorly sorted, possible staining at 1.5 - 2.3'<br>2.3 - 2.7' Sandy Gravel (GW): well graded, light brown, dry to moist, loose, poorly sorted | Headspace PID (ppm)<br>0.0 VOC background<br>No elevated PID readings<br>Sample ID **CS-U1-3-SO-0103** @ 10:36 |
| 5 | | | | | |
| | 5-10 | 2.9/5.0 | DP 2 | 2.7 - 5.0' No Recovery<br>5.0 - 5.4' Sandy Gravel (GW): well graded, light grey, dry to moist, loose, poorly sorted<br>5.4 - 7.9' Sand (SP): poorly graded, medium brown, dry to moist, loose, well sorted, wet at 6.0'<br>7.9 - 10.0' No Recovery | Sample ID **CS-U1-3-SO-0103D** @ 10:38<br>No elevated PID readings |
| 10 | | | | | |
| | 10-12.6 | 2.6/2.6 | DP 3 | 10.0 - 12.6' Sand (SP): Poorly graded, medium brown, moist, loose, well sorted | |
| | | | | End of Boring (12.6' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U1-4 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS START : 9:43 6/13/2008 END : 9:47 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | 0.0 - 0.7' Asphalt and Gravel | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.7 - 2.2' Sitly Sand with Gravel (SM): black, brown, moist. Loose to medium dense, trace gravel | Headspace PID (ppm) |
| | | | | | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' VOC - 0.0 ppm |
| | 0-4 | 2.2/4.0 | DPT | 2.2 - 4.0' No Recovery | $H_2S$ - 0.0 ppm |
| | | | | | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-U1-4SO-0102** @ 0953 |
| 4 | | | | | |
| | | | | 4.0 - 5.3' SAA, some brick | 0.0 4 - 5' |
| | 4-8 | 2.0/2.0 | DPT | | 1.0 5 - 6' |
| | | | | | Sample ID **CS-U1-4-SO-0406** @ 0955 |
| | | | | End of Boring (6.0' bgs) | |
| 8 | | | | | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U1-5 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS START : 9:29 6/13/2008 END : 9:32 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | 0.0 - 0.7' Asphalt and Gravel | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.7 - 2.2' Sitly Sand with Gravel (SM): dark brown, red and white, moist. little brick, loose | Headspace PID (ppm) |
| | | | | 2.2 - 4.0' No Recovery | 0.0 0 - 1' CO - 0.0 ppm |
| | 0-4 | 2.2/4.0 | DPT | | 0.0 1 - 2' VOC - 0.0 ppm |
| | | | | | $H_2S$ - 0.0 ppm |
| | | | | | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-U1-5-SO-0102** @ 0940 |
| 4 | | | | | |
| | | | | 4.0 - 5.3' SAA, some brick | 0.0 4 - 5' |
| | 4-8 | 1.3/1.3 | DRT | | Sample ID **CS-I18-4-SO-0405** @ 0942 |
| | | | | End of Boring (5.3' bgs) | |
| 8 | | | | | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH.ZZ | P2-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : P2-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.5 ft START : 10:10 5/13/2008 END : 5/13/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | | | | 0.0-0.8' Gravel (GW): well graded, light grey, dry, loose | Headspace PID (ppm) |
| | | | | 0.8-1.1' Silty Gravel (GW): well graded, medium brown, moist, loose | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' VOC - 0.0 ppm |
| | | | | | 0.0 2 - 3' $H_2S$ - 0.0 ppm |
| | 0-5 | 3.4/5.0 | DP 1 | 1.1-3.4' Gravel (GW): well graded, light grey, red, dry to moist, loose | 0.0 3 - 3.4' LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-P2-1-SO-0003** @ 1015 |
| | | | | 3.4-5.0' No Recovery | Sample ID **CS-P2-1-SO-0003D** @ 1018 |
| 5 | | | | | |
| | | | | 5.0-7.5' Gravely Sand (SW): well graded, dark to medium brown, moist, loose | 0.0 5 - 6' |
| | | | | | 0.0 6 - 7' |
| | | | | | 0.0 7 - 8' |
| | 5-10 | 3.5/5.0 | DP 2 | | Sample ID **CS-P2-1-SO-0708** @ 1028 |
| | | | | 7.5-8.5' Clay (CL): with organic material, dark brown, moist, firm | |
| | | | | 8.5-10' No Recovery | |
| 10 | | | | | |
| | | | | 10.0-11.0' Gravel (GW): well graded, medium grey, light red, moist to wet, loose | 0.0 10 - 11' |
| | 10-12.7 | 2.7/2.7 | DP 3 | | 0.1 11 - 12' |
| | | | | 11.0-12.7' Sand (SP): fine, poorly graded, medium grey, wet, loose | |
| | | | | End of Boring (12.7' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | P2-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : P2-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS : START : 9:40 5/13/2008 END : 5/13/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | 0-5 | 2.7/5.0 | DP 1 | 0.0-0.5' Gravel (GW): well graded, light grey, dry, loose<br>0.5-1.1' Sand (SW): fine, some gravel and silt, well graded, dark brown, moist, loose<br>1.1-1.6' Gravel (GW): well graded, light grey, dry, loose<br>1.6-1.9' Gravelly Silt (ML): dark brown, dry to moist, soft<br>1.9-2.4' Gravel (GW): with red brick, well graded, red, light grey, dry, loose<br>2.4-2.7' Gravelly Silt (ML): dark brown, dry to moist, soft<br>2.4-5.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>0.0 2 - 2.7' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-P2-2-SO-0103** @ 0945 |
| 5 | 5-10 | 3.2/5.0 | DP 2 | 5.0-5.6' Gravelly Silt (ML): dark brown, dry to moist, soft<br>5.5-7.4' Silt (ML): with organic material, brown, moist, firm<br>7.4-8.2' Sand (SP): fine, poorly graded, medium grey, moist, loose<br>8.2-10.0' No Recovery | 0.0 5 - 6'<br>0.0 6 - 7' |
| 10 | 10-12.4 | 2.4/2.4 | DP 3 | 10.0-12.4' Sand (SP): fine, trace gravel, medium grey to medium brown, moist, loose, coarser sand at 11.4 - 11.6', bedding evident | 0.0 10 - 11'<br>0.1 11 - 12' |
| 15 | | | | End of Boring (12.4' bgs) | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U2-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U2-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0 ft START : 11:20 5/7/2008 END : 5/7/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.3' Asphalt pieces, black, dry, loose | Headspace PID (ppm) |
| | | | | 0.3 - 1.8' Sandy Gravel (GW): well graded, rock pieces, light grey, dry, loose, poorly sorted | 0.0 VOC background<br>No elevated PID readings |
| | 0-5 | 2.7/5.0 | DP 1 | 1.8 - 5.0' No Recovery | |
| 5 | | | | | |
| | | | | 5.0 - 6.7' Gravel (GW): well graded, rock pieces, light grey, dry, loose, poorly sorted | 0.1 VOC background<br>No elevated PID readings |
| | 5-10 | 1.7/5.0 | DP 2 | 6.7 - 10.0' No Recovery | |
| 10 | | | | | |
| | | | | 10.0 - 10.3' Gravel (GW): well graded, rock pieces, light grey, dry, loose, poorly sorted | 0.1 VOC background<br>No elevated PID readings |
| | 10-12 | 1.4/1.4 | DP 3 | 10.3 - 11.4' Clay (CL): dary grey, wet, soft | Sample ID **CS-U2-1-SO-1011** @ 11:44 |
| | | | | End of Boring (11.4' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH.ZZ | U2-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U2-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 6.6 ft START : 14:00 5/7/2008 END : 5/7/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.4' Asphalt pieces, black, dry, loose | Headspace PID (ppm) |
| | | | | 0.4 - 0.9' Sandy Gravel (GW): well graded, light grey, dry to moist, loose, poorly sorted | 0.0 VOC background<br>No elevated PID readings |
| | 0-5 | 4.0/5.0 | DP 1 | 0.9 - 4.0' Gravelly Clay (CL): medium brown, dry to moist, medium firm | |
| | | | | 2.0 - 2.1' - Gravel pieces, light grey | Sample ID **CS-U2-2-SO-0609** 14:30 |
| | | | | 2.9 - 3.0' - Gravel pieces, red | Sample ID **CS-U2-2-GW-050708** 14:40 |
| 5 | | | | 4.0 - 5.0' No Recovery | |
| | | | | 5.0 - 6.6' Clay (CL): trace gravel, light brown, dry to moist, firm | 0.1 VOC background<br>No elevated PID readings |
| | 5-10 | 3.8/5.0 | DP 2 | 6.6 - 8.8' Clay (CL): trace gravel and sand, dary grey, wet, soft | |
| | | | | 8.8 - 10.0' No Recovery | |
| 10 | | | | 10.0 - 11.1' Clay (CL): trace gravel, dark grey, wet, soft | 0.1 VOC background<br>No elevated PID readings |
| | 10-12.5 | 2.5/2.5 | DP 3 | 11.1 - 12.5' Sand (SP): poorly graded, light brown, wet, firm | Sample ID **CS-U2-2-GW-051408** @ 10:30 (5/15/08) |
| | | | | End of Boring (12.5' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U2-3 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U2-3

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 5.0 ft START : 12:45 5/7/2008 END : 5/7/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | 0-5 | 2.9/5.0 | DP 1 | 0.0 - 1.1' Gravelly Sand (SW): well graded, dark brown to light grey, dry to moist, loose, poorly sorted | Headspace PID (ppm) 0.0 VOC background No elevated PID readings |
| | | | | 1.1 - 1.5' Gravel (GW): well graded, light grey, dry to moist, loose, poorly sorted | |
| | | | | 1.5 - 1.6' Same as above, red | |
| | | | | 1.6 - 2.3' Sand (SP): poorly graded, trace gravel, medium brown, dry to moist, loose, well sorted | Sample ID **CS-U2-3-SO-0203** @ 13:20 |
| | | | | 2.3 - 2.9' Sand (SP), brown to black, possible staining | |
| 5 | | | | 2.9 - 5.0' No Recovery | |
| | 5-10 | 2.8/5.0 | DP 2 | 5.0 - 6.6' Sandy Clay (CL), dark brown, moist to wet, loose | 0.0 VOC background No elevated PID readings |
| | | | | 6.6 - 7.8' Wood (tree roots) | |
| | | | | 7.8 - 10.0' No Recovery | |
| 10 | | | | | |
| | 10-12.5 | 2.5/2.5 | DP 3 | 10.0 - 11.2' Gravelly Clay (CL), dark brown, wet, soft | 0.0 VOC background No elevated PID readings |
| | | | | 11.2 - 12.5' Sand (SP): poorly graded, medium grey, loose, well sorted | |
| | | | | End of Boring (12.5' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U2-4 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U2-4

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 5.0 ft START : 11:45 5/7/2008 END : 5/7/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.3' Asphalt pieces, black, dry, loose | Headspace PID (ppm) |
| | | | | 0.3 - 1.0' Gravelly Sand (SW): well graded, light grey, dry to moist, loose, poorly sorted | 0.4 VOC background |
| | | | | 1.0 - 1.4' Clay (CL): dark grey, dry to moist, soft | No elevated PID readings |
| | 0-5 | 3.3/5.0 | DP 1 | 1.4 - 2.2' Clay (CL), trace gravel, light to dark grey, dry to moist, loose, brick at 2.2' | |
| | | | | 2.2 - 3.3' Possible staining at 2.2 - 2.7', black | Sample ID **CS-U2-4-SO-0203** @ 12:10 |
| | | | | 3.3 - 5.0' No Recovery | |
| 5 | | | | | |
| | | | | 5.0 - 7.5' Sandy Clay (CL), trace gravel, medium grey, wet, soft | 0.4 VOC background |
| | 5-10 | 2.5/5.0 | DP 2 | | No elevated PID readings |
| | | | | 7.5 - 10.0' No Recovery | |
| 10 | | | | | |
| | | | | 10.0 - 12.5' Sandy Clay (CL), trace gravel, medium grey, wet, soft | 0.4 VOC background |
| | 10-12.5 | 2.5/2.5 | DP 3 | | No elevated PID readings |
| | | | | End of Boring (12.5' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH.ZZ | U2-5 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U2-5

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10 ft START : 12:20 5/7/2008 END : 5/7/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-5 | 2.7/5.0 | DP 1 | 0.0 - 0.2' Asphalt pieces, black, dry, loose<br>0.2 - 2.7' Gravel (GW): well graded, some sand, light grey with minor red and medium brown, dry to moist, loose, poorly sorted<br>2.7 - 5.0' No | Headspace PID (ppm)<br>0.3 VOC background<br>No elevated PID readings |
| 5 | 5-10 | 2.0/5.0 | DP 2 | 5.0 - 5.2' Gravel (GW), red, dry to moist, loose<br>5.2 - 7.0 Sand (SP): well graded, light brown, dry to moist, loose, possible staining (5.2 - 5.6')<br>7.0 - 10.0 No | 0.3 VOC background<br>No elevated PID readings<br>Sample ID **CS-U2-5-SO-0506** @ 12:38 |
| 10 | 10-12.8 | 2.8/2.8 | DP 3 | 10.0 - 11.3 Sandy Gravel (GW): well graded, medium grey with some red, wet, loose<br>11.3 - 12.8 Sand (SP): poorly graded, medium brown, wet, loose | No elevated PID readings |
| | | | | End of Boring (12.8' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U2-6 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS START : 8:55 6/13/2008 END : 09:12 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.7' Asphalt and Gravel | Headspace PID (ppm) |
| | | | | 0.7 - 2.5' Silty Sand w/ Gravel (SM): black, red & light brown, moist, dense to loose, some brick fragments | 0.0 0 - 1' CO - 0.0 ppm |
| | 0-4 | 2.5/4.0 | DPT | | 0.0 1 - 2' VOC - 0.0 ppm |
| | | | | 2.5 - 4.0' No Recovery | $H_2S$ - 0.0 ppm |
| | | | | | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| 4 | | | | | Sample ID **CS-U2-6 SO-0103** @ 0903 |
| | | | | 4.0 - 5.5' SAA | 0.0 4 - 5' |
| | | | | 5.5 - 6.2' Silty Sand (SM): light to medium brown, moist, loose, trace black cinders, trace brick | 0.0 5 - 6' |
| | 4-8 | 1.8/1.8 | DPT | | |
| | | | | | Sample ID **CS-U2-6-SO-0406** @ 0910 |
| 8 | | | | | |
| | | | | 8.0 -10.2' SAA, wet at 9.8' | 0.0 8 - 9' |
| | | | | | 0.0 9 - 10' |
| | 8-12 | 2.2/2.2 | DPT | | |
| 12 | | | | | |
| | | | | 12.0 - 13.2' SAA, wet, trace gravel | |
| | | | | 13.2 - 13.9' ~~Fine Sand and Fine to Coarse Sand (SP)~~: alternating bedding (very thin to thin), light brown, wet, loose, fine sanc is poorly graded, fine to coarse sand is well graded with fine gravel | |
| | 12-16 | 2.1/2.1 | DPT | | |
| 16 | | | | | |
| | | | | End of Boring (13.9' bgs) | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U2-7 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS START : 9:19 6/13/2008 END : 09:24 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.7' Asphalt and Fill Gravel | Headspace PID (ppm) |
| | | | | 0.7 - 2.0' Silty Sand w/ Gravel (SM): black, red & light brown, moist, dense to loose, some brick fragments | 0.0 0 - 1' CO - 0.0 ppm |
| | 0-4 | 2.0/4.0 | DPT | | 0.0 1 - 2' VOC - 0.0 ppm |
| | | | | 2.0 - 4.0' No Recovery | $H_2S$ - 0.0 ppm |
| | | | | | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| 4 | | | | | Sample ID **CS-U2-6 SO-0103** @ 0903 |
| | | | | 4.0 - 5.8' SAA | 0.0 4 - 5' |
| | | | | 5.8 - 6.2' Clay Sand (CL): brown, wet to moist, soft, trace to little gravel | 0.0 5 - 6' |
| | 4-8 | 2.2/2.2 | DPT | | Sample ID **CS-U2-6-SO-0406** @ 0928 |
| | | | | End og Boring (6.2' bgs) | |
| 8 | | | | | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U2-8 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS 8.5 ft START : 8:26 6/13/2008 END : 03:45 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.8' Asphalt and Fill Gravel | Headspace PID (ppm) |
| | | | | 0.8 - 2.5' Silty Sand w/ Gravel (SM): black, brown, light tan & red, moist to dry, medium dense, trace brick | DR: Refusal at 3' bgs moved 1.5' to the east of original bo |
| | 0-4 | 2.5/4.0 | DPT | 2.5 - 4.0' No Recovery | 0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>0.0 2 - 2.5' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm |
| 4 | | | | | Sample ID **CS-U2-6 SO-0103** @ 0903 |
| | | | | 4.0 - 6.0' Gravel, Brick, and Sand (GM & SP-SM): moist, loose to dense | 0.0 4 - 5'<br>0.0 5 - 6' |
| | 4-8 | 2.0/2.0 | DPT | | Sample ID **CS-U2-6-SO-0406** @ 0928 |
| 8 | | | | | |
| | | | | 8.0 - 8.5' SAA<br>8.5 - 9.1' Silty Sand (SM): lisght brown and brown, wet, loose, poorly graded | |
| | | | | End of Boring (9.1' bgs) | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U3-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U3-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS NA START : 8:00 5/8/2008 END : 5/8/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Above Hole |
|---|---|---|---|---|---|
| | | | | 0.0 - 1.1' Fill, asphalt, concrete, black, light grey, dry, loose | Headspace PID (ppm) 0.0 |
| | 0-5 | 3.0/5.0 | DP 1 | 1.1 - 3.0' Sand (SP): poorly graded, trace gravel, medium brown, loose, well sorted<br>3.0 - 5.0' No | No elevated PID readings |
| 5 | | | | | |
| | 5-10 | 2.8/5.0 | DP 2 | 5.0 - 7.8' Sand (SP): poorly graded, trace gravel, medium brown, loose, dry to moist, well sorted<br>7.8 - 10.0' No | 0.0 No elevated PID readings<br>Sample ID **CS-U3-1-SO-1112** @ 8:00 |
| 10 | | | | | |
| | 10-12.3 | 2.3/2.3 | DP 3 | 10.0 - 12.3' Sand (SP): poorly graded, trace gravel, medium brown, loose, dry to moist | 0.0 No elevated PID readings |
| | | | | End of Boring (12.3' bgs) | No groundwater observed |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U3-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U3-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS NA START : 8:40 5/13/2008 END : 5/13/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-5 | 1.6/5.0 | DP 1 | 0.0-0.6' Gravel (GW): well graded, light grey, dry, loose<br>0.6-1.1' Silty Sand (SW): well graded, dark brown, moist, loose, poorly sorted<br>1.1-1.6' Gravel (GW): well graded, light grey, dry, loose<br>1.6-5.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 1.6' VOC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm |
| 5 | | | | | |
| | 5-10 | 3.7/5.0 | DP 2 | 5.0-6.5' Silty Sand (SW): trace gravel, well graded, dark brown, moist, loose<br>6.5-7.5' Silty Clay (CL): dark brown, black, moist, soft, possible staining<br>7.5-7.9' Silty Sand (SW): trace gravel, well graded, dark brown, moist, loose<br>7.9-8.7' Sand (SW): some gravel, well graded, light to medium brown, dry to moist, loose<br>8.7-10.0' No Recovery | 0.0 5 - 6'<br>0.1 6 - 7'<br>0.0 7 - 8'<br>Sample ID **CS-U3-2-SO-0708** @ 0855 |
| 10 | 10-12 | 2.0/2.0 | DP 3 | 10.0-12.0' Sand (SW): some gravel, well graded, medium to dark brown, dry to moist, loose | 0.0 10 - 11'<br>0.0 11 - 12' |
| | | | | End of Boring (12.0' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U3-3 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U3-3

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS : START : 9:00 5/13/2008 END : 5/13/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-5 | 2.8/5.0 | DP 1 | 0.0-0.7' Gravel (GW): well graded, light grey, dry, loose<br>0.0-2.8' Sand (SP): fine, trace gravel, poorly graded, medium to dark brown, dry to moist, loose, red brick at 1.3'<br>2.8-5.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>0.0 2 - 3' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Moved boring 5' N due to parked car.<br>Sample ID **CS-U3-3-SO-0203** @0905 |
| 5 | 5-10 | 2.6/5.0 | DP 2 | 5.0-7.6' Sand (SP): fine, trace gravel, poorly graded, medium brown, dry to moist, loose, light brown and hard from 6.5-6.6'<br>7.6'-10.0' No Recovery | 0.0 5 - 6'<br>0.0 6 - 7'<br>Sample ID **CS-U3-3-SO-0507** @ 0910<br>Sample ID **CS-U3-3-SO-GW-051308** @ 0915 |
| 10 | 10-15 | 3.8/5.0 | DP 3 | 10.0-10.9' Sand (SP): fine, some organic matter, poorly graded,light brown, moist, loose<br>12.-13.8' Sand (SP): fine, poorly graded, mediium grey, moist, loose, clay present from 12.5-12.6' | 0.0 10 - 11'<br>0.0 11 - 12'<br>0.0 12 - 13'<br>0.0 13 - 13.8'<br>Drilled deeper to get to groundwater for groundwater sample. |
| 15 | 15-20 | 5.0/5.0 | DP 4 | 13.8-15' No Recovery<br>15.0-20.0' Sand: medium brown | Not able to log due to the fact that the liner was partially crushed and therefore unable to be opened. Some sand came out of the liner at both ends. |
| 20 | | | | End of Boring (20.0' bgs) | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U3-4 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U3-4

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10 ft START : 8:15 5/13/2008 END : 5/13/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | 0-5 | 3.4/5.0 | DP 1 | 0.0-0.7' Gravel (GW): well graded, light grey, dry, loose<br>0.7-0.9' Sandy Gravel (GW): well graded, dark brown, dry to moist, loose<br>0.9-1.0' Gravel (GW): well graded, light grey, dry, loose<br>1.0-3.4' Sand (SP): fine, poorly graded, medium brown, dry to moist, loose<br>3.4-5.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1'<br>0.0 1 - 2'<br>0.0 2 - 3'<br>0.0 3 - 3.4'<br>CO - 0.0 ppm<br>VOC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-U3-4-SO-0103** @ 0824 |
| 5 | 5-10 | 3.2/5.0 | DP 2 | 5.0-8.2 Sand (SW): fine to course, well graded, medium brown, moist, loose<br>8.2-10.0' No Recovery | 0.0 5 - 6'<br>0.0 6 - 7'<br>0.0 7 - 8'<br>0.0 8 - 8.2' |
| 10 | 10-12.4 | 2.4/2.4 | DP 3 | 10.0-12.4' Sand (SP): fine to medium, poorly graded, medium brown, medium grey, wet, loose, bedding evident, corser sands at 10.6-10.8', 11.2-11.3' and 11.5-11.7' | 0.0 10 - 11'<br>0.0 11 - 12' |
| 15 | | | | End of Boring (12.4' bgs) | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U3-5 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS START : 8:12 6/13/2008 END : 08:20 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.7' Asphalt and Fill Gravel | Headspace PID (ppm) |
| | | | | 0.7 - 2.7' Silty Sand w/ Gravel (SM): light brown & brown, moist, loose to medium dense, trace brick, trace gravel | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' VOC - 0.0 ppm |
| | 0-4 | 2.7/4.0 | DPT | | 0.0 2 - 3' $H_2S$ - 0.0 ppm |
| | | | | 2.7 - 4.0' No Recovery | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-U3-5 SO-0102** @ 0819 |
| 4 | | | | 4.0 - 7.0' SAA | 0.0 4 - 5' |
| | | | | | 0.0 5 - 6' |
| | | | | | 1.0 6 - 7' |
| | 4-8 | 3.0/3.0 | DPT | | Sample ID **CS-U3-5-SO-0407** @ 0821 |
| | | | | | CS-U3-5-SO-0407 MS |
| | | | | | CS-U3-5-SO-0407 MSD |
| 8 | | | | End of Boring (7.0' bgs) | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U4-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U4-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 6.8 ft START : 10:30 5/8/2008 END : 5/8/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION<br>SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS<br>DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.<br>OVM (ppm): Breathing Zone Above Hole |
|---|---|---|---|---|---|
| | 0-5 | 3.4/5.0 | DP 1 | 0.0 - 0.3' Fill, asphalt pieces, black, dry to moist, loose<br>0.3 - 0.7' Gravel (GW): well graded, light grey, dry, loose, poorly sorted<br>0.7 - 1.9' Sand (SP): poorly graded, trace gravel, medium brown, dry to moist, loose, well sorted<br>1.9 - 3.4' Sandy Gravel (GW): well graded, dark brown with minor red, dry to moist, loose, poorly sorted<br>3.4 - 5.0' No Recovery | Headspace PID (ppm)<br>No elevated PID readings<br>Sample ID **CS-U4-1-SO-0004** @ 10:50 |
| 5 | 5-10 | 2.3/5.0 | DP 2 | 5.0 - 6.8' Gravelly Sand (GW): well graded, dark brown with minor red, dry to moist, loose<br>6.8 - 7.3' Sand (SP): poorly graded, medium brown, wet, loose, well sorted<br>7.3 - 10.0' No Recovery | No elevated PID readings |
| 10 | 10-12.2 | 2.2/2.2 | DP 3 | 10.0 - 12.2' Sand (SP): poorly graded, medium brown, wet, loose, well sorted | No elevated PID readings |
| 15 | | | | End of Boring (12.2' bgs) | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U4-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U4-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 8.1 ft START : 11:20 5/8/2008 END : 5/8/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | 0-5 | 2.6/5.0 | DP 1 | 0.0 - 0.4' Fill, asphalt pieces, black, dry to moist, loose<br>0.4 - 0.7' Gravel (GW): well graded, light grey, dry, loose, poorly sorted<br>0.7 - 1.6' Sand (SP): poorly graded, medium brown, dry to moist, loose, well sorted<br>1.6 - 1.7' Gravel (GW)<br>1.7 - 2.6' Sand (SP): poorly graded, light brown to medium brown, dry to moist, loose, well sorting<br>2.6 - 5.0' No Recovery | Headspace PID (ppm)<br>0.0 No elevated PID readings<br>Sample ID **CS-U4-2-SO-0507** @ 11:36 |
| 5 | 5-10 | 3.9/5.0 | DP 2 | 5.0 - 8.9' Sand (SP): poorly graded, light brown to medium brown, wet at 8.1 ft bsg<br>8.9 - 10.0' No Recovery | 0.0 No elevated PID readings |
| 10 | 10-12.6 | 2.6/2.6 | DP 3 | 10.0 - 12.6' Sand (SP): poorly graded, light brown, wet, loose, well sorted | 0.0 No elevated PID readings |
| | | | | End of Boring (12.6' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U4-3 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U4-3

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.5 ft START : 8:50 5/8/2008 END : 5/8/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone / Above Hole |
|---|---|---|---|---|---|
| | | | | 0.0 - 0.4' Fill, gravel and asphalt pieces, medium grey to black, dry to moist, loose | Headspace PID (ppm) |
| | | | | 0.4 - 1.3' Clay (CL) some gravel, dary brown to light brown, dry to moist, medium firm | |
| | 0-5 | 2.1/5.0 | DP 1 | 1.3 - 2.1' Gravelly Sand (SW): well graded, medium brown, dry to moist, loose, poorly sorted | 0.0 No elevated PID readings |
| | | | | 2.1 - 5.0' No | |
| 5 | | | | | |
| | | | | 5.0 - 7.9' Gravelly Sand (SW): well graded, light brown to red, dry to moist, loose, poorly sorted | 0.0 No elevated PID readings |
| | 5-10 | 2.9/5.0 | DP 2 | 7.9 - 10.0' No | Sample ID **CS-U4-3-SO-0607** @ 9:15 |
| 10 | | | | | |
| | | | | 10.0 - 10.5' Gravelly Sand (SW): well graded, medium brown, dry to moist, loose | |
| | 10-12.1 | 2.1/2.1 | DP 3 | 10.5 - 12.1' Sand (SP): poorly graded, medium brown, wet at 10.5 ft bsg, loose | 0.0 No elevated PID readings |
| | | | | End of Boring (12.1' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH.ZZ | U4-4 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U4-4

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 6.5 START : 12:00 5/8/2008 END : 5/8/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Above Hole |
| | 0-5 | 3.1/5.0 | DP 1 | 0.0 - 0.5' Fill, gravel and asphalt pieces, medium grey to black, dry to moist, loose<br>0.5 - 1.1' Gravel (GW): well graded, light grey, dry, loose<br>1.1 - 2.4' Gravelly Sand (GW), well graded, medium to dark brown, loose<br>2.4 - 2.7' Gravel (GW): well graded,light grey, dry, loose<br>2.7 - 3.1' Gravelly Sand (SW): well graded, medium brown, dry to moist, loose<br>3.1 - 5.0' No Recovery | Headspace PID (ppm)<br>0.0 No elevated PID readings<br>Sample ID **CS-U4-4-SO-0103** @ 12:14 |
| 5 | 5-10 | 2.5/5.0 | DP 2 | 5.0 - 6.5' Gravelly Sand (SW): well graded, medium brown, dry to moist, loose<br>6.5 - 7.5' Sand (SP): fine, poorly graded, medium brown, wet at 6.5 ft bsg<br>7.5 - 10.0' No Recovery | 0.0 No elevated PID readings |
| 10 | 10-13.0 | 3.0/3.0 | DP 3 | 10.0 - 13.0 Sand (SP): fine, poorly graded, medium brown, wet, loose | 0.0 Elevated PID readings |
| 15 | | | | End of Boring (13.0' bgs) | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U4-5 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U4-5

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0 ft START : 9:30 5/8/2008 END : 5/8/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Above Hole |
| | 0-5 | 3.1/5.0 | DP 1 | 0.0 - 0.5' Fill, asphalt pieces, medium grey to black, dry to moist, loose<br>0.5 - 0.8' Gravel (GW): well graded, light grey, dry, loose<br>0.8 - 1.1' Silt (ML), black, dry to moist, loose<br>1.1 - 3.1' Sand (SP): poorly graded, medium to dark brown, dry to moist, loose<br>3.1 - 5.0' No Recovery | Headspace PID (ppm)<br>0.0 No elevated PID readings<br>Sample ID **CS-U4-5-SO-0004** @ 9:50 |
| 5 | 5-10 | 2.8/5.0 | DP 2 | 5.0 - 5.4' Gravelly Sand (SW): well graded, dark brown to black, dry to moist, loose<br>5.4 - 7.8' Sand (SP): poorly graded, medium brown, dry to moist, loose<br>7.8 - 10.0' No Recovery | 0.0 No elevated PID readings<br>Sample ID **CS-U4-5-SO-0506** @ 9:55 |
| 10 | 10-13.0 | 2.6/2.6 | DP 3 | 10.0 - 12.6' Sand (SP): poorly graded, medium brown, wet,at 10.0 ft bsg, loose | 0.0 No elevated PID readings |
| 15 | | | | End of Boring (12.6' bgs) | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U4-6 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS START : 13:48:00 AM 6/12/2008 END : 13:52 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-4 | 2.2/4.0 | DPT | 0.0 - 0.8' Asphalt and Gravel<br>0.8 - 1.5' Clay, Sand, Gravel & Brickl (SM): black, white, red, moist, dense<br>2.2 - 4.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1'<br>0.0 1 - 2'<br>CO - 0.0 ppm<br>VOC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-U4-6 SO-0002** @ 1400 |
| 4 | 4-8 | 2.0/2.0 | DPT | 4.0 - 6.0' Sitly Sand (SM): light brown, moist, loose, poorly graded | 0.0 4 - 5'<br>0.0 5 - 6'<br>Sample ID **CS-U1-4-SO-0405** @ 1402 |
| | | | | End of Boring (6.0' bgs) | |
| 8 | | | | | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U4-7 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS START : 13:00:00 AM 6/12/2008 END : 13:07 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | 0-4 | 2.5/4.0 | DPT | 0.0 - 0.5' Topsoil - Clay (CL): black, moist, soft, trace organics<br>0.5 - 0.8' Concrete Pieces, light grey, dry, loose<br>0.8 - 2.5' Sitly Sand (SM): light brown to dark brown, dry to moist, loose,<br>2.5 - 4.0' No Recovery | OVM (ppm): Breathing Zone / Above Hole<br>Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-U4-7 SO-0102** @ 1310 |
| 4 | 4-8 | 2.3/2.3 | DPT | 4.0 - 6.3' Fine Sand (SP): light brown, moist, loose, | 0.0 4 - 5'<br>0.0 5 - 6'<br>Sample ID **CS-U4-7-SO-0405** @ 1313 |
| | | | | End of Boring (6.3' bgs) | |
| 8 | | | | | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I5-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : I5-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 11.5 ft START : 14:45 5/13/2008 END : 5/13/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | | | | 0.0-1.0' Topsoil: dark brown, roots, dry to moist, medium firm | Headspace PID (ppm) |
| | | | | 1.0-3.2' Sand (SP): fine, trace gravel, poorly graded, medium brown, dry to moist, loose | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' VOC - 0.0 ppm |
| | | | | | 0.0 2 - 3' $H_2S$ - 0.0 ppm |
| | 0-5 | 3.2/5.0 | DP 1 | | 0.0 3 - 3.2' LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | 3.2-5.0' No Recovery | |
| | | | | | Sample ID **CS-I5-1-SO-0103** @ 1555 |
| 5 | | | | | |
| | | | | 5.0-7.3' Sand (SP): fine, some gravel, poorly graded, medium brown, dry to moist, loose | 0.0 5 - 6' |
| | | | | | 0.0 6 - 7' |
| | | | | | 0.0 7 - 7.3' |
| | | | | 7.3-10.0' No Recovery | |
| | 5-10 | 2.3/5.0 | DP 2 | | Sample ID **CS-I5-1-GW-051308** @ 1505 |
| 10 | | | | | |
| | | | | 10.0-11.5 Gravel (GW): with "disc"-shaped concrete, well graded, light grey, dry, loose | 0.0 10 - 11' |
| | 10-12.7 | 2.7/2.7 | DP 3 | | 0.0 11 - 12' |
| | | | | 11.5-12.7' Sand (SP): fine with coarse sand at the top, poorly graded, medium brown, wet, loose | |
| | | | | End of Boring (12.7' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | P5-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : P5-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0' START : 14:40 5/12/2008 END : 5/12/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | | | | 0.0-0.6' Gravel (GW): well graded, light grey, dry, loose | Headspace PID (ppm) |
| | | | | 0.6-2.9' Silty Sand (SW) well graded, dark brown, dry to moist, loose, red brick from 1.3-1.5' | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' VOC - 0.0 ppm |
| | 0-5 | 2.9/5 | DP 1 | | 0.0 2 - 2.9' $H_2S$ - 0.0 ppm |
| | | | | | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | 2.9-5.0' No Recovery | |
| | | | | | Sample ID **CS-P5-1-SO-0103 @ 1455** |
| 5 | | | | | |
| | | | | 5.0-8.6' Sand (SP): fine, some gravel, poorly graded, medium to dark brown, moist, loose | 0.0 5 - 6' |
| | | | | | 0.0 6 - 7' |
| | | | | | 0.0 7 - 8' |
| | 5-10 | 3.6/5 | DP 2 | | 0.0 8 - 8.6' |
| | | | | | Sample ID **CS-P5-1-SO-0507 @ 1500** |
| | | | | | Sample ID **CS-P5-1-GW-051208 @ 1506** |
| | | | | 8.6-10.0' No Recovery | |
| 10 | | | | | |
| | | | | 10-12.6 Sand (SP): fine, trace gravel, poorly graded, medium brown, wet, loose | 0.0 10 - 11' |
| | 10-12.6 | 2.6/2.6 | DP 3 | | 0.0 11 - 12' |
| | | | | | 0.0 12 - 12.6' |
| | | | | End of Boring (12.6' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | P5-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : P5-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS NA START : 13:40 5/12/2008 END : 5/12/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | 0-5 | 3.6/5.0 | DP 1 | 0.0-0.8' Gravel (GW): well graded, light grey, dry, loose<br>0.8-3.6' Gravelly Sand (SW) well graded, dark brown, dry, loose | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>0.0 2 - 3' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm |
| | | | | 3.6-5.0' No Recovery | Sample ID **CS-P5-2-SO-0506** @ 1355 |
| 5 | 5-10 | 3.0/5.0 | DP 2 | 5.0-6.0' Gravelly Sand (SW), well graded, dark brown, moist, loose<br>6.0-8.0' Sand (SP): fine, some gravel, poorly graded, medium brown, moist, clay present from 6.0-6.1' and 7.3-7.4' | 0.0 5 - 6'<br>0.0 6 - 7'<br>0.0 7 - 8' |
| | | | | 8.0-10.0' No Recovery | |
| 10 | 10-12.6 | 2.6/2.6 | DP 3 | 10.0-12.6' Sand (SW): fine, some gravel, well graded, medium brown, wet, loose | 0.0 10 - 11'<br>0.0 11 - 12'<br>0.0 12 - 12.6' |
| | | | | End of Boring (12.6' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | P5-3 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : P5-3

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 11 ft START : 11:50 5/12/2008 END : 5/12/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION<br>SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS<br>DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | 0-5 | 3.5/5.0 | DP 1 | 0.0-0.3' Gravel (GW): with asphalt, well graded, black, dry to moist, loose<br>0.3-1.3' Gravel (GW): well graded, dark brown, dry to moist, loose<br>1.3-1.5' Gravel (GW): well graded, light brown, dry to moist, loose<br>1.5-2.9' Gravelly Sand (SW): well graded, dark brown, black, dry to moist, loose, possible staining<br>2.9-3.5' Gravel (GW): well graded, light red, dry, loose<br>3.5-5.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>0.0 2 - 3' $H_2S$ - 0.0 ppm<br>0.0 3 - 3.5' LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-P5-3-SO-0103** @ 1200 |
| 5 | 5-10 | 2.8/5.0 | DP 2 | 5.0-6.4' Gravelly Sand (SW): well graded, dark brown, black, dry to moist, loose, possible staining<br>6.4-7.8' Sand (SP): trace gravel, poorly graded, dark brown, dry to moist, loose<br>7.8-10.0' No Recovery | 0.0 5 - 6'<br>0.0 6 - 7'<br>Sample ID **CS-P5-3-GW-051208** @ 1235 |
| 10 | 10-12.3 | 2.3/2.3 | DP 3 | 10.0-12.3' Sand (SP): poorly graded, dark brown, moist to wet, loose | 0.0 10 - 11'<br>0.0 11 - 12' |
| | | | | End of Boring (12.3' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | P5-4 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : P5-4

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0 ft START : 12:50 5/12/2008 5/12/085 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-5 | 3.5/5.0 | DP 1 | 0.0 - 1.1' Gravel (GW): light gey, poorly sorted, well graded, dry loose<br>1.1 - 3.4' Gravelly Sand (SW): poorly sorted, well graded, dark brown, medium brown, from 1.9 2.3', dry to moist, loose<br>3.4 - 5.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' /OC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>0.0 2 - 3' LEL - 0.0 ppm<br>0.0 3 - 3.4' $O_2$ - 20.9 ppm<br>Sample ID **CS-P5-4-SO-0102** @ 1315<br>Sample ID **CS-P5-4-SO-0102** @ 1317 |
| 5 | | | | | |
| | 5-10 | 1.7/5.0 | DP 2 | 5.0 - 6.7' Gravelly Sand (SW): poorly sorted, well graded dark brown, dry to moist, loose<br>6.7 - 10.0' No Recovery | 0.0 5 - 6'<br>0.0 6 - 6.7'<br>Sample ID **CS-P5-4-GW-051208** @ 1420 |
| 10 | | | | | |
| | 10-12.8 | 3.2/5.0 | DP 3 | 10.0 - 10.5' Gravelly Sand (SW): poorly sorted, well graded, dark brown, dry, loose, tree root at 10.3 - 10.4'<br>10.5 - 11.6' Sandy Clay (CL): light grey to medium grey, dry to moist, loose<br>11.6 -13.2' Sand (SW): medium brown, fine, poorly sorted, well graded, wet at 12.0', loose | 0.0 10 - 11'<br>0.0 11 - 12'<br>0.0 12 - 13'<br>0.0 13 -13.2' |
| 15 | | | | | |
| | 15-20' | 3.9/3.9 | DP4 | 15.0 - 20.0' Fine Sand (SP): well sorted, poorly graded, medium brown to reddish brown, wet, loose | 0.0 15 -16'<br>0.0 16 - 17'<br>0.0 17 - 18'<br>0.0 18 - 18.9' |
| 20 | | | | End of Boring (20.0' bgs) | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971 | P 5-5 | SHEET 1 OF 1 |

# SOIL BORING LOG

PROJECT : Michael Reese Hospital S — LOCATION : Chicago, IL

ELEVATION : NA — DRILLING CONTRACTOR : TSC — DATE: 5/7/2008

DRILLING METHOD AND EQUIPMENT USED : Mobile B-61: Hollow stem auger (4-1/4" ID), 24" split spoon, 140 lb. autohammer

WATER LEVELS : 6.0 ft — START: 8:55; 5/7/08 — END : 10:10; 5/7/08 — LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (IN) | #/TYPE | STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N) | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|---|
| | | | | | 0.0 - 0.2' Gravel (GM): white, dry, loose | Headspace PID (ppm) |
| 1 | 0 - 2 | 16 | SS | 6 - 6 - 5 - 7 | 0.2 - 1.3' Sand (SP - SM): fine grained, black to light brown, moist, loose | 0.0 |
| 2 | | | | | | |
| 3 | 2 - 4 | 22 | SS | 3 - 4 - 4 - 5 | 2.0 - 4.0' As above | 0.0<br>Sample ID: **CS-P5-5-SO-0204** @ 09:05 |
| 4 | | | | | | |
| 5 | 4 - 6 | 0 | ST | NA | 4.0 - 6.0' No recovery | |
| 6 | | | | | | WT=6.0' bgs |
| 7 | 6 - 8 | 13 | SS | 3 - 4 - 6 - 6 | 6.0 - 7.1' Sand (SP - SM): fine to medium grained, light gray, wet, loose, trace gravel, trace black sand | Sample ID: **CS-P5-5-SO-0607** @ 09:40<br>0.0 |
| 8 | | | | | | |
| 9 | 8 - 10 | 24 | SS | 3 - 3 - 5 - 7 | 8.0 - 10.0' As above, no black material | 0.0 |
| 10 | | | | | | |
| 11 | 10 - 12 | 18 | SS | 4 - 7 - 7 - 6 | 10.0 - 11.5' As above | 0.0 |
| 12 | | | | | End of Boring at 12.0' | |
| 13 | | | | | | |
| 14 | | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | P5-6 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS 5.3 ft START : 7:50 6/13/2008 END : 07:57 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 1.0' Asphalt and Fill Gravel | Headspace PID (ppm) |
| | | | | 1.0 - 2.3' Silty Sand (SM): dark brown, streaky black, moist, loose | 0.0 0 - 1' CO - 0.0 ppm |
| | 0-4 | 2.3/4.0 | DPT | | 0.0 1 - 2' VOC - 0.0 ppm |
| | | | | 2.3 - 4.0' No Recovery | 0.0 2 - 2.3' $H_2S$ - 0.0 ppm |
| | | | | | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| 4 | | | | | Sample ID **CS-P5-6 SO-0102** @ 0753 |
| | | | | 4.0 - 5.3' SAA, trace gravel | 0.0 4 - 5' |
| | | | | 5.3-7.3' Fine Sand (SP-SM): dark brown and brown, wet, loose, trace fine gravel | 0.0 5 - 6' |
| | 4-8 | 3.3/4.0 | DPT | | 0.0 6 - 7.3' |
| | | | | | Sample ID **CS-P5-6-SO-0405** @ 0758 |
| 8 | | | | | |
| | | | | 8.0 - 11.1 SAA (5.3-7.3'), trace fine to coarse gravel | |
| | 8-12 | 3.1/3.1 | DPT | | |
| | | | | | |
| | | | | End of Boring at (11.1' bgs) | |
| 12 | | | | | |
| | | | | | |
| | | | | | |
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| 16 | | | | | |
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| 20 | | | | | |
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| 24 | | | | | |
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| | | | | | |
| | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U5-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U5-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 11 ft START : 11:00 5/12/2008 END : 5/12/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-5 | 3.2/5.0 | DP 1 | 0.0-2.6' Gravel (GW): with asphalt, well graded, black, light grey, medium brown, red, dry, loose<br>2.6-3.2' Sand (SW): medium, well graded, dark brown, dry to moist, loose<br>3.2-5.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1'<br>0.0 1 - 2'<br>0.0 2 - 3'<br>0.0 3 - 3.2'<br>CO - 0.0 ppm<br>VOC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-U5-2-SO-0204** @ 1120 |
| 5 | 5-10 | 1.4/5.0 | DP 2 | 5.0-5.3' Sand (SP): fine, poorly graded, dark brown, dry to moist, loose<br>5.3-6.0' Gravelly Sand (GW): with clay, well graded, dark brown, black, light brown, dry to moist, loose<br>6.0-7.4' Sand (SP): fine, poorly graded, medium brown, dry to moist, loose<br>7.4-10.0' No Recovery | 0.0 5 - 6'<br>0.0 6 - 7'<br>Sample ID **CS-U5-2-SO-0506** @ 1130<br>Sample ID **CS-U5-2-GW-051208** @ 1130 |
| 10 | 10-12 | 1.8/1.8 | DP 3 | 10.0-11.8' Sand (SP): fine, poorly graded, medium brown, moist to wet, loose | 0.0 10 - 11'<br>0.0 11 - 12' |
| | | | | End of Boring (12.0' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U5-3 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U5-3

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 6.1 ft START : 8:00 5/7/2008 END : 5/7/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.4' Asphalt pieces, black, dry, loose<br>0.4 - 0.7' FILL, gravel, concrete pieces, light grey, dry, loose | Headspace PID (ppm)<br>0.3 VOC background<br>No elevated PID readings |
| | 0-5 | 2.1/5.0 | DP 1 | 0.7 - 2.1' Sandy Gravel (GW): light brown, dry to moist, loose<br>2.1 - 5.0' No Recovery | Sample ID **CS-U5-3-SO-0607** @ 9:00 |
| 5 | | | | | |
| | 5-10 | 3.5/5.0 | DP 2 | 5.0 - 6.1' Sandy Gravel (GW): light brown, dry to moist, loose<br>6.1 - 8.5' Sand (SP): poorly graded, light brown, dark brown at 6.1-6.6', wet, loose, well sorted<br>8.5 - 10.0' No Recovery | 0.4 VOC background<br>No elevated PID readings |
| 10 | | | | | |
| | 10-12 | 1.8/1.8 | DP 3 | 10.0 - 11.8' Sand (SP): poorly graded, light brown, wet, loose, well sorted | 0.3 VOC background<br>No elevated PID readings |
| | | | | End of Boring (12' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U6-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U6-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS NA START : 14:00 5/12/2008 END : 5/12/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | 0-5 | 0.0/5.0 | DP 1 | | Headspace PID (ppm)<br>CO - 0.0 ppm<br>VOC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm |
| 5 | | | | | Refusal at 6" - concrete<br>Moved 3' south - refusal at 6". Tried to go through concrete but got refusal again. No other options to move due to utilities near by. Driller says it feels like a UST or something similar underneath. |
| 10 | | | | | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971 | U 7-1 | SHEET 1 OF 1 |

# SOIL BORING LOG

PROJECT : Chicago Reese Hospital | LOCATION : Chicago, IL

ELEVATION : NA | DRILLING CONTRACTOR : TSC | DATE: 5/7/2008

DRILLING METHOD AND EQUIPMENT USED : Mobile B-61: Hollow stem auger (4-1/4" ID), 24" split spoon, 140 lb. autohammer

WATER LEVELS : 12.0 ft | START: 14:10; 5/7/08 | END : 15:00; 5/7/08 | LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (IN) | #/TYPE | STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N) | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|---|
| | | | | | 0.0 - 1.0' Clay (CL): black, moist, stiff | Headspace PID (ppm) |
| 1 | 0 - 2 | 18 | SS | 4 - 5 - 7 - 7 | 1.0 - 1.5' Silt (ML): light brown, moist, soft | 0.0 |
| 2 | | | | | | |
| | | | | | 2.0 - 3.0' As above | |
| 3 | 2 - 4 | 24 | SS | 4 - 3 - 3 - 3 | 3.0 - 4.0' Silty Sand (SM): light brown and black, moist, loose | 0.0 Sample ID: **CS-U7-1-SO-0304** @ 14:18 |
| 4 | | | | | | |
| 5 | 4 - 6 | 11 | ST | NA | | |
| 6 | | | | | | |
| 7 | 6 - 8 | 12 | SS | 2 - 3 - 4 - 6 | 6.0 - 7.0' Silty Gravel (GM): black, brown, light orange-brown, moist, loose, little sand, trace brick | 0.0 |
| 8 | | | | | | |
| 9 | 8 - 10 | 12 | SS | 3 - 3 - 2 - 3 | 8.0 - 9.0' Sandy Silt (SM): dark brown, moist, loose, trace gravel | 0.0 |
| 10 | | | | | | |
| 11 | 10 - 12 | 24 | SS | 3 - 3 - 4 - 5 | 10.0 - 12.0' As above, no gravel | 0.0 |
| 12 | | | | | | WT=12'bgs |
| 13 | 12 - 14 | 20 | SS | 2 - 6 - 7 - 6 | 12.0 - 14.0' As above, wet | 0.0 |
| 14 | | | | | | |
| | | | | | End of Boring at 14.0' | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U8-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U8-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS NA START : 7:50 5/12/2008 END : 5/12/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone / Above Hole |
|---|---|---|---|---|---|
| | | | | 0.0-1.3' Topsoil: black, moist, medium firm | Headspace PID (ppm) |
| | | | | 1.3-2.5' Silty Sand (SW): some gravel, well graded, dark brown, dry to moist, loose | NA 0 - 1' |
| | | | | | NA 1 - 2' |
| | 0-5 | 3.9/5.0 | DP 1 | | NA 2-3' |
| | | | | 2.5-3.9' Sand (SP): fine, poorly graded, medium brown, moist, loose | No MiniRae available for boring. |
| | | | | 3.9-5.0' No Recovery | Sample ID **CS-U8-1-SO-0103** @ 0807 |
| 5 | | | | | Sample ID **CS-U8-1-SO-0103D** @ 0813 |
| | | | | 5.0-7.3' Sand (SP): fine, poorly graded, medium brown, dry to moist, loose, trace gravel at 5.9-6.0' | NA 5 - 6' |
| | | | | | NA 6 - 7' |
| | | | | | NA 7 - 8' |
| | 5-10 | 2.3/5.0 | DP 2 | 7.3-10.0' No Recovery | Sample ID **CS-U8-1-SO-0507** @ 0815 |
| | | | | | Sample ID **CS-U8-1-GW-051208** @ 0900 |
| 10 | | | | | |
| | | | | 10.0-12.2' Sand (SP): fine, poorly graded, medium brwon, moist to wet, trace gravel at 11.0-11.1' | NA 10 - 11' |
| | 10-12.2 | 2.2/2.2 | DP 3 | | NA 11 - 12' |
| | | | | End of Boring (12.2' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U8-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U8-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS NA START : 8:30 5/12/2008 END : 5/12/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-5 | 3.7/5 | DP 1 | 0.0-0.9' Topsoil: black, dry to moist, soft<br>0.9-1.4' Silty Sand (SW) well graded, medium to dark brown, dry to moist, loose<br>1.4-1.8' Gravel (GW): well graded, light grey, dry, loose<br>1.8-3.7' Sand (SP): fine, poorly graded, medium brown, dry to moist, loose<br>3.7-5.0' No Recovery | Headspace PID (ppm)<br>NA 0 - 1'<br>NA 1 - 2'<br>NA 2-3'<br>No MiniRae available for boring.<br>Sample ID **CS-U8-2-SO-0002** @ 0836 |
| 5 | 5-10 | 3.0/5 | DP 2 | 5.0-8.0' Sand (SP): fine, trace gravel, poorly graded, medium brown, dry to moist, loose<br>8.0-10.0' No Recovery | NA 5 - 6'<br>NA 6 - 7'<br>NA 7 - 8' |
| 10 | 10-12.1 | 2.1/2.1 | DP 3 | 10.0-12.1' Sand (SP): fine, poorly graded, medium brown, dry to moist, loose | NA 10 - 11'<br>NA 11 - 12' |
| | | | | End of Boring (12.1' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U9-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U9-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS : START : 13:30 5/8/2008 END : 5/8/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone / Above Hole |
|---|---|---|---|---|---|
| | | | | 0.0 - 0.8' Topsoil. black. dry to moist. medium firm | Headspace PID (ppm) |
| | 0-5 | 2.4/5.0 | DP 1 | 0.8 - 2.4' Sandy Silt (SW), dark brown, medium firm, dry to moist | 0.0 No elevated PID readings |
| 5 | | | | 2.4 - 5.0' No | |
| | 5-10 | 3.5/5.0 | DP 2 | 5.0 - 8.5' Sand (SP): fine, poorly graded, medium brown, dry to moist, loose, clay at 5.8 - 6.1' | 0.0 No elevated PID readings<br>Sample ID **CS-U9-1-SO-0508** @ 14:00 |
| 10 | | | | 8.5 - 10.0' No | Sample ID **CS-U9-1-SO-0506** @ 14:07 |
| | 10-15 | 4.7/4.7 | DP 3 | 10.0 - 14.7' Sand (SP): fine, poorly graded, medium brown, dry to moist, loose | 0.0 No elevated PID readings |
| 15 | | | | End of Boring (15.0' bgs) | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U9-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U9-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 14.0 ft START : 14:10 5/8/2008 END : 5/8/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Above Hole |
| | | | | 0.0 - 0.8' Topsoil, black, dry to moist, medium firm<br>0.8 - 1.0' Gravel (GW): well graded, light grey, dry,<br>1.0 - 3.0' Sand (SP): poorly graded fine, medium brown, dry to moist, loose, well sorted | Headspace PID (ppm) |
| | 0-5 | 3.0/5.0 | DP 1 | | 0.0 No elevated PID readings |
| | | | | 3.0 - 5.0' No | |
| 5 | | | | | |
| | | | | 5.0 - 8.6' Sand (SP): fine, poorly graded, medium brown, dry to moist, loose, gravel at 5.5-6.0' | 0.0 No elevated PID readings<br>Sample ID **CS-U9-2-SO-0103** @ 14:18<br>Sample ID **CS-U9-2-SO-1012** @ 14:25 (MSMSD) |
| | 5-10 | 3.6/5.0 | DP 2 | | |
| | | | | 8.6 - 10.0' No | |
| 10 | | | | | |
| | | | | 10.0 - 15.0' Sand (SP): fine, poorly graded, light to medium brown, dry to moist, wet at 14.0', loose, well sorted | 0.0 No elevated PID readings |
| | 10-15 | 5.0/5.0 | DP 3 | | |
| 15 | | | | | |
| | | | | End of Boring (15.0' bgs) | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U10-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U10-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0 ft START : 13:30 5/8/2008 END : 5/8/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.6' Topsoil, black, dry to moist, medium firm | Headspace PID (ppm) |
| | | | | 0.6 - 3.6' Sand (SP), fine, poorly graded, medium | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' /OC - 0.0 ppm |
| | | | | | $H_2S$ - 0.0 ppm |
| | 0-5 | 3.0/5.0 | DP 1 | | 0.0 2 - 3' LEL - 0.0 ppm |
| | | | | | 0.0 3 - 3.6' $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-U10-1-SO-0507** @ 13:50 |
| | | | | 3.6 - 5.0 No | |
| 5 | | | | 5.0 - 8.3' Sand (SP): fine, poorly graded, medium brown, loose, gravel at 5.7-6.6' | 0.0 5 - 6' |
| | | | | | 0.0 6 - 7' |
| | 5-10 | 3.6/5.0 | DP 2 | | 0.0 7 - 8' |
| | | | | | 0.0 8 - 8.3' |
| | | | | 8.3 - 10.0' No | |
| 10 | | | | | |
| | 10-12.3 | 2.3/2.3 | DP 3 | 10.0 - 12.3' Sand (SP): fine, poorly graded, medium brown, loose, well sorted, gravel with sand at 11.0 - 11.2' | |
| | | | | End of Boring (15.0' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH.ZZ | U10-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U10-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS : START : 14:10 5/9/2008 END : 5/9/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.4' Topsoil, black, dry to moist, medium firm | Headspace PID (ppm) |
| | | | | 0.4 - 3.3' Sand (SP): fine, poorly graded, medium to dark brown and black, dry to moist, well sorted. | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' /OC - 0.0 ppm |
| | | | | | $H_2S$ - 0.0 ppm |
| | 0-5 | 3.3/5.0 | DP 1 | | 0.0 2 - 3' LEL - 0.0 ppm |
| | | | | | 0.2 3 - 3.3' $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-U10-2-SO-0307** @ 14:15 |
| | | | | 3.3 - 5.0 No | |
| 5 | | | | | |
| | | | | 5.0 - 8.9' Sand (SP): fine, poorly graded, light to medium brown, possible staining at 5.0-5.3 and 5.8-6.3, loose, gravel at 5.7-6.6' | 0.2 5 - 6' |
| | | | | | 0.0 6 - 7' |
| | 5-10 | 3.9/5.0 | DP 2 | | 0.0 7 - 8' |
| | | | | | 0.0 8 - 8.9' |
| | | | | 8.9 - 10.0' No | |
| 10 | | | | | Sample ID **CS-U10-2-GW-050908** @ 14:25 |
| | | | | | 0.0 10 - 11' |
| | 10-12.8 | 2.8/2.8 | DP 3 | 10.0 - 12.8' Sand (SP): fine poorly graded, light to medium brown, black at 10.6-10.9 loose, well sorted, wet to dry | 0.0 11 - 12' |
| | | | | | 0.0 12 - 12.8' |
| | | | | End of Boring (12.8' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U10-3 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U10-3

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS : START : 14:30 5/9/2008 END : 5/9/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.4' Topsoil, black, dry to moist, soft | Headspace PID (ppm) |
| | | | | 0.4 - 2.9' Silty Clay (CL), with gravel, dark brown, dry to moist, soft | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' /OC - 0.0 ppm |
| | | | | | $H_2S$ - 0.0 ppm |
| | 0-5 | 2.9/5.0 | DP 1 | | 0.0 2 - 2.9' LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | 2.9 - 5.0' No | |
| 5 | | | | | |
| | | | | 5.0 - 7.0' Sand (SP): fine, poorly graded, medium brown, loose, dry to moist | 0.0 5 - 6' |
| | | | | | Sample ID **CS-U10-3-SO-0607** @ 14:50 |
| | | | | 7.0 - 7.3' Gravel (GW), well graded, light grey, dry, loose, poorly sorted | 0.0 6 - 7' |
| | 5-10 | 2.3/5.0 | DP 2 | | 0.0 7 - 7.3 |
| | | | | 7.3 - 10.0' No | |
| 10 | | | | | |
| | | | | 10.0 - 11.0' Sand (SP): fine, poorly graded, medium brown, loose, well sorted | 0.0 10 - 11' |
| | 10-12.0 | 1.0/1.0 | DP 3 | | |
| | | | | End of Boring (12.0' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | P11-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : P11-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0 ft START : 15:30 5/8/2008 5/8/085 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.8' Topsoil dark brown to black, dry to moist, soft | Headspace PID (ppm) |
| | | | | 0.8 - 2.9' Sand (SP): fine, poorly graded, light brown, dry to moist, loose | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' OC - 0.0 ppm |
| | | | | | $H_2S$ - 0.0 ppm |
| | 0-5 | 2.9/5.0 | DP 1 | | 0.0 2 - 3' LEL - 0.0 ppm |
| | | | | | 0.0 3 - 3.7 $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-P11-1-SO-0102** @ 1508 |
| | | | | 2.9 - 5.0' No Recovery | No elevated PID readings |
| 5 | | | | | |
| | | | | 5.0 - 8.7' Sand (SP): fine, poorly graded, light brown, dry to moist, loose | 0.0 5 - 6' |
| | | | | | 0.0 6 - 7' |
| | | | | | 0.0 7 - 8' |
| | 5-10 | 3.7/5.0 | DP 2 | | 0.0 8 - 8.3' |
| | | | | | Sample ID **CS-P11-1-SO-0508** @ 1515 |
| | | | | | Sample ID **CS-P11-1-SO-0102 - MS** @ 1508 |
| | | | | 8.7 - 10.0' No Recovery | No elevated PID readings |
| 10 | | | | | |
| | | | | 10.0 - 12.8' Sand (SP): Fine, poorly graded, light brown, wet at 10.0 ft bgs, loose | 0.0 10 - 11' |
| | 10-12.8 | 2.8/2.8 | DP 3 | | 0.0 11 - 12' |
| | | | | | 0.0 12 - 12.8' |
| | | | | | No elevated PID readings |
| | | | | End of Boring (12.8' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH.ZZ | U11-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U11-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0 ft START : 9:20 5/9/2008 END : 5/9/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | 0.0 - 0.8' Topsoil, black, dry to moist, soft | OVM (ppm): Breathing Zone / Above Hole<br>Headspace PID (ppm) |
| | | | | 0.8 - 1.4' Sandy Silt (ML), medium to dark brown, dry to moist, loose | 0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' /OC - 0.0 ppm |
| | | | | 1.4 - 1.6' Clay (CL), medium grey, dry to moist, firm | $H_2S$ - 0.0 ppm |
| | 0-5 | 3.5/5.0 | DP 1 | 1.6 - 3.5 Sand (SW): well graded, some gravel and brick, dark brown, dry ot moist, loose, poorly sorted | 0.0 2 - 3' LEL - 0.0 ppm<br>0.0 3 - 3.5' $O_2$ - 20.9 ppm |
| | | | | 3.5 - 5.0' No | |
| 5 | | | | | |
| | | | | 5.0 - 6.5' Gravel (GW): well graded, brick, gravel and concrete fill, red to dark red and light grey, dry to moist, loose | 0.0 5 - 6'<br>0.0 6 - 7' |
| | 5-10 | 2.8/5.0 | DP 2 | 6.5 - 7.8' Sand (SP): fine, poorly graded, light brown, dry to moist. loose | Sample ID **CS-U11-1-SO-0608** @ 943<br>0.0 7 - 7.8 |
| | | | | 7.8 - 10.0' No | |
| 10 | | | | | |
| | | | | 10.0 - 11.8' Sand (SP): fine, well graded, light to medium brown, wet at 10.0 ft bgs, loose | 0.0 10 - 11' |
| | 10-12.0 | 1.8/1.8 | DP 3 | 11.8 - 12.0 No Recovery | |
| | | | | End of Boring (12.0' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U11-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U11-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0 ft START : 8:20 5/9/2008 END : 5/9/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | 0.0 - 0.9' Topsoil, black, dry to moist, soft | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.9 - 1.4' Sand (SW): well graded, gravel, dark brown, dry to moist, loose | Headspace PID (ppm) |
| | | | | 1.4 - 1.9' Clay (CL), brown-medium brown mottling, some gravel, dry to moist, firm | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | 1.9 - 2.0' Gravel (GW): well graded, orange-brown, dry to moist, loose | 0.0 1 - 2' /OC - 0.0 ppm |
| | 0-5 | 3.7/5.0 | DP 1 | 2.0 - 3.0' Clay (CL), medium brown with medium gray mottling, dry to moist, firm | $H_2S$ - 0.0 ppm |
| | | | | 3.0 - 3.7' Sand (SP): poorly graded, light brown, dry to moist, loose, well sorted | 0.0 2 - 3' LEL - 0.0 ppm |
| 5 | | | | | 0.0 3 - 3.7 $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-U11-2-SO-0002 MS** @ 850 |
| | | | | | 0.0 5 - 6' |
| | | | | 3.7 - 5.0 No Recovery | 0.0 6 - 7' |
| | | | | 5.0 - 8.3' Sand (SP): fine, poorly graded, light to medium brown, dry to moist, loose | 0.0 7 - 8' |
| | 5-10 | 3.3/5.0 | DP 2 | | Sample ID **CS-U11-2-SO-0608** @ 855 |
| | | | | | 0.0 8 - 8.3' |
| | | | | 8.3 - 10.0' No Recovery | |
| 10 | | | | | |
| | | | | 10.0 - 12.7 Sand (SP): fine, poorly graded, medium brown, wet at 10.0 ft bgs, loose | 0.0 10 - 11' |
| | 10-12.7 | 2.7/2.7 | DP 3 | | 0.0 11 - 12' |
| | | | | | 0.0 12 - 12.7' |
| | | | | End of Boring (12.7' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH.ZZ | U12-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U12-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 6.6 ft START : 13:15 5/13/2008 END : 5/13/2008 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.3' Gravel (GW): well graded (GW), light grey, dry, | Headspace PID (ppm) (Background = 0.6ppm) |
| | | | | 0.3 - 1.9' Sand (SP): fine, poorly graded, dark to medium brown, dry to moist | 0.6 0 - 1' CO - 0.0 ppm |
| | | | | | 1.9 1 - 2' VOC - 0.0 ppm |
| | | | | | $H_2S$ - 0.0 ppm |
| | 0-5 | 1.9/5.0 | DP 1 | | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | 1.9 - 5.01' No Recovery | |
| 5 | | | | | |
| | | | | 5.0 - 8.6' Sand (SP): fine, poorly graded, medium brown, moist, wet at 6.6 ft bgs, loose | 0.6 5 - 6' |
| | | | | | 0.5 6 - 7' |
| | | | | | 0.5 7 - 8' |
| | 5-10 | 3.6/5.0 | DP 2 | | 0.5 8 - 8.3' |
| | | | | | Sample ID **CS-U12-1-SO-0507 MS** @ 1508 |
| | | | | 8.6 - 10.0' No Recovery | |
| 10 | | | | | |
| | | | | 10.0 - 12.5' Sand (SP): Fine, poorly graded, medium brown, wet, loose | 0.6 10 - 11' |
| | 10-12.5 | 2.5/2.5 | DP 3 | | 0.5 11 - 12' |
| | | | | End of Boring (12.5' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U13-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U13-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0 ft START : 9:22 5/12/2008 END : 5/12/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-5 | 3.0/5.0 | DP 1 | 0.0 - 1.0' Gravel (GW): well graded, asphalt, light to medium grey, dry, loose<br>1.0 - 3.0' Sand (SP): fine, some gravel and brick at 2.5-2.7', poorly graded, medium brown to brick red, dry to<br>3.0 - 5.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>0.0 2 - 3' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-U13-1-SO-0103** @ 9:30 |
| 5 | 5-10 | 1.9/5.0 | DP 2 | 5.0 - 6.9' Sand (SP): fine, poorly graded, medium brown, some gravel, dry to moist, loose<br>6.9 - 10.0' No Recovery | 0.0 5 - 6'<br>0.0 6 - 6.9' |
| 10 | 10-12.1 | 2.1/2.1 | DP 3 | 10.0 - 12.1 Sand (SP): some gravel, poorly graded, medium brown, wet at 10.0 ft bgs | 0.0 10 - 11'<br>0.0 11 - 12' |
| 15 | | | | End of Boring (12.5' bgs) | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH.ZZ | U13-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U13-2

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0 ft START : 12:45 5/13/2008 END : 5/13/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-5 | 2.5/5.0 | DP 1 | 0.0 - 0.3' Gravel (GW): well graded, light to medium grey, dry, loose<br>0.3 - 0.9' Topsoil: dark brown, roots, dry to moist, loose<br>0.9 - 2.5' Sand (SP): fine, trace gravel, poorly graded, medium brown, dry to moist, loose | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>0.0 2 - 3' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm |
| | | | | 2.5 - 5.0' No Recovery | |
| 5 | | | | | |
| | 5-10 | 3.1/5.0 | DP 2 | 5.0 - 8.1' Sand (SP): fine, poorly graded, light brown, moist, loose | 0.0 5 - 6'<br>0.0 6 - 7'<br>Sample ID **CS-U13-2-SO-0507 MS** @ 1256 |
| | | | | 8.1 - 10.0' No Recovery | |
| 10 | | | | | |
| | 10-12.4 | 2.4/2.4 | DP 3 | 10.0 - 12.4' Sand (SP): fine, poorly graded, medium brown, wet at 10.0 ft bgs, loose | 0.0 10 - 11'<br>0.0 11 - 12' |
| | | | | End of Boring (12.4' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U14-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : U14-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 7.1 ft START : 12:50 5/9/2008 END : 5/9/2008 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 1.6' Topsoil: black, dry to moist, loose | Headspace PID (ppm) |
| | | | | 1.6 - 3.1' Sandy Silt (ML): dark brown, dry to moist, loose | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' VOC - 0.0 ppm |
| | 0-5 | 3.1/5.0 | DP 1 | | 0.0 2 - 3' $H_2S$ - 0.0 ppm |
| | | | | | 0.0 3 - 3.1' LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-U14-1-SO-0103** @ 1320 |
| | | | | 3.1 - 5.0' No Recovery | Sample ID **CS-U14-1-SO-0103 D** @ 1320 |
| 5 | | | | | |
| | | | | 5.0 - 8.4' Sand (SP): poorly graded, medium brown to medium gray, dry to moist, wet at 7.1', loose | 0.0 5 - 6' |
| | | | | | 0.0 6 - 7' |
| | | | | | 7 - 8' |
| | 5-10 | 3.4/5.0 | DP 2 | | 8 - 8.4' |
| | | | | | Sample ID **CS-U14-1-SO-0103** @ 1320 |
| | | | | | . |
| | | | | 8.4 - 10.0' No Recovery | |
| 10 | | | | | |
| | | | | 10.0 - 12.4' Sand (SP): fine, poorly graded, medium brown, wet, loose | 0.0 10 - 11' |
| | | | | | 0.0 11 - 12' |
| | 10-12.4 | 2.4/2.4 | DP 3 | | 1.0 12 - 12.7' |
| | | | | End of Boring (12.4' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971 | U 14-2 | SHEET 1 OF 1 |

# SOIL BORING LOG

PROJECT : Michael Reese Hospital S — LOCATION : Chicago, IL

ELEVATION : NA — DRILLING CONTRACTOR : TSC — DATE: 5/6/2008

DRILLING METHOD AND EQUIPMENT USED : Mobile B-61: Hollow stem auger (4-1/4" ID), 24" split spoon, 140 lb. autohammer

WATER LEVELS : 9.0 ft — START: 16:05; 5/6/08 — END : 17:10; 5/6/08 — LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (IN) | #/TYPE | STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N) | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|---|
| | | | | | | Headspace PID (ppm) |
| 1 | 0 - 2 | 24 | SS | 10 - 8 - 5 - 10 | 0.0 - 2.0' Silty Sand (SM): black, moist, medium dense, trace gravel and brick | 0.0 |
| 2 | | | | | | |
| 3 | 2 - 4 | 24 | SS | 10 - 6 - 5 - 7 | 2.0 - 4.0' As above | 0.0<br>Sample ID: **CS-U14-2-SO-0203** @ 16:20 |
| 4 | | | | | | |
| 5 | 4 - 6 | 20 | SS | 2 - 3 - 2 - 3 | 4.0 - 6.0' As above | 0.0 |
| 6 | | | | | 6.0 - 6.4' As above | |
| 7 | 6 - 8 | 15 | SS | 20 - 13 - 12 - 7 | 6.4 - 7.3' Gravel (GP - GM): white, dense, moist | 0.0 |
| 8 | | | | | | |
| 9 | 8 - 10 | 18 | SS | 2 - 3 - 5 - 5 | 8.0 - 9.5' Sand (SP - SM): fine grained, black to 9', light brown at 9.0 - 9.5', wet at 9.0', loose | 0.0<br>Sample ID: **CS-U14-2-SO-0809** @ 16:45<br>WT=9.0' bgs |
| 10 | | | | | | |
| 11 | 10 - 12 | 0 | ST | NA | 10.0 - 12.0' No recovery | |
| 12 | | | | | End of Boring at 12.0' | |
| 13 | | | | | | |
| 14 | | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U14-3 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe

WATER LEVELS 5.5 ft START : 10:55 6/12/2008 END : 10:59 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.5' Clay (CL): black, moist, soft, organic | Headspace PID (ppm) |
| | | | | 0.5 - 2.8' Fine Sand (SP - SM): black, light brown, white, moist, loose to medium dense, poorly graded, trace clay pockets, trace gravel, trace brick | 0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' /OC - 0.0 ppm<br>0.0 2 - 3' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm |
| 4 | 0-4 | 2.8/4.0 | DPT | 2.8 - 4.0' No Recovery | Sample ID **CS-U14-3-SO-0102** @ 1104 |
| | | | | 4.0 - 6.5' SAA, wet at 5.5' bgs | 0.0 4 - 5'<br>0.0 5 - 6' |
| | 4-8 | 2.5/2.5 | DPT | 6.5 - 8.0' No Recovery | 0.0 6 - 7' |
| | | | | | Sample ID **CS-U14-3-SO-0406** @1108 |
| 8 | | | | End of Boring (6.5' bgs) | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U14-4 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe

WATER LEVELS 9.3 ft START : 10:40 6/12/2008 END : 10:51 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-4 | 2.3/4.0 | DPT | 0.0 - 1.0' Clay, Gravel, and Sand (CL, GM, SM): black and gray, moist, soft, loose<br>1.0 - 2.3' Sand (SP - SM): light brown to brown, moist, loose to medium dense, poorly graded, split at top, brick at 1.7 - 2.3' | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm |
| 4 | | | | 2.3 - 4.0' No Recovery | Sample ID **CS-U14-4-SO-0102** @ 1047 |
| | 8-12 | 1.0/4.0 | DPT | 4.0 - 6.3' Clay, Brick, Gravel and Sand (CL,GM,SM): moist, loose, soft, poorly graded, fill<br>6.3 -8.0' No Recovery | 0.0 4 - 5'<br>0.0 5 -6'<br>Sample ID **CS-U14-4-SO-0809** @ 1055 |
| 8 | | | | | |
| | 12-16 | 2.0/2.0 | DPT | 8.0 - 9.5' SAA, wet at 9.3'<br>9.5 - 10.0' Fine to Medium Sand (SP - SM): black and light brown, wet, loose to medium dense, trace coarse, sand and fine gravel | 0.0 8 - 9'<br>0.0 9 - 10'<br>Sample ID **CS-U14-4-SO-0809** @ 1056 |
| | | | | End of Boring (10.0' bgs) | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U14-5 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe

WATER LEVELS 9.3 ft START : 10:40 6/12/2008 END : 10:51 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-4 | 1.4/4.0 | DPT | 0.0 - 0.2' Asphalt<br>0.2 - 1.4' Gravel and Sand (GM - SP): white and light brown, moist to dry, loose to dense, poorly graded<br>1.4 - 4.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-U14-5-SO-0001** @ 1147 |
| 4 | 8-12 | 1.0/4.0 | DPT | 4.0 - 5.5' Fine Sand (SP-SM): light brown, moist, loose, poorly graded<br>5.5 -8.0' No Recovery | 0.0 4 - 5'<br>0.0 5 -6'<br>Sample ID **CS-U14-5-SO-0405** @ 1155 |
| 8 | 12-16 | 2.7/2.7 | DPT | 8.0 - 10.7' SAA, wet at 9.3' | |
| 12 | | | | End of Boring (10.7' bgs) | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | U14-6 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe

WATER LEVELS START : 11:030:00 AM 6/12/2008 END : 11:07 6/12/08 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-4 | 2.6/4.0 | DPT | 0.0 - 0.5' Clay (CL): black, moist, stiff, organic<br>0.5 - 2.6' Sand and Gravel (SM-GM): light brown, black, and white, moist, loose to medium dense<br>2.6 -4.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-U14-6-SO-0102**@ 1117 |
| 4 | 4-8 | 2.5/2.5 | DPT | 4.0 - 6.5' Fine Sand (SP-SM): light orangish brown, moist, loose, poorly graded | 0.0 4 - 5'<br>0.0 5 - 6'<br>Sample ID **CS-U14-6-SO-0406** @ 1120 |
| 8 | | | | End of Boring (6.5' bgs) | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971 | U 15-1 | SHEET 1 OF 1 |

# SOIL BORING LOG

PROJECT : Michael Reese Hospital S — LOCATION : Chicago, IL

ELEVATION : NA — DRILLING CONTRACTOR : TSC — DATE: 5/7/2008

DRILLING METHOD AND EQUIPMENT USED : Mobile B-61: Hollow stem auger (4-1/4" ID), 24" split spoon, 140 lb. autohammer

WATER LEVELS : 9.0 ft — START: 11:20; 5/7/2008 — END : 12:10; 5/7/08 — LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (IN) | #/TYPE | STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N) | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|---|
| | | | | | 0.0 - 0.4' Clay (CL): black, moist, medium stiff | Headspace PID (ppm) 0.0 |
| 1 | 0 - 2 | 18 | SS | 4 - 5 - 5 - 3 | 0.4 - 1.5' Sandy Silt (ML): black and brown, moist, stiff | 0.0 |
| 2 | | | | | | |
| 3 | 2 - 4 | 12 | SS | 4 - 6 - 5 - 6 | 2.0 - 3.0' Sand (SP): fine grained, light brown, moist, medium dense | 0.0 |
| 4 | | | | | | |
| 5 | 4 - 6 | 24 | SS | 4 - 5 - 7 - 7 | 4.0 - 6.0' Sand (SP - SM): fine grained, light brown, medium dense, moist | 0.0 |
| 6 | | | | | | |
| 7 | 6 - 8 | 18 | SS | 6 - 8 - 8 - 7 | 6.0 - 7.5' As above | 0.0 |
| 8 | | | | | | |
| 9 | 8 - 10 | 12 | ST | NA | 8.0 - 9.0' As above, wet at 9.0' | 0.0 WT=9.0' bgs |
| 10 | | | | | | |
| 11 | 10 - 12 | 24 | SS | 7 - 6 - 6 - 5 | 10.0 - 12.0' As above | 0.0 Sample ID: **CS-U15-1-SO-1012** @ 12:00 |
| 12 | | | | | End of Boring at 12.0' | |
| 13 | | | | | | |
| 14 | | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | P16-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : P16-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS START : 10:10 5/9/2008 END : 5/9/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.3' Asphalt Pieces: black, dry to moist, loose | Headspace PID (ppm) |
| | | | | 0.3 - 3.3' Sandy Gravel (GW): red, light brown, light grey, poorly sorted, well graded, fill brick pieces | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' /OC - 0.0 ppm |
| | 0-5 | 3.3/5.0 | DP 1 | 3.3 -5.0' No Recovery | 0.0 2 - 3' $H_2S$ - 0.0 ppm |
| | | | | | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| 5 | | | | 5.0 - 6.6' Sandy Gravel (GW):red, light grey, poorly graded, dry, loose | 0.0 5 - 6' |
| | | | | | 0.0 6 - 7' |
| | | | | 6.6 - 7.5' Fine Sand (SP): medium brown, well sorted, poorly graded, loose, dry to moist | 0.0 7 - 7.5' |
| | 5-10 | 2.5/5.0 | DP 2 | | Sample ID **CS-P16-1-SO-0508 MS** @ 1040 |
| | | | | | Sample ID **CS-P16-1-GW-050908** @ 1045 |
| | | | | 7.5 - 10.0' No Recovery | |
| 10 | | | | 10.0 - 11.6' Fine Sand (SP): well sorted, poorly graded, medium brown, wet at 10.0 ft bgs, loose | 0.0 10 - 11' |
| | 10-12.4 | 1.6/1.6 | DP 3 | | 0.0 11 - 11.6' |
| | | | | End of Boring (11.6' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | P17-1 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : P17-1

ELEVATION : DRILLING CONTRACTOR : Raimonde

DRILLING METHOD AND EQUIPMENT USED : Direct Push Technology, Geoprobe 6620 DT with 5-ft acetate liners

WATER LEVELS 10.0 ft START : 7:45 5/14/2008 END : 5/14/08 LOGGER : C. Dellaria

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-5 | 3.4/5.0 | DP 1 | 0.0 - 1.3' Gravel (GW): asphalt, concrete pieces, poorly sorted, well graded, black, dry to moist, loose<br>1.3 - 3.4' Sandy Gravel (GW): black, poorly sorted, well graded/ 1.3 - 2.2' medium brown. 2.2 - 3.4' dry to moist, loose<br>3.4 -5.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' /OC - 0.0 ppm<br>0.0 2 - 3' $H_2S$ - 0.0 ppm<br>0.0 3 - 3.4' LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-P17-1-SO-0103 MS** @ 0840 |
| 5 | 5-10 | 2.5/5.0 | DP 2 | 5.0 - 7.5' Fine Sand (SP): light brown, trace gravel, well sorted, poorly graded, moist, loose<br>7.5 - 10.0' No Recovery | 0.0 5 - 6'<br>0.0 6 - 7'<br>0.0 7 - 7.5'<br>Sample ID **CS-P17-1-GW-051408** @ 0818 |
| 10 | 10-12.4 | 2.1/2.1 | DP 3 | 10.0 - 12.1' Fine Sand (SP): trace gravel, well sorted, poorly graded, medium brown, wet at 10.0 ft bgs, loose | 0.0 10 - 11'<br>0.0 11 - 12.1' |
| | | | | End of Boring (12.1' bgs) | |
| 15 | | | | | |
| 20 | | | | | |
| 25 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971 | I 18-1 | SHEET 1 OF 1 |

# SOIL BORING LOG

PROJECT : Michael Reese Hospital S — LOCATION : Chicago, IL

ELEVATION : NA — DRILLING CONTRACTOR : TSC — DATE: 5/6/2008

DRILLING METHOD AND EQUIPMENT USED : Mobile B-61: Hollow stem auger (4-1/4" ID), 24" split spoon, 140 lb. autohammer

WATER LEVELS : 8.7 ft — START : 11:45; 5/6/2008 — END : 13:10; 5/6/08 — LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (IN) | #/TYPE | STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N) | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|---|---|
| | | | | | | | Headspace PID (ppm) |
| | | | | | | | 0.0 |
| 1 | 0 - 2 | 20 | SS | 6 - 6 - 6 - 7 | 0.0 - 2.0' | Silt (ML): black, moist, stiff, brick at 1', fill, trace organics | Sample ID: **CS-I18-1-SO-0001** @ 11:55 |
| 2 | | | | | | | |
| | | | | | | | 0.0 |
| 3 | 2 - 4 | 16 | SS | 12 - 8 -6 - 6 | 2.0 - 4.0' | Silt (ML): black, moist, stiff, trace gravel, sand and brick. Sand at 2.9 to 3.1', light tan, moist | |
| 4 | | | | | | | |
| 5 | 4 - 6 | 4 | SS | 30 - 12 - 8 - 19 | 4.0 - 6.0' | Silty Gravel (GM): light gray, dry to moist, medium dense, trace to little sand. | 0.0<br>Driller remark: hard material at 4.5'. Auger refusal. Moved boring 3' west of original location. |
| 6 | | | | | 6.0 - 6.2' | Silt (ML): black, moist, stiff, trace gravel and sand | |
| 7 | 6 - 8 | 14 | SS | 12 - 15 - 50/5" | 6.2 - 6.6' | Silty Gravel (GM): light gray, dry to moist, medium dense, trace to little sand | 0.0 |
| | | | | | 6.6 - 6.8' | As above, red, bricks, dry, very dense. | Drillers remark: auger refusal at 7.0' bgs. Relocate to the west. |
| 8 | | | | | 6.8 - 7.0' | Gravel (GM): brown, moist, some silt and sand, very dense | |
| | | | | | | | Sample ID: **CS-I18-1-SO-0809** @ 13:10 |
| | | | | | | | WT=8.7' bgs |
| 9 | 8 - 10 | 19 | SS | 5 - 5 - 3 - 4 | 8.0 - 9.4' | Sand (SP - SM): very fine to medium grained, black, moist to wet, loose, trace gravel and brick, wet at 8.7' | 0.0 |
| 10 | | | | | | | |
| 11 | 10 - 12 | 12 | ST | NA | | | |
| 12 | | | | | | | |
| | | | | | | End of Boring at 12.0' | |
| 13 | | | | | | | |
| 14 | | | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I18-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe

WATER LEVELS 5.5 ft START : 15:55 6/12/2008 END : 16:01 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.7' Clay (CL): black, moist, stiff, organic | Headspace PID (ppm) |
| | | | | 0.7 - 1.5' Gravel, Clay & Silty Sand (GM, SL, & SM): black, red, and white, moist, loose fill | 0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 1.5' /OC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm |
| | 0-4 | 1.5/4.0 | DPT | 1.5- 4.0' No Recovery | Sample ID **CS-I18-2-SO-0102** @ 1604 |
| 4 | | | | 4.0 - 5.3' SAA, wet at 5.5' bgs | 0.0 4 - 5'<br>0.0 5 - 6' |
| | 4-8 | 1.3/1.3 | DPT | | Sample ID **CS-U14-3-SO-0405** @1606 |
| | | | | End of Boring (5.3' bgs) | |
| 8 | | | | | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I18-3 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe

WATER LEVELS START : 15:34:00 PM 6/12/2008 END : LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.6' Clay (CL): black, moist, stiff, organic | Headspace PID (ppm) |
| | | | | 0.6 - 2.8' Gravel, Clay & Silty Sand (GM, CL, & SM): black, red, white, moist, loose, trace brick fill | 0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' /OC - 0.0 ppm<br>0.0 2 - 3' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm |
| | 0-4 | 2.8/4.0 | DPT | 2.8 -4.0' No Recovery | DR: Refusal at 3.0', moved 2.0' south |
| 4 | | | | 4.0 - 5.5' SAA | |
| | 4-8 | 1.5/1.5 | DPT | | Sample ID **CS-I1-2-SO-0203** @ 1555 |
| | | | | End of Boring (5.5' bgs) | |
| 8 | | | | | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I18-4 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS 16.0 ft START : 7:13 6/13/2008 END : 7:32 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone Above Hole |
| | | | | 0.0 - 0.7' Clay, (CL): black, moist, stiff, organic, topsoil | Headspace PID (ppm) |
| | | | | 0.7 - 2.9' Clay, (CL): grayish brown, moist, stiff, trace glass fragments, trace (white rock) gravel | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' VOC - 0.0 ppm |
| | 0-4 | 2.9/2.9 | DPT | 2.9 - 4.0' No Recovery | 0.0 2 - 3' $H_2S$ - 0.0 ppm |
| | | | | | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-I18-4-SO-0102** @ 0730 |
| 4 | | | | | |
| | | | | 4.0 - 6.6' | 0.0 4 - 5' |
| | | | | Silty Sand, Clay and Gravel (SM, CL & GM): black white, red, moist, loose to dense, trace wood & brick | 0.0 5 - 6' |
| | 4-8 | 2.6/5.0 | DRT | | 0.0 6 - 7' |
| | | | | 6.6 -8.0' No Recovery | |
| 8 | | | | | |
| | | | | 8.0 - 10.5' Silty Sand (SM): light brown, brown and red, moist, loose, poorly graded, trace brick fragments | 0.0 8 - 9' |
| | | | | | 0.0 9 - 10' |
| | 8-12 | 2.5/4.0 | DPT | 10.5 - 12.0' No Recovery | 0.0 10 - 11' |
| | | | | | Sample ID **CS-I18-4-SO-0810** @ 0732 |
| 12 | | | | | |
| | | | | 12.0 - 15.0' SAA, Gravel at 14.0 - 14.2' | 0.0 12 -13' |
| | | | | | 0.0 13 - 14' |
| | 12-16 | 2.0/2.0 | DPT | | 0.0 14 - 15' |
| | | | | 15.0 - 16.0' No Recovery | |
| 16 | | | | | |
| | 16-20 | 1.2/1.2 | DPT | 16.0 - 17.2' Gravelly Sand (SP-SM): dark brown, wet, loose, fine to coarse sand, fine to coarse gravel, saturated | 0.0 16 - 17' |
| | | | | | 0.0 17 - 17.2' |
| | | | | End of Boring (17.2' bgs) | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I18-5 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS START : 13:30:00 PM 6/12/2008 END : 13:36 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 0.5' Clay (CL): black, moist, stiff, organic | Headspace PID (ppm) |
| | | | | 0.5 - 1.2' Silty Sand (SM): light brown, moist, loose, poorly graded | 0.0 0 - 1' CO - 0.0 ppm |
| | 0-4 | 2.5/4.0 | DPT | 1.2 -1.7' Gravel (GM): white, dry, medium dense, poorly | 0.0 1 - 2' /OC - 0.0 ppm |
| | | | | 1.7 -2.5' Silty Sand as 0.5 - 1.2', dark brown | 0.0 2 - 2.5' $H_2S$ - 0.0 ppm |
| | | | | | LEL - 0.0 ppm |
| | | | | 2.5 - 4.0' No Recovery | $O_2$ - 20.9 ppm |
| 4 | | | | | DR: Refusal at 2.0', moved 2.0' East of original locatic |
| | | | | 4.0 - 5.0' mixed material from 1.2 -1.7' & 1.7 - 2.5' | 0.0 4 - 5' |
| | 4-8 | 1.75/1.75 | DPT | 5.0 - 5.75' Silty Sand (SM): orangish brown, moist, loose, poorly graded | 0.0 5 - 6' |
| | | | | | Sample ID **CS-I18-5-SO-0506** @ 1348 |
| | | | | End of Boring (5.75' bgs) | |
| 8 | | | | | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I18-6 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe

WATER LEVELS 8.0 ft START : 13:14:00 PM 6/12/2008 END : 13:21 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-4 | 2.5/4.0 | DPT | 0.0 - 1.0' Clay (CL): black, moist, stiff, organic<br>1.0 - 2.0' Silty Sand (SM): blak and white, moist to dry, loose, trace cinders, trace gravel<br>2.0 -2.5' Silty Sand (SM): dark brown, moist, loose, poorly graded<br>2.5 - 4.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>0.0 2 - 2.5' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-I18-6-SO-0102** @ 1326 |
| 4 | 4-8 | 1.5/5.0 | DRT | 4.0 - 5.5' SAA, light brown, trace brick & gravel<br>5.5 - 8.0' No Recovery | 0.0 4 - 5'<br>0.0 5 - 6' |
| 8 | 8-12 | 2.8/2.8 | DPT | 8.0 - 10.8' Fine Sand (SP-SM): brown, wet, loose, laminated to very thin bedding, fine to medium grained beds at 8.4 - 8.8', poorly graded | 0.0 8 - 9'<br>0.0 9 - 10'<br>0.0 10 - 11'<br>Sample ID **CS-I18-6-SO-0405** @ 1330 |
| 12 | | | | End of Boring (10.8' bgs) | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971 | I 19-1 | SHEET 1 OF 1 |

# SOIL BORING LOG

PROJECT : Michael Reese Hospital S — LOCATION : Chicago, IL

ELEVATION : NA — DRILLING CONTRACTOR : TSC — DATE: 5/7/2008

DRILLING METHOD AND EQUIPMENT USED : Mobile B-61: Hollow stem auger (4-1/4" ID), 24" split spoon, 140 lb. autohammer

WATER LEVELS : 10.5 ft — START: 15:40; 5/7/08 — END : 16:45; 5/7/08 — LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (IN) | #/TYPE | STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N) | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|---|
| 1 | 0 - 2 | 18 | SS | 7 - 6 - 4 - 4 | 0.0 - 0.3' Clay (CL): black, moist, medium stiff, trace gravel and organics<br>0.3 - 1.1' Gravel (GM): black, white, light brown, moist, little sand, silt and clay, loose<br>1.1 - 1.5' Silty Sand (SM): dark brown, moist, medium stiff | Headspace PID (ppm)<br>0.0 |
| 3 | 2 - 4 | 12 | SS | 3 - 3 - 4 - 4 | 2.0 - 3.0' Sandy Gravel (GP - GM): light brown, black and orange, dry to moist, loose | 0.0 |
| 5 | 4 - 6 | 12 | SS | 3 - 3 - 4 - 5 | 4.0 - 5.0' As above | 0.0 |
| 7 | 6 - 8 | 18 | SS | 5 - 2 - 2 - 5 | 6.0 - 6.75' As above, trace to little sand at 7.3' | 1.4<br>Sample ID: **CS-I19-1-SO-0608** @ 16:21 |
| 9 | 8 - 10 | 12 | SS | 5 - 2 - 50/1" | 8.0 - 9.0' Sandy Silt (SM): black and brown, moist, medium stiff | 0.0 |
| 10 | | | | | 10.0 - 10.5' As above, little gravel, wet | Drillers remark: Shelby tube refusal at 10' bgs<br>WT=10.5' bgs |
| 11 | 10 - 12 | 18 | SS | 5 - 7 - 8 - 9 | 10.5 - 11.5' Sand (SP - SM): fine grained, light brown, wet, medium dense | |
| 12 | | | | | End of Boring at 12.0' | |
| 13 | | | | | | |
| 14 | | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I19-2 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe. Discrete Sampler

WATER LEVELS START : 20:34 6/12/2008 END : 08:50 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 1.0' Clay (CL): dark brown, moist, soft, PP: 0.75 tsf | Headspace PID (ppm) |
| | | | | 1.0 - 2.5' Fine Sand (SP - SM): light brown and light grayish brown, moist, loose, trace to little gravel (white rock), poorly graded | 0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>0.0 2 - 23' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm |
| | 0-4 | 2.6/4.0 | DPT | 2.5 - 4.0' No Recovery | DR: Refusal at 2.0' during first attempt, moved 1.5' NW |
| 4 | | | | 4.0 - 6.1' Fine Sand (SP - SM): light brown and light grayish brown, moist, loose, trace fine gravel & coarse, poorly graded | Sample ID **CS-I19-2-SO-0102** @ 0840 |
| | 4-8 | 2.1/5.0 | DPT | 6.1 - 8.0' No Recovery | 0.0 4 - 5'<br>0.0 5 - 6' |
| 8 | | | | 8.0 - 10.0 Silty Sand (SM): black to dark brown, moist, very loose, trace organics (roots), wet for last 2", poorly graded | WT= 9.9 bgs<br>0.0 8 - 9'<br>0.0 9 - 10' |
| | 8-10 | 1.6/2.0 | DPT | 10.0 - 11.0' SAA, wet | Sample ID **CS-I19-2-SO-0102** @ 0845 |
| | 10-12 | 2.0/2.0 | DPT | 11.0 - 12.0' Fine to Medium Sand (SP-SM): light gray, wet, loose, poorly graded at 10.5', horizontal laminate bedding, alternating colors (black & light brown) | DR: Refusal at 10', moved 1.5' NW; Moved boring to NE of original location because no access with truck rig |
| 12 | | | | End of Boring (10.5' bgs) | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I19-3 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe. Discrete Sampler

WATER LEVELS 8.9 ft START : 8:10 6/12/2008 END : 08:16 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 1.75' Fine Sand (SP-SM): dark brown, moist, loose, some gravel and brick at 0.0 - 0.5', poorly graded | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>$H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm |
| | 0-4 | 1.75/4.0 | DPT | 1.75 - 4.0' No Recovery | Sample ID **CS-I19-3-SO-0002** @ 0815 |
| 4 | | | | 4.0 - 5.75' Fine Sand (SP-SM): light brown, moist, loose, poorly graded | 0.0 4 - 5'<br>0.0 5 - 6' |
| | 4-8 | 1.75/2.0 | DPT | 5.75 - 8.0' No Recovery | |
| 8 | | | | | 0.0 8 - 9'<br>0.0 9 - 10'<br>0.0 10 - 11' |
| | 8-12 | 2.5/2.5 | DPT | 8.0 - 10.5' SAA, wet at 8.9' bgs | Sample ID **CS-I19-3-SO-0809** @ 0820<br>DR: boring was moved 4' south because of utilities |
| | | | | End of Boring (8.9' bgs) | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I19-4 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe

WATER LEVELS 8.0 ft START : 13:14:00 PM 6/12/2008 END : 13:21 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | 0-4 | 2.5/4.0 | DPT | 0.0 - 1.0' Clay (CL): black, moist, stiff, organic<br>1.0 - 2.0' Silty Sand (SM): black and white, moist to dry, loose, trace cinders, trace gravel<br>2.0 -2.5' Silty Sand (SM): dark brown, moist, loose, poorly graded<br>2.5 - 4.0' No Recovery | Headspace PID (ppm)<br>0.0 0 - 1' CO - 0.0 ppm<br>0.0 1 - 2' VOC - 0.0 ppm<br>0.0 2 - 2.5' $H_2S$ - 0.0 ppm<br>LEL - 0.0 ppm<br>$O_2$ - 20.9 ppm<br>Sample ID **CS-I18-6-SO-0102** @ 1326 |
| 4 | 4-8 | 1.5/5.0 | DRT | 4.0 - 5.5' SAA, light brown, trace brick & gravel<br>5.5 - 8.0' No Recovery | 0.0 4 - 5'<br>0.0 5 - 6' |
| 8 | 8-12 | 2.8/2.8 | DPT | 8.0 - 10.8' Fine Sand (SP-SM): brown, wet, loose, laminated to very thin bedding, fine to medium grained beds at 8.4 - 8.8', poorly graded | 0.0 8 - 9'<br>0.0 9 - 10'<br>0.0 10 - 11'<br>Sample ID **CS-I18-6-SO-0405** @ 1330 |
| 12 | | | | End of Boring (10.8' bgs) | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I19-5 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS 9.5 ft START : 9:37 6/12/2008 END : 09:45 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 1.0' Clay (CL): black, moist, soft, trace organics, PP: 0.7 tsf | Headspace PID (ppm) |
| | | | | | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' VOC - 0.0 ppm |
| | 0-4 | 2.3/4.0 | DPT | 1.0 - 2.3' Silty Sand (SM): brown, dry to moist, loose, trace gravel | 0.0 2 - 2.5' $H_2S$ - 0.0 ppm |
| | | | | | LEL - 0.0 ppm |
| | | | | 2.3 - 4.0' No Recovery | $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-I19-5-SO-0102** @ 0940 |
| 4 | | | | | |
| | | | | 4.0 - 4.5' SAA | 0.0 4 - 5' |
| | | | | 4.5 - 6.2' Fine Sand (SP - SM): light brown, moist, loose, poorly graded, trace gravel (pebbles) | 0.0 5 - 6' |
| | 4-8 | 2.2/5.0 | DRT | | |
| | | | | 6.2 - 8.0' No Recovery | |
| 8 | | | | | |
| | | | | 8.0 - 9.5' SAA | 0.0 8 - 9' |
| | 8-12 | 2.2/2.2 | DPT | 9.5 - 10.2' SAA, wet, iron oxide stained | 0.0 9 - 10' |
| | | | | | Sample ID **CS-I19-5-SO-0910** @ 0946 |
| | | | | End of Boring (10.2' bgs) | |
| 12 | | | | | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971. CH. ZZ | I19-6 | SHEET 1 OF 1 |

# GEOPROBE SOIL LOG

PROJECT : Michael Reese Hospital Site LOCATION : Chicago, IL

ELEVATION : DRILLING CONTRACTOR Raimonde

DRILLING METHOD AND EQUIPMENT USED : Truck mounted Geoprobe, Discrete Sampler

WATER LEVELS START : 9:56 6/12/2008 END : 10:07 LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (FT) | #/TYPE | SOIL DESCRIPTION | COMMENTS |
|---|---|---|---|---|---|
| | | | | SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
| | | | | | OVM (ppm): Breathing Zone / Above Hole |
| | | | | 0.0 - 1.7' Clay, Gravel and Sand (CL, GM,SM)): black, brown, and light brown, moist, soft, loose | Headspace PID (ppm) |
| | | | | | 0.0 0 - 1' CO - 0.0 ppm |
| | | | | | 0.0 1 - 2' VOC - 0.0 ppm |
| | 0-4 | 1.7/4.0 | DPT | 2.3 - 4.0' No Recovery | $H_2S$ - 0.0 ppm |
| | | | | | LEL - 0.0 ppm |
| | | | | | $O_2$ - 20.9 ppm |
| | | | | | Sample ID **CS-I19-6-SO-0001** @ 0959 |
| 4 | | | | | |
| | | | | 4.0 - 5.5' Fine Sand (SP - SM): light brown, moist, loose, poorly graded, trace gravel | 0.0 4 - 5' |
| | | | | | 0.0 5 - 6' |
| | 4-8 | 1.5/5.0 | DRT | 5.5 -8.0' No Recovery | |
| 8 | | | | | |
| | | | | 8.0 - 9.5' SAA, becomes orangish brown at the bottom | 0.0 8 - 9' |
| | | | | | Sample ID **CS-I19-6-SO-0809** @ 1009 |
| | 8-12 | 1.0/4.0 | DPT | 9.5 - 12.0' No Recovery | |
| 12 | | | | | |
| | | | | 12.0 - 14.0' Fine Sand (SP-SM): orangish browm, wet, loose, poorly graded | 0.0 12 -13' |
| | 12-16 | 2.0/2.0 | DPT | | 0.0 13 - 14' |
| | | | | End of Boring (14.0' bgs) | |
| 16 | | | | | |
| 20 | | | | | |
| 24 | | | | | |
| 28 | | | | | |

CH2MHILL

| PROJECT NUMBER | BORING NUMBER | |
|---|---|---|
| 353971 | I 20-1 | SHEET 1 OF 1 |

# SOIL BORING LOG

PROJECT : Michael Reese Hospital Site — LOCATION : Chicago, IL

ELEVATION : NA — DRILLING CONTRACTOR : TSC — DATE: 5/6/2008

DRILLING METHOD AND EQUIPMENT USED : Mobile B-61: Hollow stem auger (4-1/4" ID), 24" split spoon, 140 lb. autohammer

WATER LEVELS : 9.2 ft — START: 14:50; 5/6/08 — END : 15:50; 5/6/08 — LOGGER : L. Hunt

| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (IN) | #/TYPE | STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N) | SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY. | COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. |
|---|---|---|---|---|---|---|
| | | | | | | Headspace PID (ppm) |
| 1 | 0 - 2 | 23 | SS | 1 - 2 - 1 - 2 | 0.0 - 1.9' Silty Sand (SM): fine grained, dark brown, dry to moist, very loose, trace gravel fill | 0.0 |
| 2 | | | | | | |
| 3 | 2 - 4 | 22 | SS | 1 - 1 - 1 - 2 | 2.0 - 4.0' As above | 0.0 |
| 4 | | | | | | |
| 5 | 4 - 6 | 24 | ST | NA | | |
| 6 | | | | | | |
| 7 | 6 - 8 | 24 | SS | 5 - 7 - 6 - 7 | 6.0 - 8.0' Sand (SP - SM): fine grained, light orangish-brown, moist, medium dense, fill sand | 0.0 |
| 8 | | | | | | |
| 9 | 8 - 10 | 24 | SS | 4 - 7 - 8 - 8 | 8.0 - 10.0' As above, wet at 9.2' bgs | 0.0 WT=9.2' bgs |
| 10 | | | | | | Sample ID: **CS-I20-1-SO-1011** @ 15:15 |
| 11 | 10 - 12 | 18 | SS | 1 - 2 - 1 - 3 | 10.0 - 11.5' As above, wet | 0.0 |
| 12 | | | | | End of Boring at 12.0' | |
| 13 | | | | | | |
| 14 | | | | | | |

# Appendix B

# Summary of Phase II Soil Analytical Data

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | I1-1 | | I1-1 | | I1-2 | | I1-2 | | I1-3 | | I1-3 | | P1-1 | | P1-1 | | U1-1 | | U1-2 | | U1-2 | |
| | | | Sample ID | SO-0203 | | SO-0809 | | SO-0102 | | SO-0506 | | SO-0001 | | SO-0103 | | SO-0002 | | SO-0607 | | SO-0607 | | SO-0106 | | SO-0607 | |
| | | | Sample Date | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/13/08 | | 5/13/08 | | 5/7/08 | | 5/7/08 | | 5/14/08 | |
| | | | Sample Depth | 02 to 03 | | 08 to 09 | | 05 to 06 | | 05 to 06 | | 00 to 01 | | 01 to 03 | | 00 to 02 | | 06 to 07 | | 06 to 07 | | 01 to 06 | | 06 to 07 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | 5600 | | 4000 | | | | | | | | | | 4200 | | 4900 | | | | | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | 1.1 | U | 1.1 | U | | | | | | | | | 1.1 | U | 1 | U | | | | | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | 7.7 | | 13 | | 8.3 | | 1.6 | | 13 | | 10 | | 8.4 | | 6.9 | | | | | | | |
| Barium | Residential Ing. [1] | 5500 | mg/kg | 140 | | 140 | | 190 | | 4.2 | | 470 | | 280 | | 75 | | 86 | | | | | | | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | 0.17 | U | 0.62 | | | | | | | | | | 0.71 | | 0.65 | | | | | | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | 0.69 | | 1.1 | | 1.1 | | 0.16 | U | 1.7 | | 1.5 | | 0.67 | | 0.87 | | | | | | | |
| Calcium | | | mg/kg | 43000 | | 36000 | | | | | | | | | | 49000 | | 42000 | | | | | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | 17 | | 14 | | 21 | | 2.9 | | 50 | | 15 | | 8.4 | | 8.2 | | | | | | | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | 5.8 | | 4.7 | | | | | | | | | | 3.2 | | 3.9 | | | | | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | 35 | | 53 | | | | | | | | | | 28 | | 100 | | | | | | | |
| Iron | | | mg/kg | 13000 | | 18000 | | | | | | | | | | 11000 | | 14000 | | | | | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | 290 | | **430** | | **490** | | 3 | | **1200** | | 340 | | 240 | | 260 | | | | | | | |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | 19000 | | 14000 | | | | | | | | | | 20000 | | 13000 | | | | | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | 310 | | 200 | | | | | | | | | | 230 | | 480 | | | | | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | **0.45** | | **0.29** | | **0.8** | | 0.0016 | U | **0.7** | | **0.58** | | **0.47** | | **0.35** | | | | | | | |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | 16 | | 13 | | | | | | | | | | 10 | | 13 | | | | | | | |
| Potassium | | | mg/kg | 1100 | | 790 | | | | | | | | | | 590 | | 520 | | | | | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | 0.6 | U | 0.62 | U | 0.65 | U | 0.54 | U | 0.62 | U | 0.61 | U | 0.59 | U | 0.57 | U | | | | | | |
| Silver | Residential Ing. [1] | 390 | mg/kg | 0.22 | U | 0.23 | U | 0.24 | U | 0.2 | U | 0.23 | U | 0.22 | U | 0.22 | U | 0.21 | U | | | | | | |
| Sodium | | | mg/kg | 200 | | 200 | | | | | | | | | | 930 | | 720 | | | | | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | 0.12 | U | 0.12 | U | | | | | | | | | 0.11 | U | 0.11 | U | | | | | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | 20 | | 21 | | | | | | | | | | 17 | | 13 | | | | | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | 190 | | 280 | | | | | | | | | | 170 | | 380 | | | | | | | |
| % Solids | | | | 83.8 | | 78.7 | | 93.6 | | 95.9 | | 85.8 | | 87.1 | | | | | | 90.3 | | 85.9 | | | |
| Cyanide | Residential Ing. [1] | 1600 | | 0.11 | U | 0.12 | U | | | | | | | | | 0.11 | U | 0.11 | U | | | | | | |
| pH | | | | 8.2 | | 8 | | 9.13 | | 8.68 | | 8.36 | | 11.3 | | 9.4 | | 9 | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | 0.0012 | U | 0.0012 | U | | | | | | | | | 0.0012 | U | 0.0012 | U | | | | | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | 0.00117 | U | 0.00117 | U | | | | | | | | | 0.00117 | U | 0.00117 | U | | | | | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | 0.0213 | | 0.00098 | U | | | | | | | | | 0.00098 | U | 0.00098 | U | | | | | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | 0.00042 | U | 0.00042 | U | | | | | | | | | 0.00042 | U | 0.00042 | U | | | | | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | 0.00022 | U | 0.00022 | U | | | | | | | | | 0.00022 | U | 0.00022 | U | | | | | | |
| beta-BHC | | | mg/kg | 0.00043 | U | 0.00043 | U | | | | | | | | | 0.00043 | U | 0.00043 | U | | | | | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | 0.06 | U | 0.06 | U | | | | | | | | | 0.06 | U | 0.06 | U | | | | | | |
| delta-BHC | | | mg/kg | 0.0005 | U | 0.0005 | U | | | | | | | | | 0.0005 | U | 0.0005 | U | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | I1-1 | | I1-1 | | I1-2 | | I1-2 | | I1-3 | | I1-3 | | P1-1 | | P1-1 | | U1-1 | | U1-2 | | U1-2 | |
| | | | Sample ID | SO-0203 | | SO-0809 | | SO-0102 | | SO-0506 | | SO-0001 | | SO-0103 | | SO-0002 | | SO-0607 | | SO-0607 | | SO-0106 | | SO-0607 | |
| | | | Sample Date | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/13/08 | | 5/13/08 | | 5/7/08 | | 5/7/08 | | 5/14/08 | |
| | | | Sample Depth | 02 to 03 | | 08 to 09 | | 05 to 06 | | 05 to 06 | | 00 to 01 | | 01 to 03 | | 00 to 02 | | 06 to 07 | | 06 to 07 | | 01 to 06 | | 06 to 07 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | 0.00216 | U | 0.00216 | U | | | | | | | | | 0.00216 | U | 0.00216 | U | | | | | | |
| Endosulfan I | | | mg/kg | 0.00316 | U | 0.00316 | U | | | | | | | | | 0.00316 | U | 0.00316 | U | | | | | | |
| Endosulfan II | | | mg/kg | 0.00238 | U | 0.00238 | U | | | | | | | | | 0.00238 | U | 0.00238 | U | | | | | | |
| Endosulfan sulfate | | | mg/kg | 0.00075 | U | 0.00075 | U | | | | | | | | | 0.00075 | U | 0.00075 | U | | | | | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | 0.00062 | U | 0.00062 | U | | | | | | | | | 0.00062 | U | 0.00062 | U | | | | | | |
| Endrin aldehyde | | | mg/kg | 0.00213 | U | 0.00213 | U | | | | | | | | | 0.00213 | U | 0.00213 | U | | | | | | |
| Endrin ketone | | | mg/kg | 0.00046 | U | 0.00046 | U | | | | | | | | | 0.00046 | U | 0.00046 | U | | | | | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | 0.00126 | U | 0.00126 | U | | | | | | | | | 0.00126 | U | 0.00126 | U | | | | | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | 0.00138 | U | 0.00138 | U | | | | | | | | | 0.00138 | U | 0.00138 | U | | | | | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | 0.00045 | U | 0.00045 | U | | | | | | | | | 0.00045 | U | 0.00045 | U | | | | | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | 0.125 | | 0.00509 | U | | | | | | | | | 0.00509 | U | 0.00509 | U | | | | | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | 0.12 | U | 0.12 | U | | | | | | | | | 0.12 | U | 0.12 | U | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | 0.075 | U | 0.075 | U | | | | | | | | | 0.075 | U | 0.075 | U | | | | | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | 0.485 | U | 0.485 | U | | | | | | | | | 0.485 | U | 0.485 | U | | | | | | |
| 1,3-Dichlorobenzene | | | mg/kg | 0.168 | U | 0.168 | U | | | | | | | | | 0.168 | U | 0.168 | U | | | | | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | 0.128 | U | 0.128 | U | | | | | | | | | 0.128 | U | 0.128 | U | | | | | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | 0.194 | U | 0.194 | U | | | | | | | | | 0.194 | U | 0.194 | U | | | | | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | 0.15 | U | 0.15 | U | | | | | | | | | 0.15 | U | 0.15 | U | | | | | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | 0.089 | U | 0.089 | U | | | | | | | | | 0.089 | U | 0.089 | U | | | | | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | 0.133 | U | 0.133 | U | | | | | | | | | 0.133 | U | 0.133 | U | | | | | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | 0.189 | U | 0.189 | U | | | | | | | | | 0.189 | U | 0.189 | U | | | | | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | 0.107 | U | 0.107 | U | | | | | | | | | 0.107 | U | 0.107 | U | | | | | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | 0.112 | U | 0.112 | U | | | | | | | | | 0.112 | U | 0.112 | U | | | | | | |
| 2-Chloronaphthalene | | | mg/kg | 0.192 | U | 0.192 | U | | | | | | | | | 0.192 | U | 0.192 | U | | | | | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | 0.448 | U | 0.448 | U | | | | | | | | | 0.448 | U | 0.448 | U | | | | | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | 0.116 | U | 0.116 | U | | | | | | | | | 0.116 | U | 0.116 | U | | | | | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | 0.165 | U | 0.165 | U | | | | | | | | | 0.165 | U | 0.165 | U | | | | | | |
| 2-Nitroaniline | | | mg/kg | 0.205 | U | 0.205 | U | | | | | | | | | 0.205 | U | 0.205 | U | | | | | | |
| 2-Nitrophenol | | | mg/kg | 0.116 | U | 0.116 | U | | | | | | | | | 0.116 | U | 0.116 | U | | | | | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | 0.106 | U | 0.106 | U | | | | | | | | | 0.106 | U | 0.106 | U | | | | | | |
| 3/4-Methylphenol | | | mg/kg | 0.21 | U | 0.21 | U | | | | | | | | | 0.21 | U | 0.21 | U | | | | | | |
| 3-Nitroaniline | | | mg/kg | 0.205 | U | 0.205 | U | | | | | | | | | 0.205 | U | 0.205 | U | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | 0.46 | U | 0.46 | U | | | | | | | | | 0.46 | U | 0.46 | U | | | | | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | 0.174 | U | 0.174 | U | | | | | | | | | 0.174 | U | 0.174 | U | | | | | | |
| 4-Chloro-3-methylphenol | | | mg/kg | 0.09 | U | 0.09 | U | | | | | | | | | 0.09 | U | 0.09 | U | | | | | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | 0.121 | U | 0.121 | U | | | | | | | | | 0.121 | U | 0.121 | U | | | | | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | 0.114 | U | 0.114 | U | | | | | | | | | 0.114 | U | 0.114 | U | | | | | | |
| 4-Nitroaniline | | | mg/kg | 0.25 | U | 0.25 | U | | | | | | | | | 0.25 | U | 0.25 | U | | | | | | |
| 4-Nitrophenol | | | mg/kg | 0.168 | U | 0.168 | U | | | | | | | | | 0.168 | U | 0.168 | U | | | | | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.148 | U | 0.148 | U | 0.05 | U | 0.05 | U | 0.249 | | 0.183 | | 0.148 | U | 0.148 | U | 3.03 | | 1.15 | | 0.872 | |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.069 | U | 0.069 | U | 0.0673 | | 0.05 | U | 0.309 | | 0.34 | | 0.069 | U | 0.069 | U | 0.0952 | | 0.0536 | | 0.254 | |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 2.01 | | 0.298 | U | 0.247 | | 0.08 | U | 1.32 | | 0.951 | | 0.859 | | 0.957 | | 8.59 | | 3.01 | | 2.52 | |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | **3.53** | | 0.068 | U | 0.008 | U | 0.008 | U | 0.000008 | U | 0.000008 | U | **3.47** | | **3.43** | | **9.21** | | **5.98** | | **6.09** | |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | **8.69** | | 0.112 | U | 0.02 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | **1.59** | | **1.44** | | **11.1** | | **2.71** | | **4.97** | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | I1-1 | | I1-1 | | I1-2 | | I1-2 | | I1-3 | | I1-3 | | P1-1 | | P1-1 | | U1-1 | | U1-2 | | U1-2 | |
| | | | Sample ID | SO-0203 | | SO-0809 | | SO-0102 | | SO-0506 | | SO-0001 | | SO-0103 | | SO-0002 | | SO-0607 | | SO-0607 | | SO-0106 | | SO-0607 | |
| | | | Sample Date | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/13/08 | | 5/13/08 | | 5/7/08 | | 5/7/08 | | 5/14/08 | |
| | | | Sample Depth | 02 to 03 | | 08 to 09 | | 05 to 06 | | 05 to 06 | | 00 to 01 | | 01 to 03 | | 00 to 02 | | 06 to 07 | | 06 to 07 | | 01 to 06 | | 06 to 07 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | **4.19** | | 0.23 | U | 0.01 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | **1.94** | | **1.55** | | **7.5** | | **8.58** | | **6.21** | |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 1.75 | | 0.205 | U | 0.02 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.205 | U | 0.781 | | 8.02 | | 2.95 | | 2.49 | |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 1.83 | | 0.122 | U | 0.01 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.122 | U | 0.122 | U | 7.53 | | 2.88 | | 2.04 | |
| Benzyl alcohol | | | mg/kg | 0.251 | U | 0.251 | U | | | | | | | | | 0.251 | U | 0.251 | U | | | | | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | 0.113 | U | 0.113 | U | | | | | | | | | 0.113 | U | 0.113 | U | | | | | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | 0.329 | U | 0.329 | U | | | | | | | | | 0.329 | U | 0.329 | U | | | | | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | 0.166 | U | 0.166 | U | | | | | | | | | 0.166 | U | 0.166 | U | | | | | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | 0.091 | U | 0.091 | U | | | | | | | | | 0.091 | U | 0.091 | U | | | | | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | 0.109 | U | 0.109 | U | | | | | | | | | 0.109 | U | 0.109 | U | | | | | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | **0.717** | | 0.131 | U | | | | | | | | | 0.131 | U | 0.131 | U | | | | | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 3.26 | | 0.094 | U | 0.52 | | 0.00005 | U | 4.2 | | 3.72 | | 3.76 | | 3.93 | | 10.1 | | 6.15 | | 5.64 | |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.174 | U | 0.174 | U | 0.02 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.174 | U | 0.174 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | 0.219 | U | 0.219 | U | | | | | | | | | 0.219 | U | 0.219 | U | | | | | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | 0.324 | U | 0.324 | U | | | | | | | | | 0.324 | U | 0.324 | U | | | | | | |
| Dimethyl phthalate | | | mg/kg | 0.118 | U | 0.118 | U | | | | | | | | | 0.118 | U | 0.118 | U | | | | | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | 0.168 | U | 0.168 | U | | | | | | | | | 0.168 | U | 0.168 | U | | | | | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | 0.167 | U | 0.167 | U | | | | | | | | | 0.167 | U | 0.167 | U | | | | | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 0.094 | U | 0.094 | U | 0.993 | | 0.00005 | U | 8.52 | | 5.38 | | 0.094 | U | 0.094 | U | 27.1 | | 13.4 | | 12.2 | |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 0.136 | U | 0.136 | U | 0.0513 | | 0.00003 | U | 0.352 | | 0.293 | | 0.136 | U | 0.136 | U | 2.46 | | 1.2 | | 0.817 | |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | 0.066 | U | 0.066 | U | | | | | | | | | 0.066 | U | 0.066 | U | | | | | | |
| Hexachlorobutadiene | | | mg/kg | 0.074 | U | 0.074 | U | | | | | | | | | 0.074 | U | 0.074 | U | | | | | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | 0.173 | U | 0.173 | U | | | | | | | | | 0.173 | U | 0.173 | U | | | | | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | 0.132 | U | 0.132 | U | | | | | | | | | 0.132 | U | 0.132 | U | | | | | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | **1.55** | | 0.178 | U | 0.307 | | 0.00002 | U | **1.4** | | **1.28** | | 0.837 | | 0.662 | | **7.37** | | **2.72** | | 0.0552 | |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | 0.097 | U | 0.097 | U | | | | | | | | | 0.097 | U | 0.097 | U | | | | | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.086 | U | 0.086 | U | 0.05 | U | 0.00005 | U | 0.171 | | 0.168 | | 0.086 | U | 0.086 | U | 0.542 | | **2.26** | | 1.02 | |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | 0.232 | U | 0.232 | U | | | | | | | | | 0.232 | U | 0.232 | U | | | | | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | 0.218 | U | 0.218 | U | | | | | | | | | 0.218 | U | 0.218 | U | | | | | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | 0.253 | U | 0.253 | U | | | | | | | | | 0.253 | U | 0.253 | U | | | | | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | 0.317 | U | 0.317 | U | | | | | | | | | 0.317 | U | 0.317 | U | | | | | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 7.51 | | 0.122 | U | 0.58 | | 0.00003 | U | 4.77 | | 3 | | 3.48 | | 4.01 | | 24.6 | | 10.1 | | 8.61 | |
| Phenol | Residential Soil [5] | 100 | mg/kg | 0.584 | U | 0.584 | U | | | | | | | | | 0.584 | U | 0.584 | U | | | | | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 7.41 | | 0.066 | U | 0.897 | | 0.00005 | U | 7.46 | | 4.78 | | 5.9 | | 6.18 | | 27.8 | | 11.5 | | 10.7 | |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | | | | | **0.0865** | | | | | | | | | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | 0.002 | U | 0.002 | U | | | | | | | | | 0.002 | U | 0.002 | U | | | | | | |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | 0.004 | U | 0.004 | U | | | | | | | | | 0.004 | U | 0.004 | U | | | | | | |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | 0.0003 | U | 0.0003 | U | | | | | | | | | 0.0003 | U | 0.0003 | U | | | | | | |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | 0.0006 | U | 0.0006 | U | | | | | | | | | 0.0006 | U | 0.0006 | U | | | | | | |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | 0.0008 | U | 0.0008 | U | | | | | | | | | 0.0008 | U | 0.0008 | U | | | | | | |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | 0.0005 | U | 0.0005 | U | | | | | | | | | 0.0005 | U | 0.0005 | U | | | | | | |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | 0.00005 | U | 0.00005 | U | | | | | | | | | 0.00005 | U | 0.00005 | U | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | I1-1 | | I1-1 | | I1-2 | | I1-2 | | I1-3 | | I1-3 | | P1-1 | | P1-1 | | U1-1 | | U1-2 | | U1-2 | |
| | | | Sample ID | SO-0203 | | SO-0809 | | SO-0102 | | SO-0506 | | SO-0001 | | SO-0103 | | SO-0002 | | SO-0607 | | SO-0607 | | SO-0106 | | SO-0607 | |
| | | | Sample Date | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/13/08 | | 5/13/08 | | 5/7/08 | | 5/7/08 | | 5/14/08 | |
| | | | Sample Depth | 02 to 03 | | 08 to 09 | | 05 to 06 | | 05 to 06 | | 00 to 01 | | 01 to 03 | | 00 to 02 | | 06 to 07 | | 06 to 07 | | 01 to 06 | | 06 to 07 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| 2-Butanone | | | mg/kg | 0.0005 | U | 0.0005 | U | | | | | | | | | 0.0005 | U | 0.0005 | U | | | | | | |
| 2-Hexanone | | | mg/kg | 0.0006 | U | 0.0006 | U | | | | | | | | | 0.0006 | U | 0.0006 | U | | | | | | |
| Acetone | Residential Soil [5] | 16 | mg/kg | 0.001 | U | 0.001 | U | | | | | | | | | 0.001 | U | 0.001 | U | | | | | | |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | 0.0006 | U | 0.0006 | U | | | | | | | | | 0.0006 | U | 0.0006 | U | 0.007 | | 0.0006 | U | 0.0006 | U |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | 0.0004 | U | 0.012 | | | | | | | | | | 0.0004 | U | 0.0004 | U | | | | | | |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | 0.0003 | U | 0.0003 | U | | | | | | | | | 0.0003 | U | 0.0003 | U | | | | | | |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | 0.0009 | U | 0.0009 | U | | | | | | | | | 0.0009 | U | 0.0009 | U | | | | | | |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | 0.0009 | U | 0.0009 | U | | | | | | | | | 0.0009 | U | 0.033 | | | | | | | |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | 0.0007 | U | 0.0007 | U | | | | | | | | | 0.0007 | U | 0.0007 | U | | | | | | |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | 0.0005 | U | 0.0005 | U | | | | | | | | | 0.0005 | U | 0.0005 | U | | | | | | |
| Chloroethane | | | mg/kg | 0.001 | U | 0.001 | U | | | | | | | | | 0.001 | U | 0.001 | U | | | | | | |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | 0.0006 | U | 0.055 | | | | | | | | | | 0.0006 | U | 0.0006 | U | | | | | | |
| Chloromethane | | | mg/kg | 0.001 | U | 0.001 | U | | | | | | | | | 0.001 | U | 0.001 | U | | | | | | |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | 0.0006 | U | 0.0006 | U | | | | | | | | | 0.0006 | U | 0.0006 | U | | | | | | |
| cis-1,3-Dichloropropylene | | | mg/kg | 0.0004 | U | 0.0004 | U | | | | | | | | | 0.0004 | U | 0.0004 | U | | | | | | |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | 0.0004 | U | 0.0004 | U | | | | | | | | | 0.0004 | U | 0.0004 | U | | | | | | |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | 0.0007 | U | 0.0007 | U | | | | | | | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U |
| Methyl Isobutyl Ketone | | | mg/kg | 0.0004 | U | 0.0004 | U | | | | | | | | | 0.0004 | U | 0.0004 | U | | | | | | |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | 0.0006 | U | 0.0006 | U | | | | | | | | | 0.0006 | U | 0.0006 | U | | | | | | |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | 0.0004 | U | 0.0004 | U | | | | | | | | | 0.0004 | U | 0.0004 | U | | | | | | |
| Styrene | Industrial Soil [6] | 4 | mg/kg | 0.001 | U | 0.001 | U | | | | | | | | | 0.001 | U | 0.001 | U | | | | | | |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | 0.0005 | U | 0.0005 | U | | | | | | | | | 0.0005 | U | 0.0005 | U | | | | | | |
| Toluene | Residential Soil [5] | 12 | mg/kg | 0.0007 | U | 0.0007 | U | | | | | | | | | 0.0007 | U | 0.0007 | U | 0.007 | | 0.0007 | U | 0.0007 | U |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | 0.0008 | U | 0.0008 | U | | | | | | | | | 0.0008 | U | 0.0008 | U | | | | | | |
| trans-1,3-Dichloropropylene | | | mg/kg | 0.0004 | U | 0.0004 | U | | | | | | | | | 0.0004 | U | 0.0004 | U | | | | | | |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | 0.0005 | U | 0.0005 | U | | | | | | | | | 0.0005 | U | 0.0005 | U | | | | | | |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | 0.001 | U | 0.001 | U | | | | | | | | | 0.001 | U | 0.001 | U | | | | | | |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | 0.0007 | U | 0.0007 | U | | | | | | | | | 0.0007 | U | 0.0007 | U | 0.008 | | 0.007 | | 0.0007 | U |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 2 | | 2 | | 2 | | 2 | | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U1-3 | | U1-3 | | U1-4 | | U1-4 | | U1-5 | | U1-5 | | P2-1 | | P2-1 | | P2-1 | | P2-2 | | U2-1 |
| | | | Sample ID | SO-0103 | | SO-0103D | | SO-0102 | | SO-0406 | | SO-0102 | | SO-0405 | | SO-0003 | | SO-0003D | | SO-0708 | | SO-0001 | | SO-1012 |
| | | | Sample Date | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/7/08 |
| | | | Sample Depth | 01 to 03 | | 01 to 03 | | 01 to 02 | | 04 to 06 | | 01 to 02 | | 04 to 05 | | 00 to 03 | | 00 to 03 | | 07 to 08 | | 00 to 01 | | 10 to 12 |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | | | | | | | | | | | | | 3400 | | 3700 | | 2000 | | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | | | | | | | | | | | | | 1 | U | 1.1 | U | 1.2 | U | | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | | | | | 5 | | 1.4 | | **15** | | 4.4 | | 8 | | **27** | | 5.7 | | 7.3 | | |
| Barium | Residential Ing. [1] | 5500 | mg/kg | | | | | 59 | | 4.3 | | 170 | | 65 | | 62 | | 89 | | 34 | | 54 | | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | | | | | | | | | | | | | 0.55 | | 0.79 | | 0.19 | U | | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | | | | | 0.58 | | 0.16 | U | 1.4 | | 0.17 | U | 0.17 | U | 1.1 | | 0.2 | U | 0.65 | | |
| Calcium | | | mg/kg | | | | | | | | | | | | | 86000 | | 77000 | | 28000 | | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | | | | | 5.2 | | 2.6 | | 13 | | 7.4 | | 6.3 | | 9.1 | | 3.9 | | 11 | | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | | | | | | | | | | | | | 3.1 | | 3.6 | | 2.5 | | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | | | | | | | | | | | | | 23 | | 47 | | 23 | | | | |
| Iron | | | mg/kg | | | | | | | | | | | | | 11000 | | 15000 | | 10000 | | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | | | | | **7400** | | 3.3 | | **550** | | 230 | | 190 | | **660** | | **440** | | 170 | | **440** |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | | | | | | | | | | | | | 42000 | | 33000 | | 12000 | | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | | | | | | | | | | | | | 210 | | 280 | | 140 | | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | | | | | **0.44** | | 0.0016 | U | **0.76** | | **0.3** | | 0.0016 | U | **0.32** | | **0.43** | | **0.36** | | |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | | | | | | | | | | | | | 8.6 | | 12 | | 7 | | | | |
| Potassium | | | mg/kg | | | | | | | | | | | | | 690 | | 680 | | 260 | | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | | | | | 0.54 | U | 0.56 | U | 0.58 | U | 0.6 | U | 0.58 | U | 0.61 | U | 0.69 | U | 1.7 | | |
| Silver | Residential Ing. [1] | 390 | mg/kg | | | | | 0.2 | U | 0.21 | U | 0.21 | U | 0.22 | U | 0.21 | U | 0.22 | U | 0.26 | U | 0.22 | U | |
| Sodium | | | mg/kg | | | | | | | | | | | | | 470 | | 460 | | 170 | | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | | | | | | | | | | | | | 0.11 | U | 0.12 | U | 0.13 | U | | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | | | | | | | | | | | | | 10 | | 14 | | 13 | | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | | | | | | | | | | | | | 85 | | 160 | | 110 | | | | |
| % Solids | | | | | | | | 92.2 | | 92.4 | | 81.4 | | 86.8 | | | | | | | | | | |
| Cyanide | Residential Ing. [1] | 1600 | | | | | | | | | | | | | | 0.11 | U | 0.11 | U | 0.14 | U | | | |
| pH | | | | | | | | 8.4 | | 8.8 | | 8.7 | | 9.7 | | 8.7 | | 7.8 | | 8 | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | | | | | | | | | | | | | 0.0012 | U | 0.0012 | U | 0.0012 | U | | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | 0.00117 | U | 0.00117 | U | 0.00117 | U | | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | 0.00098 | U | 0.00098 | U | 0.00098 | U | | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | | | | | | | | | | | | | 0.00042 | U | 0.00042 | U | 0.00042 | U | | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | | | | | | | | | | | | | 0.00022 | U | 0.00022 | U | 0.00022 | U | | | |
| beta-BHC | | | mg/kg | | | | | | | | | | | | | 0.00043 | U | 0.00043 | U | 0.00043 | U | | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | | | | | | | | | | | | | 0.06 | U | 0.06 | U | 0.06 | U | | | |
| delta-BHC | | | mg/kg | | | | | | | | | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 2 | | 2 | | 2 | | 2 | | 2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U1-3 | | U1-3 | | U1-4 | | U1-4 | | U1-5 | | U1-5 | | P2-1 | | P2-1 | | P2-1 | | P2-2 | | U2-1 | |
| | | | Sample ID | SO-0103 | | SO-0103D | | SO-0102 | | SO-0406 | | SO-0102 | | SO-0405 | | SO-0003 | | SO-0003D | | SO-0708 | | SO-0001 | | SO-1012 | |
| | | | Sample Date | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/7/08 | |
| | | | Sample Depth | 01 to 03 | | 01 to 03 | | 01 to 02 | | 04 to 06 | | 01 to 02 | | 04 to 05 | | 00 to 03 | | 00 to 03 | | 07 to 08 | | 00 to 01 | | 10 to 12 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | | | | | | | | | | | | | 0.00216 | U | 0.00216 | U | 0.00216 | U | | | | |
| Endosulfan I | | | mg/kg | | | | | | | | | | | | | 0.00316 | U | 0.00316 | U | 0.00316 | U | | | | |
| Endosulfan II | | | mg/kg | | | | | | | | | | | | | 0.00238 | U | 0.00238 | U | 0.00238 | U | | | | |
| Endosulfan sulfate | | | mg/kg | | | | | | | | | | | | | 0.00075 | U | 0.00075 | U | 0.00075 | U | | | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | 0.00062 | U | 0.00062 | U | 0.00062 | U | | | | |
| Endrin aldehyde | | | mg/kg | | | | | | | | | | | | | 0.00213 | U | 0.00213 | U | 0.00213 | U | | | | |
| Endrin ketone | | | mg/kg | | | | | | | | | | | | | 0.00046 | U | 0.00046 | U | 0.00046 | U | | | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | | | | | | | | | | | | | 0.00126 | U | 0.00126 | U | 0.00126 | U | | | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | | | | | | | | | | | | | 0.00138 | U | 0.00138 | U | 0.00138 | U | | | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | | | | | | | | | | | | | 0.00045 | U | 0.00045 | U | 0.00045 | U | | | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | | | | | | | | | | | | | 0.00509 | U | 0.00509 | U | 0.00509 | U | | | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | | | | | | | | | | | | | 0.12 | U | 0.12 | U | 0.12 | U | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | | | | | | | | | | | | | 0.375 | U | 0.075 | U | 0.375 | U | | | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | | | | | | | | | | | | | 2.42 | U | 0.485 | U | 2.42 | U | | | | |
| 1,3-Dichlorobenzene | | | mg/kg | | | | | | | | | | | | | 0.84 | U | 0.168 | U | 0.84 | U | | | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | | | | | | | | | | | | | 0.64 | U | 0.128 | U | 0.64 | U | | | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | | | | | | | | | | | | | 0.97 | U | 0.194 | U | 0.97 | U | | | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | | | | | | | 0.75 | U | 0.15 | U | 0.75 | U | | | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | 0.445 | U | 0.089 | U | 0.445 | U | | | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | | | | | | | | | | | | | 0.665 | U | 0.133 | U | 0.665 | U | | | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | | | | | | | | | | | | | 0.945 | U | 0.189 | U | 0.945 | U | | | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | | | | | | | | | | | | | 0.535 | U | 0.107 | U | 0.535 | U | | | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | | | | | | | | | | | | | 0.56 | U | 0.112 | U | 0.56 | U | | | | |
| 2-Chloronaphthalene | | | mg/kg | | | | | | | | | | | | | 0.96 | U | 0.192 | U | 0.96 | U | | | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | | | | | | | | | | | | | 2.24 | U | 0.448 | U | 2.24 | U | | | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | | | | | | | | | | | | | 0.58 | U | 0.116 | U | 0.58 | U | | | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | | | | | | | | | | | | | 0.825 | U | 0.165 | U | 0.825 | U | | | | |
| 2-Nitroaniline | | | mg/kg | | | | | | | | | | | | | 1.02 | U | 0.205 | U | 1.02 | U | | | | |
| 2-Nitrophenol | | | mg/kg | | | | | | | | | | | | | 0.58 | U | 0.116 | U | 0.58 | U | | | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | | | | | | | | | | | | | 0.53 | U | 0.106 | U | 0.53 | U | | | | |
| 3/4-Methylphenol | | | mg/kg | | | | | | | | | | | | | 1.05 | U | 0.21 | U | 1.05 | U | | | | |
| 3-Nitroaniline | | | mg/kg | | | | | | | | | | | | | 1.02 | U | 0.205 | U | 1.02 | U | | | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | | | | | | | | | | | | | 2.3 | U | 0.46 | U | 2.3 | U | | | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | 0.87 | U | 0.174 | U | 0.87 | U | | | | |
| 4-Chloro-3-methylphenol | | | mg/kg | | | | | | | | | | | | | 0.45 | U | 0.09 | U | 0.45 | U | | | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | | | | | | | | | | | | | 0.605 | U | 0.121 | U | 0.605 | U | | | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | 0.57 | U | 0.114 | U | 0.57 | U | | | | |
| 4-Nitroaniline | | | mg/kg | | | | | | | | | | | | | 1.25 | U | 0.25 | U | 1.25 | U | | | | |
| 4-Nitrophenol | | | mg/kg | | | | | | | | | | | | | 0.84 | U | 0.168 | U | 0.84 | U | | | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.0535 | | 0.308 | | 0.00005 | U | 0.00005 | U | 0.428 | | 3.98 | | 4.93 | | 0.148 | U | 0.74 | U | 3.6 | | 1.15 | |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.0628 | | 0.263 | | 0.00005 | U | 0.00005 | U | 1.02 | | 1.5 | | 0.345 | U | 0.069 | U | 0.345 | U | 0.753 | | 0.149 | |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 0.332 | | 1.36 | | 0.00008 | U | 0.00008 | U | 2.41 | | 10.1 | | 14.8 | | 1.2 | | 1.49 | U | 24.9 | | 3.4 | |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | 0.429 | | **3.05** | | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | **31.5** | | **4.02** | | 0.34 | U | **56.2** | | **3.52** | |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | 0.648 | | **6.42** | | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | **23.6** | | 0.942 | | 0.56 | U | **34.2** | | **4.67** | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 2 | | 2 | | 2 | | 2 | | 2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U1-3 | | U1-3 | | U1-4 | | U1-4 | | U1-5 | | U1-5 | | P2-1 | | P2-1 | | P2-1 | | P2-2 | | U2-1 | |
| | | | Sample ID | SO-0103 | | SO-0103D | | SO-0102 | | SO-0406 | | SO-0102 | | SO-0405 | | SO-0003 | | SO-0003D | | SO-0708 | | SO-0001 | | SO-1012 | |
| | | | Sample Date | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/7/08 | |
| | | | Sample Depth | 01 to 03 | | 01 to 03 | | 01 to 02 | | 04 to 06 | | 01 to 02 | | 04 to 05 | | 00 to 03 | | 00 to 03 | | 07 to 08 | | 00 to 01 | | 10 to 12 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | 0.484 | | **4.4** | | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | **32.3** | | **4.48** | | 1.15 | U | **31.2** | | **3.54** | |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 0.6 | | 5.89 | | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 14.3 | | 2.29 | | 1.02 | U | 11.3 | | 3.45 | |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 0.388 | | 4.29 | | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | **10.2** | | 1.29 | | 0.61 | U | **10.2** | | 1.99 | |
| Benzyl alcohol | | | mg/kg | | | | | | | | | | | | | 1.26 | U | 0.251 | U | 1.26 | U | | | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | | | | | | | | | | | | | 0.565 | U | 0.113 | U | 0.565 | U | | | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | | | | | | | | | | | | | 1.64 | U | 0.329 | U | 1.64 | U | | | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | | | | | | | | | | | | | 0.83 | U | 0.166 | U | 0.83 | U | | | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | | | | | | | | | | | | | 0.455 | U | 0.091 | U | 4.72 | | | | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | | | | | | | | | | | | | 0.545 | U | 0.109 | U | 0.545 | U | | | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | | | | | | | **4.59** | | 0.131 | U | 0.655 | U | | | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 0.56 | | 3.44 | | 0.0824 | | 0.00005 | U | 10.5 | | 14.9 | | 37 | | 4.67 | | 0.47 | U | 51.4 | | 4.19 | |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | **4.65** | | 0.174 | U | 0.87 | U | 0.00002 | U | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | | | | | | | | | | | | | 1.1 | U | 0.219 | U | 1.1 | U | | | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | | | | | | | | | | | | | 1.62 | U | 0.324 | U | 1.62 | U | | | | |
| Dimethyl phthalate | | | mg/kg | | | | | | | | | | | | | 0.59 | U | 0.118 | U | 0.59 | U | | | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | | | | | | | | | | | | | 0.84 | U | 0.168 | U | 3.93 | | | | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | | | | | | | | | | | | | 0.835 | U | 0.167 | U | 0.835 | U | | | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 1.11 | | 5.31 | | 0.131 | | 0.00005 | U | 20.3 | | 37.6 | | 0.47 | U | 0.094 | U | 0.47 | U | 82.3 | | 10.9 | |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 0.0749 | | 0.409 | | 0.00003 | U | 0.00003 | U | 0.541 | | 4.87 | | 0.68 | U | 0.136 | U | 0.68 | U | 5.41 | | 1.25 | |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | | | | | | | | | | | | | 0.33 | U | 0.066 | U | 0.33 | U | | | | |
| Hexachlorobutadiene | | | mg/kg | | | | | | | | | | | | | 0.37 | U | 0.074 | U | 0.37 | U | | | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | | | | | | | | | | | | | 0.865 | U | 0.173 | U | 0.865 | U | | | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | | | | | | | | | | | | | 0.66 | U | 0.132 | U | 0.66 | U | | | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | 0.483 | | **5.76** | | 0.0315 | | 0.00002 | U | **2.93** | | **4.07** | | **13.3** | | **1.97** | | 0.89 | U | 0.288 | | **3.23** | |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | | | | | | | | | | | | | 0.485 | U | 0.097 | U | 0.485 | U | | | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.483 | | 0.648 | | 0.00005 | U | 0.00005 | U | 0.558 | | **2.51** | | 0.43 | U | 0.086 | U | 0.43 | U | 0.412 | | 1.4 | |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | | | | | | | | | | | | | 1.16 | U | 0.232 | U | 1.16 | U | | | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | | | | | | | | | | | | | 1.09 | U | 0.218 | U | 1.09 | U | | | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | 1.26 | U | 0.253 | U | 1.26 | U | | | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | | | | | | | | | | | | | 1.58 | U | 0.317 | U | 1.58 | U | | | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 0.805 | | 3.58 | | 0.077 | | 0.00003 | U | 10.8 | | 32.2 | | 63.4 | | 4.78 | | 4.4 | | 89 | | 9.26 | |
| Phenol | Residential Soil [5] | 100 | mg/kg | | | | | | | | | | | | | 2.92 | U | 0.584 | U | 2.92 | U | | | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 1.13 | | 5.15 | | 0.126 | | 0.00005 | U | 21.5 | | 34.9 | | 63.3 | | 7.55 | | 0.33 | U | 121 | | 10.2 | |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | **0.185** | | | | | | | | | | **0.232** | | | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | | | | | | | | | | | | | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | | |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | | | | | | | | | | | | | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | | |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | | | | | | | | | | | | | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | | |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | | | | | | | | | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | | | | | | | | | | | | | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | | |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | | | | | | | | | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | | | | | | | | | | | | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 2 | | 2 | | 2 | | 2 | | 2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U1-3 | | U1-3 | | U1-4 | | U1-4 | | U1-5 | | U1-5 | | P2-1 | | P2-1 | | P2-1 | | P2-2 | | U2-1 | |
| | | | Sample ID | SO-0103 | | SO-0103D | | SO-0102 | | SO-0406 | | SO-0102 | | SO-0405 | | SO-0003 | | SO-0003D | | SO-0708 | | SO-0001 | | SO-1012 | |
| | | | Sample Date | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/7/08 | |
| | | | Sample Depth | 01 to 03 | | 01 to 03 | | 01 to 02 | | 04 to 06 | | 01 to 02 | | 04 to 05 | | 00 to 03 | | 00 to 03 | | 07 to 08 | | 00 to 01 | | 10 to 12 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| 2-Butanone | | | mg/kg | | | | | | | | | | | | | 0.526 | | 0.0005 | U | 0.0005 | U | 0.0005 | U | | |
| 2-Hexanone | | | mg/kg | | | | | | | | | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | |
| Acetone | Residential Soil [5] | 16 | mg/kg | | | | | | | | | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | 0.0006 | U | 0.0006 | U | | | | | | | | | 0.0006 | U | 0.0006 | U | 0.009 | | 0.0006 | U | 0.000635 | U |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | | | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | | | | | | | | | | | | | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | | |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | | | | | | | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | | |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | | | | | | | | | | | | | 0.0009 | U | 0.0009 | U | 0.18 | | 0.0009 | U | | |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | | | | | | | | | | | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | | | | | | | | | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | |
| Chloroethane | | | mg/kg | | | | | | | | | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | | | | | | | | | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | |
| Chloromethane | | | mg/kg | | | | | | | | | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | | | | | | | | | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | |
| cis-1,3-Dichloropropylene | | | mg/kg | | | | | | | | | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | | | | | | | | | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | 0.023 | | 0.0007 | U | | | | | | | | | 0.0007 | U | 0.0007 | U | 0.01 | | 0.0007 | U | 0.000685 | U |
| Methyl Isobutyl Ketone | | | mg/kg | | | | | | | | | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | | | | | | | | | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | | | | | | | | | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.000392 | U |
| Styrene | Industrial Soil [6] | 4 | mg/kg | | | | | | | | | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | | | | | | | | | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | |
| Toluene | Residential Soil [5] | 12 | mg/kg | 0.035 | | 0.0007 | U | | | | | | | | | 0.0007 | U | 0.0007 | U | 0.047 | | 0.0007 | U | 0.000658 | U |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | | | | | | | | | | | | | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | | |
| trans-1,3-Dichloropropylene | | | mg/kg | | | | | | | | | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | | | | | | | | | | | | | 0.009 | | 0.01 | | 0.0005 | U | 0.0005 | U | | |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | | | | | | | | | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | 0.12 | | 0.016 | | | | | | | | | | 0.0007 | U | 0.0007 | U | 0.019 | | 0.0007 | U | 0.00611 | |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U2-2 | | U2-3 | | U2-3 | | U2-4 | | U2-5 | | U2-6 | | U2-6 | | U2-7 | | U2-7 | | U2-8 | | U2-8 | |
| | | | Sample ID | SO-0609 | | SO-0203 | | SO-0407 | | SO-0203 | | SO-0506 | | SO-0103 | | SO-0406 | | SO-0102 | | SO-0406 | | SO-0103 | | SO-0406 | |
| | | | Sample Date | 5/7/08 | | 5/7/08 | | 5/14/08 | | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | |
| | | | Sample Depth | 06 to 09 | | 02 to 03 | | 04 to 07 | | 02 to 03 | | 05 to 06 | | 01 to 03 | | 04 to 06 | | 01 to 02 | | 04 to 06 | | 01 to 03 | | 04 to 06 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | | | 3800 | | 3200 | | | | | | | | | | | | | | | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | | | 1.1 | U | 1.2 | U | | | | | | | | | | | | | | | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | 9 | | 4.5 | | 8.4 | | | | | | **32** | | 5.6 | | 2.4 | | 3.9 | | 5.4 | | 8.4 | |
| Barium | Residential Ing. [1] | 5500 | mg/kg | 190 | | 42 | | 67 | | | | | | 220 | | 25 | | 22 | | 130 | | 73 | | 90 | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | | | 0.17 | U | 0.66 | | | | | | | | | | | | | | | | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | 1.3 | | 0.61 | | 0.19 | U | | | | | 6.4 | | 0.17 | U | 0.17 | U | 1.1 | | 0.17 | U | 0.75 | |
| Calcium | | | mg/kg | | | 35000 | | 36000 | | | | | | | | | | | | | | | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | 18 | | 8.1 | | 5.8 | | | | | | 16 | | 4.3 | | 3.2 | | 5.5 | | 11 | | 17 | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | | | 5.4 | | 3.3 | | | | | | | | | | | | | | | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | | | 15 | | 150 | | | | | | | | | | | | | | | | | |
| Iron | | | mg/kg | | | 8100 | | 7900 | | | | | | | | | | | | | | | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | **420** | | 56 | | 300 | | 160 | | 78 | | 340 | | 66 | | 120 | | 390 | | 160 | | **660** | |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | | | 18000 | | 20000 | | | | | | | | | | | | | | | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | | | 190 | | 140 | | | | | | | | | | | | | | | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | **0.33** | | **0.15** | | **1.7** | | | | | | **0.59** | | **0.12** | | **0.68** | | **0.13** | | **0.21** | | **0.58** | |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | | | 15 | | 13 | | | | | | | | | | | | | | | | | |
| Potassium | | | mg/kg | | | 440 | | 550 | | | | | | | | | | | | | | | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | 0.63 | U | 0.6 | U | 3.6 | | | | | | 1.3 | | 0.57 | U | 0.6 | U | 0.6 | U | 0.58 | U | 0.6 | U |
| Silver | Residential Ing. [1] | 390 | mg/kg | 0.23 | U | 0.23 | U | 0.25 | U | | | | | 0.24 | U | 0.21 | U | 0.22 | U | 0.22 | U | 0.22 | U | 0.22 | U |
| Sodium | | | mg/kg | | | 240 | | 170 | | | | | | | | | | | | | | | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | | | 0.12 | U | 0.13 | U | | | | | | | | | | | | | | | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | | | 16 | | 14 | | | | | | | | | | | | | | | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | | | 89 | | 110 | | | | | | | | | | | | | | | | | |
| % Solids | | | | | | | | | | | | 93.6 | | 81.6 | | 85.6 | | 87 | | 84.8 | | 87.7 | | 76.2 | |
| Cyanide | Residential Ing. [1] | 1600 | | | | 0.12 | U | 0.13 | U | | | | | | | | | | | | | | | | |
| pH | | | | | | 8 | | 8 | | | | | | 8.3 | | 8.8 | | 8.1 | | 8.7 | | 9.4 | | 8 | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | | | 0.0012 | U | 0.0012 | U | | | | | | | | | | | | | | | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | | | 0.00117 | U | 0.00117 | U | | | | | | | | | | | | | | | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | | | 0.00098 | U | 0.00098 | U | | | | | | | | | | | | | | | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | | | 0.00042 | U | 0.00042 | U | | | | | | | | | | | | | | | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | | | 0.00022 | U | 0.00022 | U | | | | | | | | | | | | | | | | |
| beta-BHC | | | mg/kg | | | 0.00043 | U | 0.00043 | U | | | | | | | | | | | | | | | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | | | 0.06 | U | 0.06 | U | | | | | | | | | | | | | | | | |
| delta-BHC | | | mg/kg | | | 0.0005 | U | 0.0005 | U | | | | | | | | | | | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U2-2 | | U2-3 | | U2-3 | | U2-4 | | U2-5 | | U2-6 | | U2-6 | | U2-7 | | U2-7 | | U2-8 | | U2-8 | |
| | | | Sample ID | SO-0609 | | SO-0203 | | SO-0407 | | SO-0203 | | SO-0506 | | SO-0103 | | SO-0406 | | SO-0102 | | SO-0406 | | SO-0103 | | SO-0406 | |
| | | | Sample Date | 5/7/08 | | 5/7/08 | | 5/14/08 | | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | |
| | | | Sample Depth | 06 to 09 | | 02 to 03 | | 04 to 07 | | 02 to 03 | | 05 to 06 | | 01 to 03 | | 04 to 06 | | 01 to 02 | | 04 to 06 | | 01 to 03 | | 04 to 06 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | | | 0.00216 | U | 0.00216 | U | | | | | | | | | | | | | | | | |
| Endosulfan I | | | mg/kg | | | 0.00316 | U | 0.00316 | U | | | | | | | | | | | | | | | | |
| Endosulfan II | | | mg/kg | | | 0.00238 | U | 0.00238 | U | | | | | | | | | | | | | | | | |
| Endosulfan sulfate | | | mg/kg | | | 0.00075 | U | 0.00075 | U | | | | | | | | | | | | | | | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | | | 0.00062 | U | 0.00062 | U | | | | | | | | | | | | | | | | |
| Endrin aldehyde | | | mg/kg | | | 0.00213 | U | 0.00213 | U | | | | | | | | | | | | | | | | |
| Endrin ketone | | | mg/kg | | | 0.00046 | U | 0.00046 | U | | | | | | | | | | | | | | | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | | | 0.00126 | U | 0.00126 | U | | | | | | | | | | | | | | | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | | | 0.00138 | U | 0.00138 | U | | | | | | | | | | | | | | | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | | | 0.00045 | U | 0.00045 | U | | | | | | | | | | | | | | | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | | | 0.00509 | U | 0.00509 | U | | | | | | | | | | | | | | | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | | | 0.12 | U | 0.12 | U | | | | | | | | | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | | | 0.075 | U | 0.75 | U | | | | | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | | | 0.485 | U | 4.85 | U | | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | mg/kg | | | 0.168 | U | 1.68 | U | | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | | | 0.128 | U | 1.28 | U | | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | | | 0.194 | U | 1.94 | U | | | | | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | | | 0.15 | U | 1.5 | U | | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | | | 0.089 | U | 0.89 | U | | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | | | 0.133 | U | 1.33 | U | | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | | | 0.189 | U | 1.89 | U | | | | | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | | | 0.107 | U | 1.07 | U | | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | | | 0.112 | U | 1.12 | U | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | mg/kg | | | 0.192 | U | 1.92 | U | | | | | | | | | | | | | | | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | | | 0.448 | U | 4.48 | U | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | | | 0.116 | U | 1.16 | U | | | | | | | | | | | | | | | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | | | 0.165 | U | 1.65 | U | | | | | | | | | | | | | | | | |
| 2-Nitroaniline | | | mg/kg | | | 0.205 | U | 2.05 | U | | | | | | | | | | | | | | | | |
| 2-Nitrophenol | | | mg/kg | | | 0.116 | U | 1.16 | U | | | | | | | | | | | | | | | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | | | 0.106 | U | 1.06 | U | | | | | | | | | | | | | | | | |
| 3/4-Methylphenol | | | mg/kg | | | 0.21 | U | 2.1 | U | | | | | | | | | | | | | | | | |
| 3-Nitroaniline | | | mg/kg | | | 0.205 | U | 2.05 | U | | | | | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | | | 0.46 | U | 4.6 | U | | | | | | | | | | | | | | | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | | | 0.174 | U | 1.74 | U | | | | | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | mg/kg | | | 0.09 | U | 0.9 | U | | | | | | | | | | | | | | | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | | | 0.121 | U | 1.21 | U | | | | | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | | | 0.114 | U | 1.14 | U | | | | | | | | | | | | | | | | |
| 4-Nitroaniline | | | mg/kg | | | 0.25 | U | 2.5 | U | | | | | | | | | | | | | | | | |
| 4-Nitrophenol | | | mg/kg | | | 0.168 | U | 1.68 | U | | | | | | | | | | | | | | | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.812 | | 0.148 | U | 1.48 | U | 0.409 | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 9.33 | | 3.34 | | 3.62 | | 81.9 | |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.177 | | 0.069 | U | 0.69 | U | 0.217 | | 0.00005 | U | 0.0784 | | 0.0502 | | 0.638 | | 0.448 | | 1.21 | | 36 | |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 2.84 | | 4.09 | | 2.98 | U | 1.63 | | 0.00008 | U | 0.157 | | 0.137 | | 42.1 | | 13.5 | | 13.7 | | 326 | |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | **5.71** | | **34.4** | | **20.3** | | **2.96** | | 0.15 | | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | **8.49** | | **81.6** | | **8.27** | | **4.36** | | 0.356 | | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U2-2 | | U2-3 | | U2-3 | | U2-4 | | U2-5 | | U2-6 | | U2-6 | | U2-7 | | U2-7 | | U2-8 | | U2-8 | |
| | | | Sample ID | SO-0609 | | SO-0203 | | SO-0407 | | SO-0203 | | SO-0506 | | SO-0103 | | SO-0406 | | SO-0102 | | SO-0406 | | SO-0103 | | SO-0406 | |
| | | | Sample Date | 5/7/08 | | 5/7/08 | | 5/14/08 | | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | |
| | | | Sample Depth | 06 to 09 | | 02 to 03 | | 04 to 07 | | 02 to 03 | | 05 to 06 | | 01 to 03 | | 04 to 06 | | 01 to 02 | | 04 to 06 | | 01 to 03 | | 04 to 06 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | **6.82** | | **65.3** | | **11.5** | | **3.78** | | 0.358 | | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 6.25 | | 13.6 | | 2.05 | U | 3.52 | | 0.483 | | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 4.22 | | **20.7** | | 1.22 | U | 1.56 | | 0.234 | | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U |
| Benzyl alcohol | | | mg/kg | | | 0.251 | U | 2.51 | U | | | | | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | | | 0.113 | U | 1.13 | U | | | | | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | | | 0.329 | U | 3.29 | U | | | | | | | | | | | | | | | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | | | 0.166 | U | 1.66 | U | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | | | 0.091 | U | 0.91 | U | | | | | | | | | | | | | | | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | | | 0.109 | U | 1.09 | U | | | | | | | | | | | | | | | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | | | 0.131 | U | 1.31 | U | | | | | | | | | | | | | | | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 6.45 | | 36.6 | | 20.1 | | 3.55 | | 0.223 | | 0.732 | | 0.54 | | **132** | | 47 | | 32.4 | | **541** | |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.00002 | U | **6.84** | | 1.74 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | | | 0.219 | U | 2.19 | U | | | | | | | | | | | | | | | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | | | 0.324 | U | 3.24 | U | | | | | | | | | | | | | | | | |
| Dimethyl phthalate | | | mg/kg | | | 0.118 | U | 1.18 | U | | | | | | | | | | | | | | | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | | | 0.168 | U | 1.68 | U | | | | | | | | | | | | | | | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | | | 0.167 | U | 1.67 | U | | | | | | | | | | | | | | | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 14.5 | | 0.094 | U | 0.94 | U | 7.21 | | 0.187 | | 0.958 | | 0.785 | | 141 | | 53.4 | | 76.5 | | 1200 | |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 0.763 | | 0.136 | U | 1.36 | U | 0.498 | | 0.00003 | U | 0.0355 | | 0.00003 | U | 7.16 | | 2.85 | | 5.92 | | 158 | |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | | | 0.066 | U | 0.66 | U | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | | | mg/kg | | | 0.074 | U | 0.74 | U | | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | | | 0.173 | U | 1.73 | U | | | | | | | | | | | | | | | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | | | 0.132 | U | 1.32 | U | | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | **6.19** | | **16.2** | | 1.78 | U | **3.32** | | 0.481 | | 0.477 | | 0.213 | | **12.7** | | **8.43** | | **8.33** | | **127** | |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | | | 0.097 | U | 0.97 | U | | | | | | | | | | | | | | | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.453 | | 0.086 | U | 0.86 | U | 0.264 | | 0.00005 | U | 0.235 | | 0.0935 | | 0.00005 | U | 0.092 | | **2.05** | | **148** | |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | | | 0.232 | U | 2.32 | U | | | | | | | | | | | | | | | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | | | 0.218 | U | 2.18 | U | | | | | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | | | 0.253 | U | 2.53 | U | | | | | | | | | | | | | | | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | | | 0.317 | U | 3.17 | U | | | | | | | | | | | | | | | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 6.78 | | 13.6 | | 8.22 | | 3.6 | | 0.0524 | | 0.737 | | 0.397 | | 121 | | 40.8 | | 63.4 | | **1120** | |
| Phenol | Residential Soil [5] | 100 | mg/kg | | | 0.584 | U | 5.84 | U | | | | | | | | | | | | | | | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 12.8 | | 40.2 | | 26 | | 6.46 | | 0.204 | | 0.958 | | 0.723 | | 227 | | 84.2 | | 74.4 | | 1270 | |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | | | | | 0.002 | U | | | | | | | 0.002 | U | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | | | | | 0.004 | U | | | | | | | 0.004 | U | | | | | | | | |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | | | | | 0.0003 | U | | | | | | | 0.0003 | U | | | | | | | | |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | | | | | 0.0006 | U | | | | | | | 0.0006 | U | | | | | | | | |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | | | | | 0.0008 | U | | | | | | | 0.0008 | U | | | | | | | | |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | | | | | 0.0005 | U | | | | | | | 0.0005 | U | | | | | | | | |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | | | | | 0.00005 | U | | | | | | | 0.00005 | U | | | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U2-2 | | U2-3 | | U2-3 | | U2-4 | | U2-5 | | U2-6 | | U2-6 | | U2-7 | | U2-7 | | U2-8 | | U2-8 | |
| | | | Sample ID | SO-0609 | | SO-0203 | | SO-0407 | | SO-0203 | | SO-0506 | | SO-0103 | | SO-0406 | | SO-0102 | | SO-0406 | | SO-0103 | | SO-0406 | |
| | | | Sample Date | 5/7/08 | | 5/7/08 | | 5/14/08 | | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | |
| | | | Sample Depth | 06 to 09 | | 02 to 03 | | 04 to 07 | | 02 to 03 | | 05 to 06 | | 01 to 03 | | 04 to 06 | | 01 to 02 | | 04 to 06 | | 01 to 03 | | 04 to 06 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| 2-Butanone | | | mg/kg | | | | | 0.0005 | U | | | | | | | 0.0005 | U | | | | | | | | |
| 2-Hexanone | | | mg/kg | | | | | 0.0006 | U | | | | | | | 0.0006 | U | | | | | | | | |
| Acetone | Residential Soil [5] | 16 | mg/kg | | | | | 0.001 | U | | | | | | | 0.001 | U | | | | | | | | |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | 0.000635 | U | 0.000635 | U | 0.0006 | U | 0.000635 | U | 0.0293 | | | | 0.0006 | U | | | | | | | | |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | | | | | 0.0004 | U | | | | | | | 0.0004 | U | | | | | | | | |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | | | | | 0.0003 | U | | | | | | | 0.0003 | U | | | | | | | | |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | | | | | 0.0009 | U | | | | | | | 0.0009 | U | | | | | | | | |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | | | | | 0.0009 | U | | | | | | | 0.0009 | U | | | | | | | | |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | | | | | 0.0007 | U | | | | | | | 0.0007 | U | | | | | | | | |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | | | | | 0.0005 | U | | | | | | | 0.0005 | U | | | | | | | | |
| Chloroethane | | | mg/kg | | | | | 0.001 | U | | | | | | | 0.001 | U | | | | | | | | |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | | | | | 0.0006 | U | | | | | | | 0.0006 | U | | | | | | | | |
| Chloromethane | | | mg/kg | | | | | 0.001 | U | | | | | | | 0.001 | U | | | | | | | | |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | | | | | 0.0006 | U | | | | | | | 0.0006 | U | | | | | | | | |
| cis-1,3-Dichloropropylene | | | mg/kg | | | | | 0.0004 | U | | | | | | | 0.0004 | U | | | | | | | | |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | | | | | 0.0004 | U | | | | | | | 0.0004 | U | | | | | | | | |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | 0.000685 | U | 0.0103 | | 0.0007 | U | 0.000685 | U | 0.0178 | | | | 0.0007 | U | | | | | | | | |
| Methyl Isobutyl Ketone | | | mg/kg | | | | | 0.0004 | U | | | | | | | 0.0004 | U | | | | | | | | |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | | | | | 0.0006 | U | | | | | | | 0.0006 | U | | | | | | | | |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | 0.000392 | U | 0.000392 | U | 0.0004 | U | 0.000392 | U | 0.000392 | U | | | 0.0004 | U | | | | | | | | |
| Styrene | Industrial Soil [6] | 4 | mg/kg | | | | | 0.001 | U | | | | | | | 0.001 | U | | | | | | | | |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | | | | | 0.0005 | U | | | | | | | 0.0005 | U | | | | | | | | |
| Toluene | Residential Soil [5] | 12 | mg/kg | 0.000658 | U | 0.0153 | | 0.0007 | U | 0.00991 | | 0.0489 | | | | 0.0007 | U | | | | | | | | |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | | | | | 0.0008 | U | | | | | | | 0.0008 | U | | | | | | | | |
| trans-1,3-Dichloropropylene | | | mg/kg | | | | | 0.0004 | U | | | | | | | 0.0004 | U | | | | | | | | |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | | | | | 0.0005 | U | | | | | | | 0.0005 | U | | | | | | | | |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | | | | | 0.001 | U | | | | | | | 0.001 | U | | | | | | | | |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | 0.000695 | U | 0.0579 | | 0.0007 | U | 0.0226 | | 0.0996 | | | | 0.0007 | U | | | | | | | | |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 4 | | 4 | | 4 | | 4 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U3-1 | | U3-2 | | U3-3 | | U3-3 | | U3-4 | | U3-5 | | U3-5 | | U4-1 | | U4-2 | | U4-3 | | U4-3 | |
| | | | Sample ID | SO-1112 | | SO-0708 | | SO-0203 | | SO-0507 | | SO-0103 | | SO-0102 | | SO-0407MS | | SO-0507 | | SO-0507 | | SO-0607 | | SO-0607D | |
| | | | Sample Date | 5/8/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 6/13/08 | | 6/13/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | |
| | | | Sample Depth | 11 to 12 | | 07 to 08 | | 02 to 03 | | 05 to 07 | | 01 to 03 | | 01 to 02 | | 04 to 07 | | 05 to 07 | | 05 to 07 | | 06 to 07 | | 06 to 07 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | | | | | | | | | | | 3 | | 5 | | 7 | | | | | | | |
| Barium | Residential Ing. [1] | 5500 | mg/kg | | | | | | | | | | | 30 | | 59 | | 190 | | | | | | | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | | | | | | | | | | | 0.16 | U | 0.53 | U | 1.1 | | | | | | | |
| Calcium | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | | | | | | | | | | | 6.1 | | 7.7 | | 10 | | | | | | | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Iron | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | | | | | | | | | | | 67 | | 210 | | **550** | | | | | | | |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | | | | | | | | | | | **0.24** | | **0.41** | | **1** | | | | | | | |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Potassium | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | | | | | | | | | | | 0.56 | U | 1.1 | U | 0.59 | U | | | | | | |
| Silver | Residential Ing. [1] | 390 | mg/kg | | | | | | | | | | | 0.21 | U | 1.1 | U | 0.22 | U | | | | | | |
| Sodium | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| % Solids | | | | | | | | | | | | | | 93.3 | | 93.2 | | | | | | | | | |
| Cyanide | Residential Ing. [1] | 1600 | | | | | | | | | | | | | | | | | | | | | | | |
| pH | | | | | | | | | | | | | | 8.4 | | 8.6 | | 8.16 | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| beta-BHC | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| delta-BHC | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 4 | | 4 | | 4 | | 4 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U3-1 | | U3-2 | | U3-3 | | U3-3 | | U3-4 | | U3-5 | | U3-5 | | U4-1 | | U4-2 | | U4-3 | | U4-3 | |
| | | | Sample ID | SO-1112 | | SO-0708 | | SO-0203 | | SO-0507 | | SO-0103 | | SO-0102 | | SO-0407MS | | SO-0507 | | SO-0507 | | SO-0607 | | SO-0607D | |
| | | | Sample Date | 5/8/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 6/13/08 | | 6/13/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | |
| | | | Sample Depth | 11 to 12 | | 07 to 08 | | 02 to 03 | | 05 to 07 | | 01 to 03 | | 01 to 02 | | 04 to 07 | | 05 to 07 | | 05 to 07 | | 06 to 07 | | 06 to 07 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan I | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan II | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan sulfate | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin aldehyde | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin ketone | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3/4-Methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.00005 | U | 2.07 | | 0.00005 | U | 1.12 | | 0.00005 | U | 0.0772 | | 0.106 | | 3.5 | | 0.00005 | U | 0.146 | | 0.00005 | U |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.113 | | 1.05 | | 0.00005 | U | 0.647 | | 0.00005 | U | 0.635 | | 0.17 | | 0.23 | | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 0.339 | | 6.18 | | 0.186 | | 7.74 | | 0.138 | | 1.08 | | 0.584 | | 9.38 | | 0.00008 | U | 0.262 | | 0.00008 | U |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | **1.82** | | **18.2** | | 0.908 | | **21.3** | | 0.524 | | 0.000008 | U | 0.008 | U | **18.8** | | 0.31 | | 0.674 | | 0.0402 | |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | **1.44** | | **13.3** | | 0.824 | | **14.8** | | 0.392 | | 0.00002 | U | 0.02 | U | **12.6** | | 0.303 | | 0.617 | | 0.0311 | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 4 | | 4 | | 4 | | 4 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U3-1 | | U3-2 | | U3-3 | | U3-3 | | U3-4 | | U3-5 | | U3-5 | | U4-1 | | U4-2 | | U4-3 | | U4-3 | |
| | | | Sample ID | SO-1112 | | SO-0708 | | SO-0203 | | SO-0507 | | SO-0103 | | SO-0102 | | SO-0407MS | | SO-0507 | | SO-0507 | | SO-0607 | | SO-0607D | |
| | | | Sample Date | 5/8/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 6/13/08 | | 6/13/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | |
| | | | Sample Depth | 11 to 12 | | 07 to 08 | | 02 to 03 | | 05 to 07 | | 01 to 03 | | 01 to 02 | | 04 to 07 | | 05 to 07 | | 05 to 07 | | 06 to 07 | | 06 to 07 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | **1.64** | | **11.1** | | 1.01 | | **16** | | 0.438 | | 0.00001 | U | 0.01 | U | **14.8** | | 0.352 | | 0.665 | | 0.0402 | |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 0.636 | | 10 | | 0.386 | | 4.29 | | 0.145 | | 0.00002 | U | 0.02 | U | 6.18 | | 0.17 | | 0.352 | | 0.00002 | U |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 0.63 | | 4.59 | | 0.542 | | 6.24 | | 0.175 | | 0.00001 | U | 0.01 | U | **14.9** | | 0.125 | | 0.231 | | 0.0142 | |
| Benzyl alcohol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 1.56 | | 19.2 | | 0.862 | | 17.2 | | 0.428 | | 1.29 | | 1.59 | | 17 | | 0.294 | | 0.636 | | 0.00005 | U |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.02 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Dimethyl phthalate | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 2.66 | | 16 | | 1.73 | | 38 | | 0.808 | | 2.4 | | 3.23 | | 40.7 | | 0.446 | | 1.13 | | 0.0751 | |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 0.0571 | | 1.44 | | 0.0624 | | 1.59 | | 0.0395 | | 0.176 | | 0.149 | | 3.28 | | 0.00003 | U | 0.11 | | 0.00003 | U |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | 0.632 | | **3.82** | | 0.00002 | U | **4.54** | | 0.00002 | U | **4.42** | | **0.536** | | **5.83** | | 0.154 | | 0.294 | | 0.00002 | U |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.067 | | 0.482 | | 0.00005 | U | 0.259 | | 0.00005 | U | 0.197 | | 0.062 | | 0.638 | | 0.00005 | U | 0.291 | | 0.00005 | U |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 1.15 | | 22.9 | | 0.784 | | 22 | | 0.409 | | 1.12 | | 1.92 | | 31.7 | | 0.258 | | 1.27 | | 0.0583 | |
| Phenol | Residential Soil [5] | 100 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 2.3 | | 27.6 | | 1.52 | | 0.171 | | 0.722 | | 2.33 | | 2.76 | | 35 | | 0.405 | | 1.08 | | 0.0687 | |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | | | | | | | | | | | **0.476** | | | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | | | | | | | | | | | | | | | 0.002 | U | | | | | | |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | | | | | | | | | | | | | | | 0.004 | U | | | | | | |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | | | | | | | | | | | | | | | 0.0003 | U | | | | | | |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | | | | | | | | | | | | | | | 0.0006 | U | | | | | | |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | | | | | | | | | | | | | | | 0.0008 | U | | | | | | |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | | | | | | | | | | | | | | | 0.0005 | U | | | | | | |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | | | | | | | | | | | | | | | 0.00005 | U | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 4 | | 4 | | 4 | | 4 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U3-1 | | U3-2 | | U3-3 | | U3-3 | | U3-4 | | U3-5 | | U3-5 | | U4-1 | | U4-2 | | U4-3 | | U4-3 | |
| | | | Sample ID | SO-1112 | | SO-0708 | | SO-0203 | | SO-0507 | | SO-0103 | | SO-0102 | | SO-0407MS | | SO-0507 | | SO-0507 | | SO-0607 | | SO-0607D | |
| | | | Sample Date | 5/8/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 5/13/08 | | 6/13/08 | | 6/13/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | |
| | | | Sample Depth | 11 to 12 | | 07 to 08 | | 02 to 03 | | 05 to 07 | | 01 to 03 | | 01 to 02 | | 04 to 07 | | 05 to 07 | | 05 to 07 | | 06 to 07 | | 06 to 07 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| 2-Butanone | | | mg/kg | | | | | | | | | | | | | | | 0.0005 | U | | | | | | |
| 2-Hexanone | | | mg/kg | | | | | | | | | | | | | | | 0.0006 | U | | | | | | |
| Acetone | Residential Soil [5] | 16 | mg/kg | | | | | | | | | | | | | | | 0.001 | U | | | | | | |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | 0.025 | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | | | | | | | | | 0.0004 | U | | | | | | |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | | | | | | | | | | | | | | | 0.0003 | U | | | | | | |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | | | | | | | | | 0.0009 | U | | | | | | |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | | | | | | | | | | | | | | | 0.0009 | U | | | | | | |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | | | | | | | | | | | | | | | 0.0007 | U | | | | | | |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | | | | | | | | | | | | | | | 0.0005 | U | | | | | | |
| Chloroethane | | | mg/kg | | | | | | | | | | | | | | | 0.001 | U | | | | | | |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | | | | | | | | | | | | | | | 0.0006 | U | | | | | | |
| Chloromethane | | | mg/kg | | | | | | | | | | | | | | | 0.001 | U | | | | | | |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | | | | | | | | | | | | | | | 0.0006 | U | | | | | | |
| cis-1,3-Dichloropropylene | | | mg/kg | | | | | | | | | | | | | | | 0.0004 | U | | | | | | |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | | | | | | | | | | | | | | | 0.0004 | U | | | | | | |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U |
| Methyl Isobutyl Ketone | | | mg/kg | | | | | | | | | | | | | | | 0.0004 | U | | | | | | |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | | | | | | | | | | | | | | | 0.0006 | U | | | | | | |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | | | | | | | | | | | | | | | 0.0004 | U | | | | | | |
| Styrene | Industrial Soil [6] | 4 | mg/kg | | | | | | | | | | | | | | | 0.001 | U | | | | | | |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | | | | | | | | | | | | | | | 0.0005 | U | | | | | | |
| Toluene | Residential Soil [5] | 12 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | | | | | | | | | | | | | | | 0.0008 | U | | | | | | |
| trans-1,3-Dichloropropylene | | | mg/kg | | | | | | | | | | | | | | | 0.0004 | U | | | | | | |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | | | | | | | | | | | | | | | 0.0005 | U | | | | | | |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | | | | | | | | | | | | | | | 0.001 | U | | | | | | |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | 0.014 | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | | 0.013 | | 0.0007 | U | 0.01 | | 0.006 | |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 5 | | 5 | | 5 | | 5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U4-4 | | U4-5 | | U4-5 | | U4-6 | | U4-6 | | U4-7 | | U4-7 | | I5-1 | | P5-1 | | P5-1 | | P5-2 | |
| | | | Sample ID | SO-0103 | | SO-0004 | | SO-0506 | | SO-0002 | | SO-0405 | | SO-0102 | | SO-0405 | | SO-0103 | | SO-0103 | | SO-0507 | | SO-0506 | |
| | | | Sample Date | 5/8/08 | | 5/8/08 | | 5/8/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/13/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | |
| | | | Sample Depth | 01 to 03 | | 00 to 04 | | 05 to 06 | | 00 to 02 | | 04 to 05 | | 01 to 02 | | 04 to 05 | | 01 to 03 | | 01 to 03 | | 05 to 07 | | 05 to 06 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | | | 1900 | | 2500 | | | | | | | | | | | | 2200 | | 2100 | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | | | 1 | U | 1 | U | | | | | | | | | | | 1 | U | 0.98 | U | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | | | 2.6 | | 4.5 | | 5.3 | | 1.1 | | 6 | | 0.27 | U | 2.4 | | 3.4 | | 2 | | 6.3 | |
| Barium | Residential Ing. [1] | 5500 | mg/kg | | | 19 | | 70 | | 91 | | 6.8 | | 110 | | 6.5 | | 13 | | 22 | | 12 | | 73 | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | | | 0.17 | U | 0.16 | U | | | | | | | | | | | 0.15 | U | 0.15 | U | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | | | 0.17 | U | 0.17 | U | 0.6 | | 0.14 | U | 0.61 | | 0.15 | U | 0.15 | U | 0.17 | U | 0.15 | U | 0.2 | U |
| Calcium | | | mg/kg | | | 67000 | | 43000 | | | | | | | | | | 30000 | | 5800 | | 6300 | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | | | 3.3 | | 16 | | 8.3 | | 4.1 | | 16 | | 4.4 | | 4.4 | | 5.5 | | 4.5 | | 9.9 | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | | | 0.19 | U | 2.1 | | | | | | | | | | | | 2.9 | | 2.5 | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | | | 0.72 | U | 18 | | | | | | | | | | | | 14 | | 5.4 | | | |
| Iron | | | mg/kg | | | 4100 | | 7200 | | | | | | | | | | | | 5600 | | 3800 | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | | | 25 | | 140 | | 240 | | 7.4 | | 310 | | 2.9 | | 26 | | 83 | | 6.4 | | 66 | |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | | | 14000 | | 18000 | | | | | | | | | | | | 3300 | | 3700 | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | | | 130 | | 220 | | | | | | | | | | | | 51 | | 51 | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | | | **0.2** | | **0.83** | | **0.68** | | 0.073 | | **0.96** | | 0.0016 | U | 0.074 | | 0.076 | | 0.03 | | **0.18** | |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | | | 3 | | 6.7 | | | | | | | | | | | | 6.2 | | 4.2 | | | |
| Potassium | | | mg/kg | | | 170 | | 350 | | | | | | | | | | | | 310 | | 340 | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | | | 0.57 | U | 0.57 | U | 0.56 | U | 0.5 | U | 0.58 | U | 0.51 | U | 0.51 | U | 0.56 | U | 0.55 | U | 0.69 | U |
| Silver | Residential Ing. [1] | 390 | mg/kg | | | 0.21 | U | 0.21 | U | 0.21 | U | 0.19 | U | 0.21 | U | 0.19 | U | 0.19 | U | 0.21 | U | 0.2 | U | 0.26 | U |
| Sodium | | | mg/kg | | | 94 | | 150 | | | | | | | | | | | | 420 | | 750 | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | | | 0.11 | U | 0.11 | U | | | | | | | | | | | 0.11 | U | 0.11 | U | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | | | 9.8 | | 12 | | | | | | | | | | | | 7.7 | | 8.9 | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | | | 17 | | 110 | | | | | | | | | | | | 69 | | 21 | | | |
| % Solids | | | | | | | | | | 89.2 | | 96.8 | | 75 | | 91.6 | | | | 91.5 | | 87.3 | | 78.5 | |
| Cyanide | Residential Ing. [1] | 1600 | | | | 0.11 | U | 0.11 | U | | | | | | | | | | | 0.11 | U | 0.11 | U | | |
| pH | | | | | | 8.9 | | 8.8 | | 8.98 | | 9.92 | | 8.19 | | 8.52 | | | | 8.7 | | 7.7 | | 10.2 | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | | | 0.0012 | U | 0.0012 | U | | | | | | | | | | | 0.0012 | U | 0.0012 | U | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | | | 0.00117 | U | 0.00117 | U | | | | | | | | | | | 0.00117 | U | 0.00117 | U | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | | | 0.00098 | U | 0.00098 | U | | | | | | | | | | | 0.00098 | U | 0.00098 | U | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | | | 0.00042 | U | 0.00042 | U | | | | | | | | | | | 0.00042 | U | 0.00042 | U | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | | | 0.00022 | U | 0.00022 | U | | | | | | | | | | | 0.00022 | U | 0.00022 | U | | |
| beta-BHC | | | mg/kg | | | 0.00043 | U | 0.00043 | U | | | | | | | | | | | 0.00043 | U | 0.00043 | U | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | | | 0.06 | U | 0.06 | U | | | | | | | | | | | 0.06 | U | 0.06 | U | | |
| delta-BHC | | | mg/kg | | | 0.0005 | U | 0.0005 | U | | | | | | | | | | | 0.0005 | U | 0.0005 | U | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 5 | | 5 | | 5 | | 5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U4-4 | | U4-5 | | U4-5 | | U4-6 | | U4-6 | | U4-7 | | U4-7 | | I5-1 | | P5-1 | | P5-1 | | P5-2 | |
| | | | Sample ID | SO-0103 | | SO-0004 | | SO-0506 | | SO-0002 | | SO-0405 | | SO-0102 | | SO-0405 | | SO-0103 | | SO-0103 | | SO-0507 | | SO-0506 | |
| | | | Sample Date | 5/8/08 | | 5/8/08 | | 5/8/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/13/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | |
| | | | Sample Depth | 01 to 03 | | 00 to 04 | | 05 to 06 | | 00 to 02 | | 04 to 05 | | 01 to 02 | | 04 to 05 | | 01 to 03 | | 01 to 03 | | 05 to 07 | | 05 to 06 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | | | 0.00216 | U | 0.00216 | U | | | | | | | | | | | 0.00216 | U | 0.00216 | U | | |
| Endosulfan I | | | mg/kg | | | 0.00316 | U | 0.00316 | U | | | | | | | | | | | 0.00316 | U | 0.00316 | U | | |
| Endosulfan II | | | mg/kg | | | 0.00238 | U | 0.00238 | U | | | | | | | | | | | 0.00238 | U | 0.00238 | U | | |
| Endosulfan sulfate | | | mg/kg | | | 0.00075 | U | 0.00075 | U | | | | | | | | | | | 0.00075 | U | 0.00075 | U | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | | | 0.00062 | U | 0.00062 | U | | | | | | | | | | | 0.00062 | U | 0.00062 | U | | |
| Endrin aldehyde | | | mg/kg | | | 0.00213 | U | 0.00213 | U | | | | | | | | | | | 0.00213 | U | 0.00213 | U | | |
| Endrin ketone | | | mg/kg | | | 0.00046 | U | 0.00046 | U | | | | | | | | | | | 0.00046 | U | 0.00046 | U | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | | | 0.00126 | U | 0.00126 | U | | | | | | | | | | | 0.00126 | U | 0.00126 | U | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | | | 0.00138 | U | 0.00138 | U | | | | | | | | | | | 0.00138 | U | 0.00138 | U | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | | | 0.00045 | U | 0.00045 | U | | | | | | | | | | | 0.00045 | U | 0.00045 | U | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | | | 0.00509 | U | 0.00509 | U | | | | | | | | | | | 0.00509 | U | 0.00509 | U | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | | | 0.12 | U | 0.12 | U | | | | | | | | | | | 0.12 | U | 0.12 | U | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | | | 0.075 | U | 0.075 | U | | | | | | | | | | | 0.075 | U | 0.075 | U | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | | | 0.485 | U | 0.485 | U | | | | | | | | | | | 0.485 | U | 0.485 | U | | |
| 1,3-Dichlorobenzene | | | mg/kg | | | 0.168 | U | 0.168 | U | | | | | | | | | | | 0.168 | U | 0.168 | U | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | | | 0.128 | U | 0.128 | U | | | | | | | | | | | 0.128 | U | 0.128 | U | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | | | 0.194 | U | 0.194 | U | | | | | | | | | | | 0.194 | U | 0.194 | U | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | | | 0.15 | U | 0.15 | U | | | | | | | | | | | 0.15 | U | 0.15 | U | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | | | 0.089 | U | 0.089 | U | | | | | | | | | | | 0.089 | U | 0.089 | U | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | | | 0.133 | U | 0.133 | U | | | | | | | | | | | 0.133 | U | 0.133 | U | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | | | 0.189 | U | 0.189 | U | | | | | | | | | | | 0.189 | U | 0.189 | U | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | | | 0.107 | U | 0.107 | U | | | | | | | | | | | 0.107 | U | 0.107 | U | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | | | 0.112 | U | 0.112 | U | | | | | | | | | | | 0.112 | U | 0.112 | U | | |
| 2-Chloronaphthalene | | | mg/kg | | | 0.192 | U | 0.192 | U | | | | | | | | | | | 0.192 | U | 0.192 | U | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | | | 0.448 | U | 0.448 | U | | | | | | | | | | | 0.448 | U | 0.448 | U | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | | | 0.116 | U | 0.116 | U | | | | | | | | | | | 0.116 | U | 0.116 | U | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | | | 0.165 | U | 0.165 | U | | | | | | | | | | | 0.165 | U | 0.165 | U | | |
| 2-Nitroaniline | | | mg/kg | | | 0.205 | U | 0.205 | U | | | | | | | | | | | 0.205 | U | 0.205 | U | | |
| 2-Nitrophenol | | | mg/kg | | | 0.116 | U | 0.116 | U | | | | | | | | | | | 0.116 | U | 0.116 | U | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | | | 0.106 | U | 0.106 | U | | | | | | | | | | | 0.106 | U | 0.106 | U | | |
| 3/4-Methylphenol | | | mg/kg | | | 0.21 | U | 0.21 | U | | | | | | | | | | | 0.21 | U | 0.21 | U | | |
| 3-Nitroaniline | | | mg/kg | | | 0.205 | U | 0.205 | U | | | | | | | | | | | 0.205 | U | 0.205 | U | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | | | 0.46 | U | 0.46 | U | | | | | | | | | | | 0.46 | U | 0.46 | U | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | | | 0.174 | U | 0.174 | U | | | | | | | | | | | 0.174 | U | 0.174 | U | | |
| 4-Chloro-3-methylphenol | | | mg/kg | | | 0.09 | U | 0.09 | U | | | | | | | | | | | 0.09 | U | 0.09 | U | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | | | 0.121 | U | 0.121 | U | | | | | | | | | | | 0.121 | U | 0.121 | U | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | | | 0.114 | U | 0.114 | U | | | | | | | | | | | 0.114 | U | 0.114 | U | | |
| 4-Nitroaniline | | | mg/kg | | | 0.25 | U | 0.25 | U | | | | | | | | | | | 0.25 | U | 0.25 | U | | |
| 4-Nitrophenol | | | mg/kg | | | 0.168 | U | 0.168 | U | | | | | | | | | | | 0.168 | U | 0.168 | U | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.00005 | U | 0.148 | U | 0.148 | U | 0.0583 | | 0.00005 | U | 0.395 | | 0.00005 | U | 0.00005 | U | 0.148 | U | 0.148 | U | 0.00005 | U |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.00005 | U | 0.069 | U | 0.069 | U | 0.0628 | | 0.00005 | U | 0.115 | | 0.00005 | U | 0.00005 | U | 0.069 | U | 0.069 | U | 0.00005 | U |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 0.00008 | U | 0.298 | U | 0.298 | U | 0.321 | | 0.173 | | 1.53 | | 0.00008 | U | 0.00008 | U | 0.298 | U | 0.298 | U | 0.00008 | U |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | 0.135 | | 0.068 | U | 0.068 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.456 | | 0.99 | | 0.068 | U | 0.126 | |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | 0.111 | | **1.63** | | 0.112 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.359 | | 0.112 | U | 0.112 | U | 0.0866 | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 5 | | 5 | | 5 | | 5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U4-4 | | U4-5 | | U4-5 | | U4-6 | | U4-6 | | U4-7 | | U4-7 | | I5-1 | | P5-1 | | P5-1 | | P5-2 | |
| | | | Sample ID | SO-0103 | | SO-0004 | | SO-0506 | | SO-0002 | | SO-0405 | | SO-0102 | | SO-0405 | | SO-0103 | | SO-0103 | | SO-0507 | | SO-0506 | |
| | | | Sample Date | 5/8/08 | | 5/8/08 | | 5/8/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/13/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | |
| | | | Sample Depth | 01 to 03 | | 00 to 04 | | 05 to 06 | | 00 to 02 | | 04 to 05 | | 01 to 02 | | 04 to 05 | | 01 to 03 | | 01 to 03 | | 05 to 07 | | 05 to 06 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | 0.132 | | 0.23 | U | 0.23 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.427 | | 0.23 | U | 0.23 | U | 0.112 | |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 0.0565 | | 0.205 | U | 0.205 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.197 | | 0.205 | U | 0.205 | U | 0.0459 | |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 0.0446 | | 0.122 | U | 0.122 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.143 | | 0.122 | U | 0.122 | U | 0.0318 | |
| Benzyl alcohol | | | mg/kg | | | 0.251 | U | 0.251 | U | | | | | | | | | | | 0.251 | U | 0.251 | U | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | | | 0.113 | U | 0.113 | U | | | | | | | | | | | 0.113 | U | 0.113 | U | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | | | 0.329 | U | 0.329 | U | | | | | | | | | | | 0.329 | U | 0.329 | U | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | | | 0.166 | U | 0.166 | U | | | | | | | | | | | 0.166 | U | 0.166 | U | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | | | 0.091 | U | 0.091 | U | | | | | | | | | | | 0.091 | U | 0.091 | U | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | | | 0.109 | U | 0.109 | U | | | | | | | | | | | 0.109 | U | 0.109 | U | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | | | 0.131 | U | 0.131 | U | | | | | | | | | | | 0.131 | U | 0.131 | U | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 0.122 | | 0.094 | U | 0.094 | U | 1.73 | | 0.618 | | 3.5 | | 0.00005 | U | 0.406 | | 0.97 | | 0.094 | U | 0.129 | |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.00002 | U | 0.174 | U | 0.174 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.174 | U | 0.174 | U | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | | | 0.219 | U | 0.219 | U | | | | | | | | | | | 0.219 | U | 0.219 | U | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | | | 0.324 | U | 0.324 | U | | | | | | | | | | | 0.324 | U | 0.324 | U | | |
| Dimethyl phthalate | | | mg/kg | | | 0.118 | U | 0.118 | U | | | | | | | | | | | 0.118 | U | 0.118 | U | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | | | 0.168 | U | 0.168 | U | | | | | | | | | | | 0.168 | U | 0.168 | U | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | | | 0.167 | U | 0.167 | U | | | | | | | | | | | 0.167 | U | 0.167 | U | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 0.213 | | 0.094 | U | 0.094 | U | 3.25 | | 0.848 | | 8.67 | | 0.00005 | U | 0.665 | | 0.094 | U | 0.094 | U | 0.149 | |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 0.00003 | U | 0.136 | U | 0.136 | U | 0.0504 | | 0.00003 | U | 0.375 | | 0.00003 | U | 0.00003 | U | 0.136 | U | 0.136 | U | 0.00003 | U |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | | | 0.066 | U | 0.066 | U | | | | | | | | | | | 0.066 | U | 0.066 | U | | |
| Hexachlorobutadiene | | | mg/kg | | | 0.074 | U | 0.074 | U | | | | | | | | | | | 0.074 | U | 0.074 | U | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | | | 0.173 | U | 0.173 | U | | | | | | | | | | | 0.173 | U | 0.173 | U | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | | | 0.132 | U | 0.132 | U | | | | | | | | | | | 0.132 | U | 0.132 | U | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | 0.0511 | | 0.178 | U | 0.178 | U | 0.692 | | 0.473 | | **1.24** | | 0.0448 | | 0.00002 | U | 0.178 | U | 0.178 | U | 0.0344 | |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | | | 0.097 | U | 0.097 | U | | | | | | | | | | | 0.097 | U | 0.097 | U | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.00005 | U | 0.086 | U | 0.086 | U | 0.00005 | U | 0.0579 | | 0.152 | | 0.00005 | U | 0.00005 | U | 0.086 | U | 0.086 | U | 0.107 | |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | | | 0.232 | U | 0.232 | U | | | | | | | | | | | 0.232 | U | 0.232 | U | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | | | 0.218 | U | 0.218 | U | | | | | | | | | | | 0.218 | U | 0.218 | U | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | | | 0.253 | U | 0.253 | U | | | | | | | | | | | 0.253 | U | 0.253 | U | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | | | 0.317 | U | 0.317 | U | | | | | | | | | | | 0.317 | U | 0.317 | U | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 0.114 | | 0.762 | | 0.122 | U | 1.05 | | 0.418 | | 6.09 | | 0.00003 | U | 0.252 | | 1.58 | | 0.122 | U | 0.271 | |
| Phenol | Residential Soil [5] | 100 | mg/kg | | | 0.584 | U | 0.584 | U | | | | | | | | | | | 0.584 | U | 0.584 | U | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 0.197 | | 1.02 | | 0.066 | U | 3.01 | | 0.772 | | 8.03 | | 0.00005 | U | 0.559 | | 1.72 | | 0.066 | U | 0.00005 | U |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | | | 0.002 | U | 0.002 | U | | | | | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | | | 0.004 | U | 0.004 | U | | | | | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | | | 0.0003 | U | 0.0003 | U | | | | | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | | | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | | | 0.0008 | U | 0.0008 | U | | | | | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | | | 0.0005 | U | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | | | 0.00005 | U | 0.00005 | U | | | | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 5 | | 5 | | 5 | | 5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U4-4 | | U4-5 | | U4-5 | | U4-6 | | U4-6 | | U4-7 | | U4-7 | | I5-1 | | P5-1 | | P5-1 | | P5-2 | |
| | | | Sample ID | SO-0103 | | SO-0004 | | SO-0506 | | SO-0002 | | SO-0405 | | SO-0102 | | SO-0405 | | SO-0103 | | SO-0103 | | SO-0507 | | SO-0506 | |
| | | | Sample Date | 5/8/08 | | 5/8/08 | | 5/8/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/13/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | |
| | | | Sample Depth | 01 to 03 | | 00 to 04 | | 05 to 06 | | 00 to 02 | | 04 to 05 | | 01 to 02 | | 04 to 05 | | 01 to 03 | | 01 to 03 | | 05 to 07 | | 05 to 06 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| 2-Butanone | | | mg/kg | | | 0.0005 | U | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U |
| 2-Hexanone | | | mg/kg | | | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U |
| Acetone | Residential Soil [5] | 16 | mg/kg | | | 0.001 | U | 0.001 | U | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | | | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | | | 0.0003 | U | 0.0003 | U | | | | | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | | | 0.0009 | U | 0.0009 | U | | | | | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | | | 0.0009 | U | 0.0009 | U | | | | | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.055 | | 0.0009 | U |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | | | 0.0007 | U | 0.0007 | U | | | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | | | 0.0005 | U | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U |
| Chloroethane | | | mg/kg | | | 0.001 | U | 0.001 | U | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | | | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U |
| Chloromethane | | | mg/kg | | | 0.001 | U | 0.001 | U | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | | | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U |
| cis-1,3-Dichloropropylene | | | mg/kg | | | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | | | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U |
| Methyl Isobutyl Ketone | | | mg/kg | | | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | | | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | | | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U |
| Styrene | Industrial Soil [6] | 4 | mg/kg | | | 0.001 | U | 0.001 | U | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | | | 0.0005 | U | 0.0005 | U | | | | | 0.008 | | 0.006 | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.021 | |
| Toluene | Residential Soil [5] | 12 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | | | 0.0008 | U | 0.0008 | U | | | | | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U |
| trans-1,3-Dichloropropylene | | | mg/kg | | | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | | | 0.0005 | U | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | | | 0.001 | U | 0.001 | U | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | 0.012 | | 0.01 | | 0.012 | | | | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.019 | |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | P5-3 | | P5-4 | | P5-4 | | P5-5 | | P5-5 | | P5-6 | | P5-6 | | U5-2 | | U5-2 | | U5-3 | | U7-1 | |
| | | | Sample ID | SO-0103 | | SO-1012 | | SO-1012D | | SO-0204 | | SO-0607 | | SO-0102 | | SO-0405 | | SO-0204 | | SO-0506 | | SO-0204 | | SO-0304 | |
| | | | Sample Date | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/7/08 | |
| | | | Sample Depth | 01 to 03 | | 10 to 12 | | 10 to 12 | | 02 to 04 | | 06 to 07 | | 01 to 02 | | 04 to 05 | | 02 to 04 | | 05 to 06 | | 02 to 04 | | 03 to 04 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | | | | | | | 2400 | | 930 | | | | | | | | | | | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | | | | | | | 1.1 | U | 1.1 | U | | | | | | | | | | | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | 6.1 | | 5.3 | | 7.3 | | 2.2 | | 0.32 | U | 3.1 | | 3 | | | | | | 3.1 | | 2.5 | |
| Barium | Residential Ing. [1] | 5500 | mg/kg | 67 | | 50 | | 100 | | 17 | | 2.4 | | 20 | | 31 | | | | | | 8.3 | | 50 | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | | | | | | | 0.18 | U | 0.17 | U | | | | | | | | | | | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | 0.18 | U | 0.17 | U | 1.5 | | 0.18 | U | 0.17 | U | 0.16 | U | 0.9 | | | | | | 0.16 | U | 0.16 | U |
| Calcium | | | mg/kg | | | | | | | 5200 | | 26000 | | | | | | | | | | | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | 9.3 | | 5.1 | | 7.6 | | 4.6 | | 3.1 | | 5.7 | | 17 | | | | | | 4.1 | | 4.8 | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | | | | | | | 2.2 | | 1.8 | | | | | | | | | | | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | | | | | | | 4.1 | | 0.76 | U | | | | | | | | | | | | |
| Iron | | | mg/kg | | | | | | | 4200 | | 3200 | | | | | | | | | | | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | 90 | | 47 | | 94 | | 5.7 | | 1.9 | | 85 | | 75 | | | | | | 7.6 | | 69 | |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | | | | | | | 3000 | | 14000 | | | | | | | | | | | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | | | | | | | 48 | | 120 | | | | | | | | | | | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | **0.46** | | **0.27** | | **0.78** | | 0.0018 | U | 0.0017 | U | **1.5** | | **0.3** | | | | | | 0.0016 | U | **0.19** | |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | | | | | | | 3.9 | | 3 | | | | | | | | | | | | | |
| Potassium | | | mg/kg | | | | | | | 370 | | 190 | | | | | | | | | | | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | 2 | | 0.59 | U | 0.72 | U | 1.2 | | 0.6 | U | 0.54 | U | 0.57 | U | | | | | 0.57 | U | 0.56 | U |
| Silver | Residential Ing. [1] | 390 | mg/kg | 0.23 | U | 0.22 | U | 0.27 | U | 0.23 | U | 0.23 | U | 0.2 | U | 0.21 | U | | | | | 0.21 | U | 0.2 | U |
| Sodium | | | mg/kg | | | | | | | 1800 | | 220 | | | | | | | | | | | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | | | | | | | 0.12 | U | 0.12 | U | | | | | | | | | | | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | | | | | | | 9.6 | | 5.7 | | | | | | | | | | | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | | | | | | | 19 | | 10 | | | | | | | | | | | | | |
| % Solids | | | | 81.3 | | 63.2 | | 71.6 | | | | 83.3 | | 89.1 | | 90.8 | | 81.3 | | 88.2 | | 91.3 | | | |
| Cyanide | Residential Ing. [1] | 1600 | | | | | | | | 0.34 | | 0.12 | U | | | | | | | | | | | | |
| pH | | | | 8.54 | | 8.35 | | 8.26 | | 9.6 | | 7.5 | | 9.7 | | 11.4 | | | | | | 8.3 | | 8.58 | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | | | | | | | 0.0012 | U | 0.0012 | U | | | | | | | | | | | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | | | | | | | 0.00117 | U | 0.00117 | U | | | | | | | | | | | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | | | | | | | 0.00098 | U | 0.00098 | U | | | | | | | | | | | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | | | | | | | 0.00042 | U | 0.00042 | U | | | | | | | | | | | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | | | | | | | 0.00022 | U | 0.00022 | U | | | | | | | | | | | | |
| beta-BHC | | | mg/kg | | | | | | | 0.00043 | U | 0.00043 | U | | | | | | | | | | | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | | | | | | | 0.06 | U | 0.06 | U | | | | | | | | | | | | |
| delta-BHC | | | mg/kg | | | | | | | 0.0005 | U | 0.0005 | U | | | | | | | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | P5-3 | | P5-4 | | P5-4 | | P5-5 | | P5-5 | | P5-6 | | P5-6 | | U5-2 | | U5-2 | | U5-3 | | U7-1 | |
| | | | Sample ID | SO-0103 | | SO-1012 | | SO-1012D | | SO-0204 | | SO-0607 | | SO-0102 | | SO-0405 | | SO-0204 | | SO-0506 | | SO-0204 | | SO-0304 | |
| | | | Sample Date | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/7/08 | |
| | | | Sample Depth | 01 to 03 | | 10 to 12 | | 10 to 12 | | 02 to 04 | | 06 to 07 | | 01 to 02 | | 04 to 05 | | 02 to 04 | | 05 to 06 | | 02 to 04 | | 03 to 04 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | | | | | | | 0.00216 | U | 0.00216 | U | | | | | | | | | | | | |
| Endosulfan I | | | mg/kg | | | | | | | 0.00316 | U | 0.00316 | U | | | | | | | | | | | | |
| Endosulfan II | | | mg/kg | | | | | | | 0.00238 | U | 0.00238 | U | | | | | | | | | | | | |
| Endosulfan sulfate | | | mg/kg | | | | | | | 0.00075 | U | 0.00075 | U | | | | | | | | | | | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | | | | | | | 0.00062 | U | 0.00062 | U | | | | | | | | | | | | |
| Endrin aldehyde | | | mg/kg | | | | | | | 0.00213 | U | 0.00213 | U | | | | | | | | | | | | |
| Endrin ketone | | | mg/kg | | | | | | | 0.00046 | U | 0.00046 | U | | | | | | | | | | | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | | | | | | | 0.00126 | U | 0.00126 | U | | | | | | | | | | | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | | | | | | | 0.00138 | U | 0.00138 | U | | | | | | | | | | | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | | | | | | | 0.00045 | U | 0.00045 | U | | | | | | | | | | | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | | | | | | | 0.00509 | U | 0.00509 | U | | | | | | | | | | | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | | | | | | | 0.12 | U | 0.12 | U | | | | | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | | | | | | | 0.075 | U | 0.075 | U | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | | | | | | | 0.485 | U | 0.485 | U | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | mg/kg | | | | | | | 0.168 | U | 0.168 | U | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | | | | | | | 0.128 | U | 0.128 | U | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | | | | | | | 0.194 | U | 0.194 | U | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | 0.15 | U | 0.15 | U | | | | | | | | | | | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | | | | | | | 0.089 | U | 0.089 | U | | | | | | | | | | | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | | | | | | | 0.133 | U | 0.133 | U | | | | | | | | | | | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | | | | | | | 0.189 | U | 0.189 | U | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | | | | | | | 0.107 | U | 0.107 | U | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | | | | | | | 0.112 | U | 0.112 | U | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | mg/kg | | | | | | | 0.192 | U | 0.192 | U | | | | | | | | | | | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | | | | | | | 0.448 | U | 0.448 | U | | | | | | | | | | | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | | | | | | | 0.116 | U | 0.116 | U | | | | | | | | | | | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | | | | | | | 0.165 | U | 0.165 | U | | | | | | | | | | | | |
| 2-Nitroaniline | | | mg/kg | | | | | | | 0.205 | U | 0.205 | U | | | | | | | | | | | | |
| 2-Nitrophenol | | | mg/kg | | | | | | | 0.116 | U | 0.116 | U | | | | | | | | | | | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | | | | | | | 0.106 | U | 0.106 | U | | | | | | | | | | | | |
| 3/4-Methylphenol | | | mg/kg | | | | | | | 0.21 | U | 0.21 | U | | | | | | | | | | | | |
| 3-Nitroaniline | | | mg/kg | | | | | | | 0.205 | U | 0.205 | U | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | | | | | | | 0.46 | U | 0.46 | U | | | | | | | | | | | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | | | | | | | 0.174 | U | 0.174 | U | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | mg/kg | | | | | | | 0.09 | U | 0.09 | U | | | | | | | | | | | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | | | | | | | 0.121 | U | 0.121 | U | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | | | | | | | 0.114 | U | 0.114 | U | | | | | | | | | | | | |
| 4-Nitroaniline | | | mg/kg | | | | | | | 0.25 | U | 0.25 | U | | | | | | | | | | | | |
| 4-Nitrophenol | | | mg/kg | | | | | | | 0.168 | U | 0.168 | U | | | | | | | | | | | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.454 | | 0.00005 | U | 0.00005 | U | 0.148 | U | 0.148 | U | 0.00005 | U | 0.0782 | | 0.109 | | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.164 | | 0.00005 | U | 0.00005 | U | 0.069 | U | 0.069 | U | 0.0808 | | 0.0947 | | 0.106 | | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 1.44 | | 0.00008 | U | 0.00008 | U | 0.298 | U | 0.298 | U | 0.164 | | 0.3 | | 0.412 | | 0.00008 | U | 0.00008 | U | 0.257 | |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | **4.78** | | 0.226 | | 0.193 | | 0.068 | U | 0.068 | U | 0.000008 | U | 0.000008 | U | **1.6** | | 0.13 | | 0.153 | | 0.234 | |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | **3.81** | | 0.18 | | 0.154 | | 0.112 | U | 0.112 | U | 0.00002 | U | 0.00002 | U | 1.29 | | 0.0941 | | 0.138 | | 0.345 | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | P5-3 | | P5-4 | | P5-4 | | P5-5 | | P5-5 | | P5-6 | | P5-6 | | U5-2 | | U5-2 | | U5-3 | | U7-1 | |
| | | | Sample ID | SO-0103 | | SO-1012 | | SO-1012D | | SO-0204 | | SO-0607 | | SO-0102 | | SO-0405 | | SO-0204 | | SO-0506 | | SO-0204 | | SO-0304 | |
| | | | Sample Date | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/7/08 | |
| | | | Sample Depth | 01 to 03 | | 10 to 12 | | 10 to 12 | | 02 to 04 | | 06 to 07 | | 01 to 02 | | 04 to 05 | | 02 to 04 | | 05 to 06 | | 02 to 04 | | 03 to 04 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | **4.64** | | 0.233 | | 0.189 | | 0.23 | U | 0.23 | U | 0.00001 | U | 0.00001 | U | **1.55** | | 0.113 | | 0.186 | | 0.331 | |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 1.87 | | 0.0886 | | 0.0712 | | 0.205 | U | 0.205 | U | 0.00002 | U | 0.00002 | U | 0.638 | | 0.0431 | | 0.0865 | | 0.202 | |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 4.69 | | 0.0791 | | 0.0712 | | 0.122 | U | 0.122 | U | 0.00001 | U | 0.00001 | U | 0.549 | | 0.0408 | | 0.0745 | | 0.169 | |
| Benzyl alcohol | | | mg/kg | | | | | | | 0.251 | U | 0.251 | U | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | | | | | | | 0.113 | U | 0.113 | U | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | | | | | | | 0.329 | U | 0.329 | U | | | | | | | | | | | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | | | | | | | 0.166 | U | 0.166 | U | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | | | | | | | 0.091 | U | 0.091 | U | | | | | | | | | | | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | | | | | | | 0.109 | U | 0.109 | U | | | | | | | | | | | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | 0.131 | U | 0.131 | U | | | | | | | | | | | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 4.64 | | 0.207 | | 0.152 | | 0.094 | U | 0.094 | U | 0.453 | | 0.948 | | 1.46 | | 0.108 | | 0.168 | | 0.303 | |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.174 | U | 0.174 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | | | | | | | 0.219 | U | 0.219 | U | | | | | | | | | | | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | | | | | | | 0.324 | U | 0.324 | U | | | | | | | | | | | | |
| Dimethyl phthalate | | | mg/kg | | | | | | | 0.118 | U | 0.118 | U | | | | | | | | | | | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | | | | | | | 0.168 | U | 0.168 | U | | | | | | | | | | | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | | | | | | | 0.167 | U | 0.167 | U | | | | | | | | | | | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 9.29 | | 0.364 | | 0.235 | | 0.094 | U | 0.094 | U | 0.752 | | 1.69 | | 2.79 | | 0.207 | | 0.387 | | 0.579 | |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 0.522 | | 0.00003 | U | 0.00003 | U | 0.136 | U | 0.136 | U | 0.0426 | | 0.0859 | | 0.112 | | 0.00003 | U | 0.00003 | U | 0.00003 | U |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | | | | | | | 0.066 | U | 0.066 | U | | | | | | | | | | | | |
| Hexachlorobutadiene | | | mg/kg | | | | | | | 0.074 | U | 0.074 | U | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | | | | | | | 0.173 | U | 0.173 | U | | | | | | | | | | | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | | | | | | | 0.132 | U | 0.132 | U | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | **1.71** | | 0.00002 | U | 0.0684 | | 0.178 | U | 0.178 | U | 0.439 | | 0.303 | | 0.589 | | 0.00002 | U | 0.00002 | U | 0.238 | |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | | | | | | | 0.097 | U | 0.097 | U | | | | | | | | | | | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.283 | | 0.00005 | U | 0.00005 | U | 0.086 | U | 0.086 | U | 0.00005 | U | 0.0573 | | 0.469 | | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | | | | | | | 0.232 | U | 0.232 | U | | | | | | | | | | | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | | | | | | | 0.218 | U | 0.218 | U | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | | | | | | | 0.253 | U | 0.253 | U | | | | | | | | | | | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | | | | | | | 0.317 | U | 0.317 | U | | | | | | | | | | | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 6.73 | | 0.282 | | 0.137 | | 0.122 | U | 0.122 | U | 0.377 | | 0.835 | | 1.73 | | 0.149 | | 0.225 | | 0.305 | |
| Phenol | Residential Soil [5] | 100 | mg/kg | | | | | | | 0.584 | U | 0.584 | U | | | | | | | | | | | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 8.26 | | 0.334 | | 0.214 | | 0.066 | U | 0.066 | U | 0.728 | | 1.62 | | 0.00005 | U | 0.181 | | 0.329 | | 0.52 | |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | | | | | 0.002 | U | 0.002 | U |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | | | | | 0.004 | U | 0.004 | U |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | | | | | 0.0003 | U | 0.0003 | U |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | | | | | 0.0008 | U | 0.0008 | U |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | | | | | 0.00005 | U | 0.00005 | U |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | P5-3 | | P5-4 | | P5-4 | | P5-5 | | P5-5 | | P5-6 | | P5-6 | | U5-2 | | U5-2 | | U5-3 | | U7-1 | |
| | | | Sample ID | SO-0103 | | SO-1012 | | SO-1012D | | SO-0204 | | SO-0607 | | SO-0102 | | SO-0405 | | SO-0204 | | SO-0506 | | SO-0204 | | SO-0304 | |
| | | | Sample Date | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/7/08 | | 5/7/08 | | 6/13/08 | | 6/13/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/7/08 | |
| | | | Sample Depth | 01 to 03 | | 10 to 12 | | 10 to 12 | | 02 to 04 | | 06 to 07 | | 01 to 02 | | 04 to 05 | | 02 to 04 | | 05 to 06 | | 02 to 04 | | 03 to 04 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| 2-Butanone | | | mg/kg | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U |
| 2-Hexanone | | | mg/kg | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U |
| Acetone | Residential Soil [5] | 16 | mg/kg | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | | 0.001 | U | 0.001 | U |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | | | | | 0.0003 | U | 0.0003 | U |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | | | | | 0.0009 | U | 0.0009 | U |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.006 | | 0.0009 | U | 0.0009 | U | | | | | 0.0009 | U | 0.0009 | U |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | | 0.0007 | U | 0.0007 | U |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U |
| Chloroethane | | | mg/kg | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | | 0.001 | U | 0.001 | U |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U |
| Chloromethane | | | mg/kg | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | | 0.001 | U | 0.001 | U |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U |
| cis-1,3-Dichloropropylene | | | mg/kg | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.006 | | 0.0007 | U | 0.0007 | U | 0.0007 | U |
| Methyl Isobutyl Ketone | | | mg/kg | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U |
| Styrene | Industrial Soil [6] | 4 | mg/kg | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | | 0.001 | U | 0.001 | U |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | 0.0005 | U | 0.0005 | U | 0.009 | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U |
| Toluene | Residential Soil [5] | 12 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | | | | | 0.0008 | U | 0.0008 | U |
| trans-1,3-Dichloropropylene | | | mg/kg | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | 0.0005 | U | 0.0005 | U | 0.009 | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | | 0.001 | U | 0.001 | U |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | 0.015 | | 0.007 | | 0.01 | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.038 | | 0.0007 | U | 0.0007 | U | 0.0007 | U |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 8 | | 8 | | 8 | | 8 | | 9 | | 9 | | 9 | | 10 | | 10 | | 10 | | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U8-1 | | U8-1 | | U8-1 | | U8-2 | | U9-1 | | U9-2 | | U9-2 | | TS20-2A | | TS20-2B | | TS20-2C | | U10-1 | |
| | | | Sample ID | SO-0103 | | SO-0103D | | SO-0507 | | SO-0002 | | SO-0506 | | SO-0103 | | SO-1012 | | SS-001 | | SS-001 | | SS-0001D | | SO-0507 | |
| | | | Sample Date | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/14/08 | | 5/9/08 | |
| | | | Sample Depth | 01 to 03 | | 01 to 03 | | 05 to 07 | | 00 to 02 | | 05 to 06 | | 01 to 03 | | 10 to 12 | | to | | to | | to | | 05 to 07 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Barium | Residential Ing. [1] | 5500 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Calcium | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Iron | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Potassium | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Silver | Residential Ing. [1] | 390 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Sodium | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| % Solids | | | | 92.3 | | 86.3 | | 94.7 | | 90.5 | | | | | | | | | | | | | | 92.2 | |
| Cyanide | Residential Ing. [1] | 1600 | | | | | | | | | | | | | | | | | | | | | | | |
| pH | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | 0.08 | U | 0.08 | U | 0.08 | U | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | 0.08 | U | 0.08 | U | 0.08 | U | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | 0.08 | U | 0.08 | U | 0.08 | U | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | 0.08 | U | 0.08 | U | 0.08 | U | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | 0.08 | U | 0.08 | U | 0.08 | U | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | 0.16 | U | 0.16 | U | 0.16 | U | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | 0.16 | U | 0.16 | U | 0.16 | U | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| beta-BHC | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| delta-BHC | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 8 | | 8 | | 8 | | 8 | | 9 | | 9 | | 9 | | 10 | | 10 | | 10 | | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U8-1 | | U8-1 | | U8-1 | | U8-2 | | U9-1 | | U9-2 | | U9-2 | | TS20-2A | | TS20-2B | | TS20-2C | | U10-1 | |
| | | | Sample ID | SO-0103 | | SO-0103D | | SO-0507 | | SO-0002 | | SO-0506 | | SO-0103 | | SO-1012 | | SS-001 | | SS-001 | | SS-0001D | | SO-0507 | |
| | | | Sample Date | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/14/08 | | 5/9/08 | |
| | | | Sample Depth | 01 to 03 | | 01 to 03 | | 05 to 07 | | 00 to 02 | | 05 to 06 | | 01 to 03 | | 10 to 12 | | to | | to | | to | | 05 to 07 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan I | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan II | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan sulfate | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin aldehyde | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin ketone | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3/4-Methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.00005 | U | 0.534 | | 0.00005 | U | 0.101 | | 0.00005 | U | 1.34 | | 0.148 | | | | | | | | 0.00005 | U |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.00005 | U | 0.314 | | 0.00005 | U | 0.0972 | | 0.00005 | U | 0.0686 | | 0.15 | | | | | | | | 0.00005 | U |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 0.00008 | U | 1.72 | | 0.00008 | U | 0.337 | | 0.00008 | U | 3.08 | | 0.712 | | | | | | | | 0.00008 | U |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | 0.179 | | **6.19** | | 0.000008 | U | **1.37** | | 0.0349 | | **3.61** | | **1.77** | | | | | | | | 0.251 | |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | 0.157 | | **5.49** | | 0.00002 | U | **59.4** | | 0.0294 | | **2.42** | | 1.3 | | | | | | | | 0.22 | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 8 | | 8 | | 8 | | 8 | | 9 | | 9 | | 9 | | 10 | | 10 | | 10 | | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U8-1 | | U8-1 | | U8-1 | | U8-2 | | U9-1 | | U9-2 | | U9-2 | | TS20-2A | | TS20-2B | | TS20-2C | | U10-1 | |
| | | | Sample ID | SO-0103 | | SO-0103D | | SO-0507 | | SO-0002 | | SO-0506 | | SO-0103 | | SO-1012 | | SS-001 | | SS-001 | | SS-0001D | | SO-0507 | |
| | | | Sample Date | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/14/08 | | 5/9/08 | |
| | | | Sample Depth | 01 to 03 | | 01 to 03 | | 05 to 07 | | 00 to 02 | | 05 to 06 | | 01 to 03 | | 10 to 12 | | to | | to | | to | | 05 to 07 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | 0.216 | | **6.12** | | 0.00001 | U | **71** | | 0.0392 | | **2.53** | | 1.42 | | | | | | | | 0.266 | |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 0.0921 | | 2.89 | | 0.00002 | U | 32.3 | | 0.00002 | U | 0.935 | | 0.539 | | | | | | | | 0.131 | |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 0.0672 | | 1.8 | | 0.00001 | U | **24.2** | | 0.0142 | | 0.999 | | 0.529 | | | | | | | | 0.0954 | |
| Benzyl alcohol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 0.164 | | 5.72 | | 0.00005 | U | 1.26 | | 0.00005 | U | 2.92 | | 1.43 | | | | | | | | 0.232 | |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | | | | | | | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Dimethyl phthalate | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 0.261 | | 12.3 | | 0.00005 | U | 2.59 | | 0.0643 | | 7.79 | | 3.47 | | | | | | | | 0.464 | |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 0.00003 | U | 0.599 | | 0.00003 | U | 0.107 | | 0.00003 | U | 1.25 | | 0.245 | | | | | | | | 0.00003 | U |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | 0.00002 | U | **2.52** | | 0.00002 | U | **28.7** | | 0.00002 | U | **0.939** | | 0.54 | | | | | | | | 0.108 | |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.00005 | U | 0.41 | | 0.00005 | U | 0.0575 | | 0.00005 | U | 0.415 | | 0.0863 | | | | | | | | 0.00005 | U |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 0.127 | | 8.68 | | 0.00003 | U | 1.41 | | 0.049 | | 8.54 | | 2.03 | | | | | | | | 0.292 | |
| Phenol | Residential Soil [5] | 100 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 0.231 | | 12.6 | | 0.00005 | U | 2.33 | | 0.0577 | | 6.38 | | 2.87 | | | | | | | | 0.436 | |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 8 | | 8 | | 8 | | 8 | | 9 | | 9 | | 9 | | 10 | | 10 | | 10 | | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U8-1 | | U8-1 | | U8-1 | | U8-2 | | U9-1 | | U9-2 | | U9-2 | | TS20-2A | | TS20-2B | | TS20-2C | | U10-1 | |
| | | | Sample ID | SO-0103 | | SO-0103D | | SO-0507 | | SO-0002 | | SO-0506 | | SO-0103 | | SO-1012 | | SS-001 | | SS-001 | | SS-0001D | | SO-0507 | |
| | | | Sample Date | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/8/08 | | 5/14/08 | | 5/9/08 | |
| | | | Sample Depth | 01 to 03 | | 01 to 03 | | 05 to 07 | | 00 to 02 | | 05 to 06 | | 01 to 03 | | 10 to 12 | | to | | to | | to | | 05 to 07 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| 2-Butanone | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Hexanone | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | Residential Soil [5] | 16 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | | | 0.0006 | U |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chloroethane | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chloromethane | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| cis-1,3-Dichloropropylene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | | | | 0.0007 | U |
| Methyl Isobutyl Ketone | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Styrene | Industrial Soil [6] | 4 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Toluene | Residential Soil [5] | 12 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | | | | 0.0007 | U |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| trans-1,3-Dichloropropylene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.008 | | 0.012 | | 0.011 | | | | | | | | 0.006 | |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 10 | | 10 | | 11 | | 11 | | 11 | | 11 | | 11 | | 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U10-2 | | U10-3 | | P11-1 | | P11-1 | | U11-1 | | U11-2 | | U11-2 | | U12-1 | |
| | | | Sample ID | SO-0307 | | SO-0607 | | SO-0103 | | SO-0508 | | SO-0608 | | SO-0608 | | SO-0002MS | | SO-0507MS | |
| | | | Sample Date | 5/9/08 | | 5/9/08 | | 5/8/08 | | 5/8/08 | | 5/9/08 | | 5/9/08 | | 5/9/08 | | 5/13/2008 | |
| | | | Sample Depth | 03 to 07 | | 06 to 07 | | 01 to 03 | | 05 to 08 | | 06 to 08 | | 06 to 08 | | 00 to 02 | | 05 to 07 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | | | | | 1200 | | 1600 | | | | | | | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | | | | | 0.96 | U | 0.98 | U | | | | | | | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | | | | | 7.8 | | 4.2 | | | | | | | | | |
| Barium | Residential Ing. [1] | 5500 | mg/kg | | | | | 7.4 | | 6.2 | | | | | | | | | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | | | | | 0.15 | U | 0.15 | U | | | | | | | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | | | | | 0.16 | U | 0.16 | U | | | | | | | | |
| Calcium | | | mg/kg | | | | | 29000 | | 44000 | | | | | | | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | | | | | 2.5 | | 3 | | | | | | | | | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | | | | | 2.1 | | 2.5 | | | | | | | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | | | | | 3.8 | | 0.67 | U | | | | | | | | |
| Iron | | | mg/kg | | | | | 3800 | | 4600 | | | | | | | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | | | | | 3.9 | | 4.5 | | | | | | | | 11 | |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | | | | | 15000 | | 21000 | | | | | | | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | | | | | 140 | | 190 | | | | | | | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | | | | | 0.054 | | 0.0016 | U | | | | | | | | |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | | | | | 3.7 | | 4.6 | | | | | | | | | |
| Potassium | | | mg/kg | | | | | 220 | | 300 | | | | | | | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | | | | | 0.54 | U | 0.55 | U | | | | | | | | |
| Silver | Residential Ing. [1] | 390 | mg/kg | | | | | 0.2 | U | 0.2 | U | | | | | | | | |
| Sodium | | | mg/kg | | | | | 65 | | 82 | | | | | | | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | | | | | 0.1 | U | 0.11 | U | | | | | | | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | | | | | 5.9 | | 6.9 | | | | | | | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | | | | | 13 | | 16 | | | | | | | | | |
| % Solids | | | | 89.4 | | 93.3 | | | | | | 95.8 | | 87.1 | | | | | |
| Cyanide | Residential Ing. [1] | 1600 | | | | | | 0.11 | U | 0.11 | U | | | | | | | | |
| pH | | | | | | | | 9 | | 8.9 | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | | | | | 0.0012 | U | 0.0012 | U | | | | | | | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | | | | | 0.00117 | U | 0.00117 | U | | | | | | | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | | | | | 0.00098 | U | 0.00098 | U | | | | | | | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | | | | | 0.00042 | U | 0.00042 | U | | | | | | | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | | | | | 0.00022 | U | 0.00022 | U | | | | | | | | |
| beta-BHC | | | mg/kg | | | | | 0.00043 | U | 0.00043 | U | | | | | | | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | | | | | 0.06 | U | 0.06 | U | | | | | | | | |
| delta-BHC | | | mg/kg | | | | | 0.0005 | U | 0.0005 | U | | | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 10 | | 10 | | 11 | | 11 | | 11 | | 11 | | 11 | | 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U10-2 | | U10-3 | | P11-1 | | P11-1 | | U11-1 | | U11-2 | | U11-2 | | U12-1 | |
| | | | Sample ID | SO-0307 | | SO-0607 | | SO-0103 | | SO-0508 | | SO-0608 | | SO-0608 | | SO-0002MS | | SO-0507MS | |
| | | | Sample Date | 5/9/08 | | 5/9/08 | | 5/8/08 | | 5/8/08 | | 5/9/08 | | 5/9/08 | | 5/9/08 | | 5/13/2008 | |
| | | | Sample Depth | 03 to 07 | | 06 to 07 | | 01 to 03 | | 05 to 08 | | 06 to 08 | | 06 to 08 | | 00 to 02 | | 05 to 07 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | | | | | 0.00216 | U | 0.00216 | U | | | | | | | | |
| Endosulfan I | | | mg/kg | | | | | 0.00316 | U | 0.00316 | U | | | | | | | | |
| Endosulfan II | | | mg/kg | | | | | 0.00238 | U | 0.00238 | U | | | | | | | | |
| Endosulfan sulfate | | | mg/kg | | | | | 0.00075 | U | 0.00075 | U | | | | | | | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | | | | | 0.00062 | U | 0.00062 | U | | | | | | | | |
| Endrin aldehyde | | | mg/kg | | | | | 0.00213 | U | 0.00213 | U | | | | | | | | |
| Endrin ketone | | | mg/kg | | | | | 0.00046 | U | 0.00046 | U | | | | | | | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | | | | | 0.00126 | U | 0.00126 | U | | | | | | | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | | | | | 0.00138 | U | 0.00138 | U | | | | | | | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | | | | | 0.00045 | U | 0.00045 | U | | | | | | | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | | | | | 0.00509 | U | 0.00509 | U | | | | | | | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | | | | | 0.12 | U | 0.12 | U | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | | | | | 0.075 | U | 0.075 | U | | | | | | | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | | | | | 0.485 | U | 0.485 | U | | | | | | | | |
| 1,3-Dichlorobenzene | | | mg/kg | | | | | 0.168 | U | 0.168 | U | | | | | | | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | | | | | 0.128 | U | 0.128 | U | | | | | | | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | | | | | 0.194 | U | 0.194 | U | | | | | | | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | | | | | 0.15 | U | 0.15 | U | | | | | | | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | | | | | 0.089 | U | 0.089 | U | | | | | | | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | | | | | 0.133 | U | 0.133 | U | | | | | | | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | | | | | 0.189 | U | 0.189 | U | | | | | | | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | | | | | 0.107 | U | 0.107 | U | | | | | | | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | | | | | 0.112 | U | 0.112 | U | | | | | | | | |
| 2-Chloronaphthalene | | | mg/kg | | | | | 0.192 | U | 0.192 | U | | | | | | | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | | | | | 0.448 | U | 0.448 | U | | | | | | | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | | | | | 0.116 | U | 0.116 | U | | | | | | | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | | | | | 0.165 | U | 0.165 | U | | | | | | | | |
| 2-Nitroaniline | | | mg/kg | | | | | 0.205 | U | 0.205 | U | | | | | | | | |
| 2-Nitrophenol | | | mg/kg | | | | | 0.116 | U | 0.116 | U | | | | | | | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | | | | | 0.106 | U | 0.106 | U | | | | | | | | |
| 3/4-Methylphenol | | | mg/kg | | | | | 0.21 | U | 0.21 | U | | | | | | | | |
| 3-Nitroaniline | | | mg/kg | | | | | 0.205 | U | 0.205 | U | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | | | | | 0.46 | U | 0.46 | U | | | | | | | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | | | | | 0.174 | U | 0.174 | U | | | | | | | | |
| 4-Chloro-3-methylphenol | | | mg/kg | | | | | 0.09 | U | 0.09 | U | | | | | | | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | | | | | 0.121 | U | 0.121 | U | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | | | | | 0.114 | U | 0.114 | U | | | | | | | | |
| 4-Nitroaniline | | | mg/kg | | | | | 0.25 | U | 0.25 | U | | | | | | | | |
| 4-Nitrophenol | | | mg/kg | | | | | 0.168 | U | 0.168 | U | | | | | | | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.00005 | U | 0.00005 | U | 0.148 | U | 0.148 | U | 0.00005 | U | 0.00005 | U | 0.484 | | 0.00005 | U |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.00005 | U | 0.00005 | U | 0.069 | U | 0.069 | U | 0.00005 | U | 0.00005 | U | 0.0653 | | 0.00005 | U |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 0.124 | | 0.00008 | U | 0.298 | U | 0.298 | U | 0.00008 | U | 0.00008 | U | 1.27 | | 0.00008 | U |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | 0.679 | | 0.149 | | 0.068 | U | 0.068 | U | 0.221 | | 0.000008 | U | 2.34 | | 0.0502 | |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | 0.632 | | 0.125 | | 0.112 | U | 0.112 | U | 0.19 | | 0.00002 | U | 2.03 | | 0.00002 | U |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 10 | | 10 | | 11 | | 11 | | 11 | | 11 | | 11 | | 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U10-2 | | U10-3 | | P11-1 | | P11-1 | | U11-1 | | U11-2 | | U11-2 | | U12-1 | |
| | | | Sample ID | SO-0307 | | SO-0607 | | SO-0103 | | SO-0508 | | SO-0608 | | SO-0608 | | SO-0002MS | | SO-0507MS | |
| | | | Sample Date | 5/9/08 | | 5/9/08 | | 5/8/08 | | 5/8/08 | | 5/9/08 | | 5/9/08 | | 5/9/08 | | 5/13/2008 | |
| | | | Sample Depth | 03 to 07 | | 06 to 07 | | 01 to 03 | | 05 to 08 | | 06 to 08 | | 06 to 08 | | 00 to 02 | | 05 to 07 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | 0.767 | | 0.253 | | 0.23 | U | 0.23 | U | 0.246 | | 0.00001 | U | 2.3 | | 0.0577 | |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 0.378 | | 0.105 | | 0.205 | U | 0.205 | U | 0.115 | | 0.00002 | U | 1.04 | | 0.0256 | |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 0.267 | | 0.255 | | 0.122 | U | 0.122 | U | 0.0877 | | 0.00001 | U | 0.794 | | 0.0182 | |
| Benzyl alcohol | | | mg/kg | | | | | 0.251 | U | 0.251 | U | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | | | | | 0.113 | U | 0.113 | U | | | | | | | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | | | | | 0.329 | U | 0.329 | U | | | | | | | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | | | | | 0.166 | U | 0.166 | U | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | | | | | 0.091 | U | 0.091 | U | | | | | | | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | | | | | 0.109 | U | 0.109 | U | | | | | | | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | | | | | 0.131 | U | 0.131 | U | | | | | | | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 0.647 | | 0.143 | | 0.094 | U | 0.094 | U | 0.211 | | 0.00005 | U | 2.11 | | 0.00005 | U |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.00002 | U | 0.00002 | U | 0.174 | U | 0.174 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | | | | | 0.219 | U | 0.219 | U | | | | | | | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | | | | | 0.324 | U | 0.324 | U | | | | | | | | |
| Dimethyl phthalate | | | mg/kg | | | | | 0.118 | U | 0.118 | U | | | | | | | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | | | | | 0.168 | U | 0.168 | U | | | | | | | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | | | | | 0.167 | U | 0.167 | U | | | | | | | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 1.06 | | 0.204 | | 0.094 | U | 0.094 | U | 0.399 | | 0.00005 | U | 4.84 | | 0.0897 | |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 0.00003 | U | 0.00003 | U | 0.136 | U | 0.136 | U | 0.00003 | U | 0.00003 | U | 0.536 | | 0.00003 | U |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | | | | | 0.066 | U | 0.066 | U | | | | | | | | |
| Hexachlorobutadiene | | | mg/kg | | | | | 0.074 | U | 0.074 | U | | | | | | | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | | | | | 0.173 | U | 0.173 | U | | | | | | | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | | | | | 0.132 | U | 0.132 | U | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | 0.311 | | 0.00002 | U | 0.178 | U | 0.178 | U | 0.095 | | 0.00002 | U | 0.91 | | 0.00002 | U |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | | | | | 0.097 | U | 0.097 | U | | | | | | | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.00005 | U | 0.00005 | U | 0.086 | U | 0.086 | U | 0.00005 | U | 0.00005 | U | 0.408 | | 0.00005 | U |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | | | | | 0.232 | U | 0.232 | U | | | | | | | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | | | | | 0.218 | U | 0.218 | U | | | | | | | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | | | | | 0.253 | U | 0.253 | U | | | | | | | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | | | | | 0.317 | U | 0.317 | U | | | | | | | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 0.576 | | 0.252 | | 0.122 | U | 0.122 | U | 0.148 | | 0.00003 | U | 4.65 | | 0.0491 | |
| Phenol | Residential Soil [5] | 100 | mg/kg | | | | | 0.584 | U | 0.584 | U | | | | | | | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 1.1 | | 0.184 | | 0.066 | U | 0.066 | U | 0.384 | | 0.00005 | U | 4.7 | | 0.0844 | |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | | | | | | | | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | | | | | 0.002 | U | 0.002 | U | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | | | | | 0.004 | U | 0.004 | U | | | | | | | | |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | | | | | 0.0003 | U | 0.0003 | U | | | | | | | | |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | | | | | 0.0006 | U | 0.0006 | U | | | | | | | | |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | | | | | 0.0008 | U | 0.0008 | U | | | | | | | | |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | | | | | 0.0005 | U | 0.0005 | U | | | | | | | | |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | | | | | 0.00005 | U | 0.00005 | U | | | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 10 | | 10 | | 11 | | 11 | | 11 | | 11 | | 11 | | 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U10-2 | | U10-3 | | P11-1 | | P11-1 | | U11-1 | | U11-2 | | U11-2 | | U12-1 | |
| | | | Sample ID | SO-0307 | | SO-0607 | | SO-0103 | | SO-0508 | | SO-0608 | | SO-0608 | | SO-0002MS | | SO-0507MS | |
| | | | Sample Date | 5/9/08 | | 5/9/08 | | 5/8/08 | | 5/8/08 | | 5/9/08 | | 5/9/08 | | 5/9/08 | | 5/13/2008 | |
| | | | Sample Depth | 03 to 07 | | 06 to 07 | | 01 to 03 | | 05 to 08 | | 06 to 08 | | 06 to 08 | | 00 to 02 | | 05 to 07 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | |
| 2-Butanone | | | mg/kg | | | | | 0.019 | | 0.009 | | | | | | | | | |
| 2-Hexanone | | | mg/kg | | | | | 0.0006 | U | 0.0006 | U | | | | | | | | |
| Acetone | Residential Soil [5] | 16 | mg/kg | | | | | 0.001 | U | 0.001 | U | | | | | | | | |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | | | | | 0.0004 | U | 0.0004 | U | | | | | | | | |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | | | | | 0.0003 | U | 0.0003 | U | | | | | | | | |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | | | | | 0.0009 | U | 0.0009 | U | | | | | | | | |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | | | | | 0.0009 | U | 0.0009 | U | | | | | | | | |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | | | | | 0.0007 | U | 0.0007 | U | | | | | | | | |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | | | | | 0.0005 | U | 0.0005 | U | | | | | | | | |
| Chloroethane | | | mg/kg | | | | | 0.001 | U | 0.001 | U | | | | | | | | |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | | | | | 0.0006 | U | 0.0006 | U | | | | | | | | |
| Chloromethane | | | mg/kg | | | | | 0.001 | U | 0.001 | U | | | | | | | | |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | | | | | 0.0006 | U | 0.0006 | U | | | | | | | | |
| cis-1,3-Dichloropropylene | | | mg/kg | | | | | 0.0004 | U | 0.0004 | U | | | | | | | | |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | | | | | 0.0004 | U | 0.0004 | U | | | | | | | | |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | |
| Methyl Isobutyl Ketone | | | mg/kg | | | | | 0.0004 | U | 0.0004 | U | | | | | | | | |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | | | | | 0.0006 | U | 0.0006 | U | | | | | | | | |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | | | | | 0.0004 | U | 0.0004 | U | | | | | | | | |
| Styrene | Industrial Soil [6] | 4 | mg/kg | | | | | 0.001 | U | 0.001 | U | | | | | | | | |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | | | | | 0.0005 | U | 0.0005 | U | | | | | | | | |
| Toluene | Residential Soil [5] | 12 | mg/kg | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | | | | | 0.0008 | U | 0.0008 | U | | | | | | | | |
| trans-1,3-Dichloropropylene | | | mg/kg | | | | | 0.0004 | U | 0.0004 | U | | | | | | | | |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | | | | | 0.0005 | U | 0.0005 | U | | | | | | | | |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | | | | | 0.001 | U | 0.001 | U | | | | | | | | |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | 0.008 | | 0.012 | | 0.0007 | U | 0.0007 | U | 0.006 | | 0.007 | | 0.008 | | | |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | **Area** | 13 | | 13 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Boring** | U13-1 | | U13-2 | | U14-1 | | U14-1 | | U14-2 | | U14-2 | | U14-3 | | U14-3 | | U14-4 | | U14-4 | | U14-4 | |
| | | | **Sample ID** | SO-0103 | | SO-0507MS | | SO-0103 | | SO-0103D | | SO-0203 | | SO-0809 | | SO-0102 | | SO-0406 | | SO-0102 | | SO-0809 | | SO-0809D | |
| | | | **Sample Date** | 5/12/08 | | 5/12/08 | | 5/9/08 | | 5/9/08 | | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | |
| | | | **Sample Depth** | 01 to 03 | | 05 to 07 | | 01 to 03 | | 01 to 03 | | 02 to 03 | | 08 to 09 | | 01 to 02 | | 04 to 06 | | 01 to 02 | | 08 to 09 | | 08 to 09 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | | | 1.1 | | 6.1 | | 6.3 | | 13 | | 3.8 | | **19** | | 8.5 | | 2.3 | | 7.7 | | 9.6 | |
| Barium | Residential Ing. [1] | 5500 | mg/kg | | | 3.6 | | 86 | | 83 | | 190 | | 85 | | 430 | | 190 | | 21 | | 140 | | 300 | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | | | 0.51 | U | 0.74 | | 0.81 | | 0.63 | | 0.17 | U | 3.4 | | 0.81 | | 0.16 | U | 0.17 | U | 1 | |
| Calcium | | | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | | | 3.3 | | 10 | | 8.6 | | 12 | | 7.6 | | 18 | | 9.9 | | 4 | | 15 | | 14 | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Iron | | | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | 28 | | 3.3 | | 320 | | 320 | | **600** | | 180 | | **1000** | | 380 | | 74 | | 210 | | **680** | |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | | | 0.025 | U | **0.7** | | **0.58** | | **0.73** | | **0.29** | | **1.7** | | **0.56** | | 0.054 | | **0.29** | | **0.26** | |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Potassium | | | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | | | 1 | U | 1.3 | | 1.3 | | 0.59 | U | 0.6 | U | 0.69 | U | 0.56 | U | 0.57 | U | 0.6 | U | 1.4 | |
| Silver | Residential Ing. [1] | 390 | mg/kg | | | 1 | U | 0.21 | U | 0.22 | U | 0.22 | U | 0.22 | U | 0.25 | U | 0.21 | U | 0.21 | U | 0.22 | U | 0.23 | U |
| Sodium | | | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| % Solids | | | | 91.2 | | 95 | | 89.9 | | 88.1 | | 83.5 | | 81.3 | | 80.3 | | 86 | | 85.2 | | 74.5 | | 82.8 | |
| Cyanide | Residential Ing. [1] | 1600 | | | | | | | | | | | | | | | | | | | | | |
| pH | | | | | | | | 7.28 | | 7.54 | | 7.85 | | 7.65 | | 8.08 | | 8.11 | | 8.14 | | 8 | | 8.19 | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| beta-BHC | | | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | | | | | | | | | | | | | | | | | | | | |
| delta-BHC | | | mg/kg | | | | | | | | | | | | | | | | | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | | | | | | | | | | | | | | | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 13 | | 13 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U13-1 | | U13-2 | | U14-1 | | U14-1 | | U14-2 | | U14-2 | | U14-3 | | U14-3 | | U14-4 | | U14-4 | | U14-4 | |
| | | | Sample ID | SO-0103 | | SO-0507MS | | SO-0103 | | SO-0103D | | SO-0203 | | SO-0809 | | SO-0102 | | SO-0406 | | SO-0102 | | SO-0809 | | SO-0809D | |
| | | | Sample Date | 5/12/08 | | 5/12/08 | | 5/9/08 | | 5/9/08 | | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | |
| | | | Sample Depth | 01 to 03 | | 05 to 07 | | 01 to 03 | | 01 to 03 | | 02 to 03 | | 08 to 09 | | 01 to 02 | | 04 to 06 | | 01 to 02 | | 08 to 09 | | 08 to 09 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan I | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan II | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan sulfate | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin aldehyde | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin ketone | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3/4-Methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.422 | | 0.00005 | U | 0.933 | | 0.711 | | 1.03 | |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.826 | | 0.093 | | 1.41 | | 1.38 | | 0.464 | |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 0.106 | | 0.00008 | U | 0.00008 | U | 0.00008 | U | 0.00008 | U | 0.0947 | | 1.85 | | 0.241 | | 3.78 | | 4.38 | | 2.84 | |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | 0.425 | | 0.000008 | U | 0.219 | | 0.000008 | U | 0.0419 | | 0.0566 | | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | 0.372 | | 0.00002 | U | 0.215 | | 0.00002 | U | 0.114 | | 0.132 | | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | 0.451 | | 0.00001 | U | 0.284 | | 0.00001 | U | 0.213 | | 0.2 | | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 0.201 | | 0.00002 | U | 0.133 | | 0.00002 | U | 0.0587 | | 0.0566 | | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 13 | | 13 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U13-1 | | U13-2 | | U14-1 | | U14-1 | | U14-2 | | U14-2 | | U14-3 | | U14-3 | | U14-4 | | U14-4 | | U14-4 | |
| | | | Sample ID | SO-0103 | | SO-0507MS | | SO-0103 | | SO-0103D | | SO-0203 | | SO-0809 | | SO-0102 | | SO-0406 | | SO-0102 | | SO-0809 | | SO-0809D | |
| | | | Sample Date | 5/12/08 | | 5/12/08 | | 5/9/08 | | 5/9/08 | | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | |
| | | | Sample Depth | 01 to 03 | | 05 to 07 | | 01 to 03 | | 01 to 03 | | 02 to 03 | | 08 to 09 | | 01 to 02 | | 04 to 06 | | 01 to 02 | | 08 to 09 | | 08 to 09 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 0.154 | | 0.00001 | U | 0.0945 | | 0.00001 | U | 0.115 | | 0.108 | | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U |
| Benzyl alcohol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 0.387 | | 0.00005 | U | 0.224 | | 0.00005 | U | 0.00005 | U | 0.0566 | | 5.52 | | 0.541 | | 11 | | 12.2 | | 7.48 | |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Dimethyl phthalate | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 0.753 | | 0.00005 | U | 0.387 | | 0.00005 | U | 0.104 | | 0.121 | | 10.9 | | 1.01 | | 22.8 | | 29.2 | | 15.6 | |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 0.034 | | 0.00003 | U | 0.00003 | U | 0.00003 | U | 0.00003 | U | 0.00003 | U | 0.565 | | 0.057 | | 1.27 | | 1.58 | | 1.25 | |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.0539 | | 0.0504 | | **2.02** | | 0.295 | | **3.53** | | **4.35** | | **2.02** | |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.457 | | 0.0674 | | 1.19 | | 1.67 | | 1.22 | |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 0.406 | | 0.00003 | U | 0.152 | | 0.00003 | U | 0.0611 | | 0.0972 | | 6.56 | | 0.627 | | 12.7 | | 18.7 | | 13.8 | |
| Phenol | Residential Soil [5] | 100 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 0.688 | | 0.00005 | U | 0.359 | | 0.00005 | U | 0.104 | | 0.121 | | 10.6 | | 0.987 | | 21.2 | | 35.8 | | 16.9 | |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | | | | | 0.005 | U | | | | | | | | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | | | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | | | | | | | 0.002 | U | 0.002 | U |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | | | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | | | | | | | 0.004 | U | 0.004 | U |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | | | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | | | | | | | 0.0003 | U | 0.0003 | U |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | | | 0.0006 | U | 0.0006 | U |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | | | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | | | | | | | 0.0008 | U | 0.0008 | U |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 13 | | 13 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U13-1 | | U13-2 | | U14-1 | | U14-1 | | U14-2 | | U14-2 | | U14-3 | | U14-3 | | U14-4 | | U14-4 | | U14-4 | |
| | | | Sample ID | SO-0103 | | SO-0507MS | | SO-0103 | | SO-0103D | | SO-0203 | | SO-0809 | | SO-0102 | | SO-0406 | | SO-0102 | | SO-0809 | | SO-0809D | |
| | | | Sample Date | 5/12/08 | | 5/12/08 | | 5/9/08 | | 5/9/08 | | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | |
| | | | Sample Depth | 01 to 03 | | 05 to 07 | | 01 to 03 | | 01 to 03 | | 02 to 03 | | 08 to 09 | | 01 to 02 | | 04 to 06 | | 01 to 02 | | 08 to 09 | | 08 to 09 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | | | | 0.0005 | U | 0.0005 | U |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | | | | | | | 0.00005 | U | 0.00005 | U |
| 2-Butanone | | | mg/kg | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | | | | 0.0005 | U | 0.0005 | U |
| 2-Hexanone | | | mg/kg | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | | | 0.0006 | U | 0.0006 | U |
| Acetone | Residential Soil [5] | 16 | mg/kg | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | | | | 0.001 | U | 0.001 | U |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | 0.000635 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | | | 0.0006 | U | 0.0006 | U |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | | | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | | | | | | | 0.0003 | U | 0.0003 | U |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | | | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | | | | | | | 0.0009 | U | 0.0009 | U |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | | | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | | | | | | | 0.0009 | U | 0.0009 | U |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | | | | 0.0007 | U | 0.0007 | U |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | | | | 0.0005 | U | 0.0005 | U |
| Chloroethane | | | mg/kg | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | | | | 0.001 | U | 0.001 | U |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | | | 0.0006 | U | 0.0006 | U |
| Chloromethane | | | mg/kg | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | | | | 0.001 | U | 0.001 | U |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | | | 0.0006 | U | 0.0006 | U |
| cis-1,3-Dichloropropylene | | | mg/kg | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | 0.000685 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | | | | 0.0007 | U | 0.0007 | U |
| Methyl Isobutyl Ketone | | | mg/kg | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | | | | 0.0006 | U | 0.0006 | U |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | 0.000392 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U |
| Styrene | Industrial Soil [6] | 4 | mg/kg | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | | | | 0.001 | U | 0.001 | U |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | | | | 0.0005 | U | 0.0005 | U |
| Toluene | Residential Soil [5] | 12 | mg/kg | 0.000658 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | | | | 0.0007 | U | 0.0007 | U |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | | | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | | | | | | | 0.0008 | U | 0.0008 | U |
| trans-1,3-Dichloropropylene | | | mg/kg | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | | | | 0.0005 | U | 0.0005 | U |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | | | | 0.001 | U | 0.001 | U |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | 0.000695 | U | 0.0007 | U | 0.007 | | 0.008 | | 0.0007 | U | 0.0007 | U | | | | | | | 0.0007 | U | 0.0007 | U |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 14 | | 14 | | 14 | | 14 | | 15 | | 16 | | 17 | | 18 | | 18 | | 18 | | 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U14-5 | | U14-5 | | U14-6 | | U14-6 | | U15-1 | | P16-1 | | P17-1 | | I18-1 | | I18-1 | | I18-2 | | I18-2 | |
| | | | Sample ID | SO-0001 | | SO-0405 | | SO-0102 | | SO-0406 | | SO-1012 | | SO-0508MS | | SO-0103 | | SO-0001 | | SO-0809 | | SO-0103 | | SO-0405 | |
| | | | Sample Date | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/7/08 | | 5/9/2008 | | 5/14/08 | | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | |
| | | | Sample Depth | 00 to 01 | | 04 to 05 | | 01 to 02 | | 04 to 06 | | 10 to 12 | | 05 to 08 | | 01 to 03 | | 00 to 01 | | 08 to 09 | | 01 to 03 | | 04 to 05 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | | | | | | | | | | | | | | | 3400 | | 1300 | | | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | | | | | | | | | | | | | | | 1.1 | U | 1.2 | U | | | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | 6.1 | | 1.4 | | 13 | | 0.3 | U | 4.2 | | 5.3 | | 9.5 | | 3.7 | | 1.8 | | 9.1 | | 13 | |
| Barium | Residential Ing. [1] | 5500 | mg/kg | 98 | | 5.6 | | 230 | | 4.3 | | 5.8 | | 22 | | 71 | | 53 | | 8.6 | | 170 | | 130 | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | | | | | | | | | | | | | | | 0.17 | U | 0.19 | U | | | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | 0.62 | | 0.16 | U | 1.2 | | 0.16 | U | 0.2 | U | 0.17 | U | 0.77 | | 0.17 | U | 0.19 | U | 1.3 | | 32 | |
| Calcium | | | mg/kg | | | | | | | | | | | | | | | 61000 | | 57000 | | | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | 8.9 | | 2.6 | | 15 | | 3 | | 4 | | 5.9 | | 7.1 | | 5.9 | | 3.1 | | 16 | | 15 | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | | | | | | | | | | | | | | | 2.1 | | 2 | | | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | | | | | | | | | | | | | | | 15 | | 0.84 | U | | | | |
| Iron | | | mg/kg | | | | | | | | | | | | | | | 5500 | | 4500 | | | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | 210 | | 2.7 | | **1000** | | 2.6 | | 5.1 | | 24 | | 88 | | 180 | | 4.9 | | 390 | | **470** | |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | | | | | | | | | | | | | | | 16000 | | 27000 | | | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | | | | | | | | | | | | | | | 160 | | 220 | | | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | **0.35** | | 0.036 | | **2.2** | | 0.0016 | U | 0.002 | U | 0.087 | | **0.54** | | 0.1 | | 0.002 | U | **0.54** | | **0.29** | |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | | | | | | | | | | | | | | | 5.3 | | 4.2 | | | | | |
| Potassium | | | mg/kg | | | | | | | | | | | | | | | 480 | | 330 | | | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | 0.57 | U | 0.56 | U | 1.7 | | 0.56 | U | 0.68 | U | 0.61 | U | 0.41 | U | 0.61 | U | 0.68 | U | 0.6 | U | 1.2 | |
| Silver | Residential Ing. [1] | 390 | mg/kg | 0.21 | U | 0.21 | U | 0.21 | U | 0.21 | U | 0.25 | U | 0.22 | U | 0.086 | U | 0.22 | U | 0.25 | U | 0.22 | U | 0.21 | U |
| Sodium | | | mg/kg | | | | | | | | | | | | | | | 220 | | 110 | | | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | | | | | | | | | | | | | | | 0.12 | U | 0.13 | U | | | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | | | | | | | | | | | | | | | 15 | | 7.1 | | | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | | | | | | | | | | | | | | | 35 | | 18 | | | | | |
| % Solids | | | | 90.6 | | 91.3 | | 85.9 | | 91.7 | | 78.2 | | 85.6 | | | | 85.2 | | 82.6 | | 84.9 | | 87.9 | |
| Cyanide | Residential Ing. [1] | 1600 | | | | | | | | | | | | | | | | 0.12 | U | 0.13 | U | | | | |
| pH | | | | 8.9 | | 8.99 | | 8.63 | | 8.58 | | 8.42 | | 8.41 | | | | 8.6 | | 8.6 | | 8.02 | | 9.11 | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | | | | | | | | | | | | | | | 0.0012 | U | 0.0012 | U | | | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | 0.00117 | U | 0.00117 | U | | | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | 0.00098 | U | 0.00098 | U | | | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | | | | | | | | | | | | | | | 0.00042 | U | 0.00042 | U | | | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | | | | | | | | | | | | | | | 0.00022 | U | 0.00022 | U | | | | |
| beta-BHC | | | mg/kg | | | | | | | | | | | | | | | 0.00043 | U | 0.00043 | U | | | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | | | | | | | | | | | | | | | 0.06 | U | 0.06 | U | | | | |
| delta-BHC | | | mg/kg | | | | | | | | | | | | | | | 0.0005 | U | 0.0005 | U | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | | | | | | | | | | | | | | | 0.00216 | U | 0.00216 | U | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 14 | | 14 | | 14 | | 14 | | 15 | | 16 | | 17 | | 18 | | 18 | | 18 | | 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U14-5 | | U14-5 | | U14-6 | | U14-6 | | U15-1 | | P16-1 | | P17-1 | | I18-1 | | I18-1 | | I18-2 | | I18-2 | |
| | | | Sample ID | SO-0001 | | SO-0405 | | SO-0102 | | SO-0406 | | SO-1012 | | SO-0508MS | | SO-0103 | | SO-0001 | | SO-0809 | | SO-0103 | | SO-0405 | |
| | | | Sample Date | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/7/08 | | 5/9/2008 | | 5/14/08 | | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | |
| | | | Sample Depth | 00 to 01 | | 04 to 05 | | 01 to 02 | | 04 to 06 | | 10 to 12 | | 05 to 08 | | 01 to 03 | | 00 to 01 | | 08 to 09 | | 01 to 03 | | 04 to 05 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan I | | | mg/kg | | | | | | | | | | | | | | | 0.00316 | U | 0.00316 | U | | | | |
| Endosulfan II | | | mg/kg | | | | | | | | | | | | | | | 0.00238 | U | 0.00238 | U | | | | |
| Endosulfan sulfate | | | mg/kg | | | | | | | | | | | | | | | 0.00075 | U | 0.00075 | U | | | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | 0.00062 | U | 0.00062 | U | | | | |
| Endrin aldehyde | | | mg/kg | | | | | | | | | | | | | | | 0.00213 | U | 0.00213 | U | | | | |
| Endrin ketone | | | mg/kg | | | | | | | | | | | | | | | 0.00046 | U | 0.00046 | U | | | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | | | | | | | | | | | | | | | 0.00126 | U | 0.00126 | U | | | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | | | | | | | | | | | | | | | 0.00138 | U | 0.00138 | U | | | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | | | | | | | | | | | | | | | 0.00045 | U | 0.00045 | U | | | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | | | | | | | | | | | | | | | 0.00509 | U | 0.00509 | U | | | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | | | | | | | | | | | | | | | 0.12 | U | 0.12 | U | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | | | | | | | | | | | | | | | 0.075 | U | 0.075 | U | | | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | | | | | | | | | | | | | | | 0.485 | U | 0.485 | U | | | | |
| 1,3-Dichlorobenzene | | | mg/kg | | | | | | | | | | | | | | | 0.168 | U | 0.168 | U | | | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | | | | | | | | | | | | | | | 0.128 | U | 0.128 | U | | | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | | | | | | | | | | | | | | | 0.194 | U | 0.194 | U | | | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | | | | | | | | | 0.15 | U | 0.15 | U | | | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | 0.089 | U | 0.089 | U | | | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | | | | | | | | | | | | | | | 0.133 | U | 0.133 | U | | | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | | | | | | | | | | | | | | | 0.189 | U | 0.189 | U | | | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | | | | | | | | | | | | | | | 0.107 | U | 0.107 | U | | | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | | | | | | | | | | | | | | | 0.112 | U | 0.112 | U | | | | |
| 2-Chloronaphthalene | | | mg/kg | | | | | | | | | | | | | | | 0.192 | U | 0.192 | U | | | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | | | | | | | | | | | | | | | 0.448 | U | 0.448 | U | | | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | | | | | | | | | | | | | | | 1.93 | | 0.116 | U | | | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | | | | | | | | | | | | | | | 0.165 | U | 0.165 | U | | | | |
| 2-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | 0.205 | U | 0.205 | U | | | | |
| 2-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | 0.116 | U | 0.116 | U | | | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | | | | | | | | | | | | | | | 0.106 | U | 0.106 | U | | | | |
| 3/4-Methylphenol | | | mg/kg | | | | | | | | | | | | | | | 0.21 | U | 0.21 | U | | | | |
| 3-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | 0.205 | U | 0.205 | U | | | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | | | | | | | | | | | | | | | 0.46 | U | 0.46 | U | | | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | 0.174 | U | 0.174 | U | | | | |
| 4-Chloro-3-methylphenol | | | mg/kg | | | | | | | | | | | | | | | 0.09 | U | 0.09 | U | | | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | | | | | | | | | | | | | | | 0.121 | U | 0.121 | U | | | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | 0.114 | U | 0.114 | U | | | | |
| 4-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | 0.25 | U | 0.25 | U | | | | |
| 4-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | 0.168 | U | 0.168 | U | | | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.193 | | 0.00005 | U | 0.25 | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.162 | | 5.15 | | 0.933 | | 0.254 | | 1.23 | |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.547 | | 0.111 | | 0.0803 | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.331 | | 0.676 | | 0.069 | U | 0.291 | | 0.359 | |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 0.887 | | 0.161 | | 0.728 | | 0.00008 | U | 0.00008 | U | 0.00008 | U | 1.09 | | 12.3 | | 3.05 | | 1.33 | | 3.48 | |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.0129 | | **4.82** | | **24** | | **8.27** | | 0.000008 | U | 0.000008 | U |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | **3.63** | | **46.7** | | **21.4** | | 0.00002 | U | 0.00002 | U |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.0129 | | **4.75** | | **26.8** | | **9.79** | | 0.00001 | U | 0.00001 | U |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 1.53 | | 7.59 | | 4.65 | | 0.00002 | U | 0.00002 | U |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 14 | | 14 | | 14 | | 14 | | 15 | | 16 | | 17 | | 18 | | 18 | | 18 | | 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U14-5 | | U14-5 | | U14-6 | | U14-6 | | U15-1 | | P16-1 | | P17-1 | | I18-1 | | I18-1 | | I18-2 | | I18-2 | |
| | | | Sample ID | SO-0001 | | SO-0405 | | SO-0102 | | SO-0406 | | SO-1012 | | SO-0508MS | | SO-0103 | | SO-0001 | | SO-0809 | | SO-0103 | | SO-0405 | |
| | | | Sample Date | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/7/08 | | 5/9/2008 | | 5/14/08 | | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | |
| | | | Sample Depth | 00 to 01 | | 04 to 05 | | 01 to 02 | | 04 to 06 | | 10 to 12 | | 05 to 08 | | 01 to 03 | | 00 to 01 | | 08 to 09 | | 01 to 03 | | 04 to 05 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 2.04 | | **12.1** | | 5.89 | | 0.00001 | U | 0.00001 | U |
| Benzyl alcohol | | | mg/kg | | | | | | | | | | | | | | | 0.251 | U | 0.251 | U | | | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | | | | | | | | | | | | | | | 0.113 | U | 0.113 | U | | | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | | | | | | | | | | | | | | | 0.329 | U | 0.329 | U | | | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | | | | | | | | | | | | | | | 0.166 | U | 0.166 | U | | | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | | | | | | | | | | | | | | | 0.091 | U | 0.091 | U | | | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | | | | | | | | | | | | | | | 0.109 | U | 0.109 | U | | | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | | | | | | | | | **8.66** | | **1.32** | | | | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 4.64 | | 0.00005 | U | 2.92 | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 4.1 | | 21.1 | | 7.35 | | 4.12 | | 7.55 | |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | **2.06** | | **2.34** | | 0.00002 | U | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | | | | | | | | | | | | | | | 2.88 | | 0.219 | U | | | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | | | | | | | | | | | | | | | 0.324 | U | 0.324 | U | | | | |
| Dimethyl phthalate | | | mg/kg | | | | | | | | | | | | | | | 0.118 | U | 0.118 | U | | | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | | | | | | | | | | | | | | | 0.168 | U | 0.168 | U | | | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | | | | | | | | | | | | | | | 0.167 | U | 0.167 | U | | | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 7.78 | | 0.00005 | U | 5.84 | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 7.74 | | 0.094 | U | 0.094 | U | 8.14 | | 16.4 | |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 0.236 | | 0.00003 | U | 0.168 | | 0.00003 | U | 0.00003 | U | 0.00003 | U | 0.214 | | 0.136 | U | 0.136 | U | 0.347 | | 1.42 | |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | | | | | | | | | | | | | | | 0.066 | U | 0.066 | U | | | | |
| Hexachlorobutadiene | | | mg/kg | | | | | | | | | | | | | | | 0.074 | U | 0.074 | U | | | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | | | | | | | | | | | | | | | 0.173 | U | 0.173 | U | | | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | | | | | | | | | | | | | | | 0.132 | U | 0.132 | U | | | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | **1.78** | | 0.175 | | **1.07** | | 0.0523 | | 0.00002 | U | 0.00002 | U | **1.53** | | **7.22** | | **4.39** | | **1.39** | | **2.09** | |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | | | | | | | | | | | | | | | 0.097 | U | 0.097 | U | | | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.159 | | 0.00005 | U | 0.0652 | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.127 | | **3.94** | | 0.679 | | 0.27 | | 0.729 | |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | | | | | | | | | | | | | | | 0.232 | U | 0.232 | U | | | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | | | | | | | | | | | | | | | 0.218 | U | 0.218 | U | | | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | 0.253 | U | 0.253 | U | | | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | | | | | | | | | | | | | | | 0.317 | U | 0.317 | U | | | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 2.62 | | 0.00003 | U | 3.12 | | 0.00003 | U | 0.00003 | U | 0.00003 | U | 3.49 | | 41.7 | | 10.3 | | 5.04 | | 12.9 | |
| Phenol | Residential Soil [5] | 100 | mg/kg | | | | | | | | | | | | | | | 0.584 | U | 0.584 | U | | | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 7.78 | | 0.00005 | U | 5.94 | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 7.03 | | 40.4 | | 14.7 | | 7.51 | | 16.5 | |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | | | 0.002 | U | | | | | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | | | | |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | | | 0.004 | U | | | | | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | | | | |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | | | 0.0003 | U | | | | | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | | | | |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | | | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | | | 0.0008 | U | | | | | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 14 | | 14 | | 14 | | 14 | | 15 | | 16 | | 17 | | 18 | | 18 | | 18 | | 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | U14-5 | | U14-5 | | U14-6 | | U14-6 | | U15-1 | | P16-1 | | P17-1 | | I18-1 | | I18-1 | | I18-2 | | I18-2 | |
| | | | Sample ID | SO-0001 | | SO-0405 | | SO-0102 | | SO-0406 | | SO-1012 | | SO-0508MS | | SO-0103 | | SO-0001 | | SO-0809 | | SO-0103 | | SO-0405 | |
| | | | Sample Date | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/7/08 | | 5/9/2008 | | 5/14/08 | | 5/6/08 | | 5/6/08 | | 6/12/08 | | 6/12/08 | |
| | | | Sample Depth | 00 to 01 | | 04 to 05 | | 01 to 02 | | 04 to 06 | | 10 to 12 | | 05 to 08 | | 01 to 03 | | 00 to 01 | | 08 to 09 | | 01 to 03 | | 04 to 05 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | | | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | | | 0.00005 | U | | | | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | | | | |
| 2-Butanone | | | mg/kg | | | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | |
| 2-Hexanone | | | mg/kg | | | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | |
| Acetone | Residential Soil [5] | 16 | mg/kg | | | 0.001 | U | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | | | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | | | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | | | 0.0003 | U | | | | | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | 0.0003 | U | | | | |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | | | 0.0009 | U | | | | | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | | | | |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | | | 0.0009 | U | | | | | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | 0.0009 | U | | | | |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | | | 0.0007 | U | | | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | | | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | |
| Chloroethane | | | mg/kg | | | 0.001 | U | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | | | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | |
| Chloromethane | | | mg/kg | | | 0.001 | U | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | | | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | |
| cis-1,3-Dichloropropylene | | | mg/kg | | | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | | | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | | | 0.0007 | U | | | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | |
| Methyl Isobutyl Ketone | | | mg/kg | | | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | | | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | | | | |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | | | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | |
| Styrene | Industrial Soil [6] | 4 | mg/kg | | | 0.001 | U | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | | | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | |
| Toluene | Residential Soil [5] | 12 | mg/kg | | | 0.0007 | U | | | | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | | | 0.0008 | U | | | | | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | 0.0008 | U | | | | |
| trans-1,3-Dichloropropylene | | | mg/kg | | | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | | | | |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | | | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | | | | |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | | | 0.001 | U | | | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | | | | |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | | | 0.0007 | U | | | | | 0.009 | | 0.0007 | U | 0.0007 | U | 0.0007 | U | 0.0007 | U | | | | |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 18 | | 18 | | 18 | | 18 | | 18 | | 18 | | 18 | | 18 | | 19 | | 19 | | 19 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | I18-3 | | I18-3 | | I18-4 | | I18-4 | | I18-5 | | I18-5 | | I18-6 | | I18-6 | | I19-1 | | I19-2 | | I19-2 | |
| | | | Sample ID | SO-0203 | | SO-0406 | | SO-0102 | | SO-0810 | | SO-0102 | | SO-0506 | | SO-0102 | | SO-0405 | | SO-0608 | | SO-0102 | | SO-0810 | |
| | | | Sample Date | 6/12/08 | | 6/12/08 | | 6/13/08 | | 6/13/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/7/08 | | 6/12/08 | | 6/12/08 | |
| | | | Sample Depth | 02 to 03 | | 04 to 06 | | 01 to 02 | | 08 to 10 | | 01 to 02 | | 05 to 06 | | 01 to 02 | | 04 to 05 | | 06 to 08 | | 01 to 02 | | 08 to 10 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | 9.4 | | 8.4 | | 10 | | 4.3 | | **16** | | 1.9 | | **20** | | 2 | | **33** | | 7 | | 3.2 | |
| Barium | Residential Ing. [1] | 5500 | mg/kg | 160 | | 120 | | 210 | | 38 | | 82 | | 12 | | 190 | | 16 | | 860 | | 82 | | 44 | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | 1.2 | | 1.1 | | 1.3 | | 0.18 | U | 2.6 | | 0.16 | U | 1.7 | | 0.16 | U | 3.7 | | 0.16 | U | 0.16 | U |
| Calcium | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | 13 | | 26 | | 17 | | 5.3 | | 12 | | 4.7 | | 16 | | 6 | | 75 | | 9.3 | | 11 | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Iron | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | **610** | | 230 | | **440** | | 110 | | **460** | | 8.3 | | 390 | | 4.3 | | **560** | | 310 | | 62 | |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | **0.57** | | **0.17** | | **0.62** | | **0.6** | | **0.18** | | 0.03 | | **0.45** | | 0.0016 | U | **97** | | **1.4** | | **0.72** | |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Potassium | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | 0.62 | U | 1.3 | | 0.57 | U | 0.63 | U | 0.57 | U | 0.55 | U | 0.6 | U | 0.55 | U | 2 | | 0.56 | U | 0.56 | U |
| Silver | Residential Ing. [1] | 390 | mg/kg | 0.23 | U | 0.081 | U | 0.21 | U | 0.23 | U | 0.21 | U | 0.2 | U | 0.22 | U | 0.2 | U | 2.5 | | 0.21 | U | 0.21 | U |
| Sodium | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| % Solids | | | | 84.6 | | 92 | | 74.4 | | 94.2 | | 88.2 | | 74.3 | | 92.5 | | 87.8 | | | | 89.7 | | 88 | |
| Cyanide | Residential Ing. [1] | 1600 | | | | | | | | | | | | | | | | | | | | | | | |
| pH | | | | 8.06 | | 9.07 | | 8.6 | | 8.3 | | 9.08 | | 8.01 | | 8.27 | | 8.06 | | 11 | | 8.54 | | 8.58 | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| beta-BHC | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| delta-BHC | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 18 | | 18 | | 18 | | 18 | | 18 | | 18 | | 18 | | 19 | | 19 | | 19 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | I18-3 | | I18-3 | | I18-4 | | I18-4 | | I18-5 | | I18-5 | | I18-6 | | I18-6 | | I19-1 | | I19-2 | | I19-2 | |
| | | | Sample ID | SO-0203 | | SO-0406 | | SO-0102 | | SO-0810 | | SO-0102 | | SO-0506 | | SO-0102 | | SO-0405 | | SO-0608 | | SO-0102 | | SO-0810 | |
| | | | Sample Date | 6/12/08 | | 6/12/08 | | 6/13/08 | | 6/13/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/7/08 | | 6/12/08 | | 6/12/08 | |
| | | | Sample Depth | 02 to 03 | | 04 to 06 | | 01 to 02 | | 08 to 10 | | 01 to 02 | | 05 to 06 | | 01 to 02 | | 04 to 05 | | 06 to 08 | | 01 to 02 | | 08 to 10 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan I | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan II | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endosulfan sulfate | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin aldehyde | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Endrin ketone | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 2-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3/4-Methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 3-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| 4-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.878 | | 0.198 | | 0.176 | | 2.28 | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.0786 | | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.843 | | 0.301 | | 0.108 | | 0.425 | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.0558 | | 0.0604 | | 0.0702 | | 0.075 | |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 4.64 | | 1.1 | | 0.78 | | 5.95 | | 0.00008 | U | 0.00008 | U | 0.00008 | U | 0.363 | | 0.335 | | 0.087 | | 0.15 | |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.47 | | 0.000008 | U | 0.000008 | U |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.754 | | 0.00002 | U | 0.00002 | U |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.673 | | 0.00001 | U | 0.00001 | U |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.778 | | 0.00002 | U | 0.00002 | U |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 18 | | 18 | | 18 | | 18 | | 18 | | 18 | | 18 | | 18 | | 19 | | 19 | | 19 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | I18-3 | | I18-3 | | I18-4 | | I18-4 | | I18-5 | | I18-5 | | I18-6 | | I18-6 | | I19-1 | | I19-2 | | I19-2 | |
| | | | Sample ID | SO-0203 | | SO-0406 | | SO-0102 | | SO-0810 | | SO-0102 | | SO-0506 | | SO-0102 | | SO-0405 | | SO-0608 | | SO-0102 | | SO-0810 | |
| | | | Sample Date | 6/12/08 | | 6/12/08 | | 6/13/08 | | 6/13/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/7/08 | | 6/12/08 | | 6/12/08 | |
| | | | Sample Depth | 02 to 03 | | 04 to 06 | | 01 to 02 | | 08 to 10 | | 01 to 02 | | 05 to 06 | | 01 to 02 | | 04 to 05 | | 06 to 08 | | 01 to 02 | | 08 to 10 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.556 | | 0.00001 | U | 0.00001 | U |
| Benzyl alcohol | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 15.5 | | 3.23 | | 3.51 | | 10.3 | | 0.355 | | 0.00005 | U | 0.00005 | U | 1.42 | | 0.65 | | 0.295 | | 0.503 | |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Dimethyl phthalate | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 30.8 | | 7.04 | | 6.69 | | 22.6 | | 0.583 | | 0.00005 | U | 0.00005 | U | 2.67 | | 1.17 | | 0.401 | | 0.859 | |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 1.21 | | 0.341 | | 0.237 | | 2.17 | | 0.00003 | U | 0.00003 | U | 0.00003 | U | 0.0649 | | 0.00003 | U | 0.00003 | U | 0.0364 | |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | | | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | **4.86** | | **1.07** | | **0.913** | | **3.1** | | 0.141 | | 0.0404 | | 0.00002 | U | 0.527 | | 0.668 | | 0.135 | | 0.175 | |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.583 | | 0.407 | | 0.0793 | | **1.92** | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.0797 | | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 19.5 | | 4.62 | | 3.18 | | 19.4 | | 0.349 | | 0.00003 | U | 0.00003 | U | 1.65 | | 0.482 | | 0.149 | | 0.41 | |
| Phenol | Residential Soil [5] | 100 | mg/kg | | | | | | | | | | | | | | | | | | | | | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 33.5 | | 6.15 | | 6.77 | | 23.4 | | 0.628 | | 0.00005 | U | 0.00005 | U | 2.57 | | 1.02 | | 0.401 | | 0.781 | |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | | 0.0051 | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | | | | | | | | | | | | | **0.0737** | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | | 0.00025 | U | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | | | | | | | 0.002 | U | | | | | | | 0.002 | U | 0.002 | U | | | | |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | | | | | | | 0.004 | U | | | | | | | 0.004 | U | 0.004 | U | | | | |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | | | | | | | 0.0003 | U | | | | | | | 0.0003 | U | 0.0003 | U | | | | |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | | | | | | | 0.0006 | U | | | | | | | 0.0006 | U | 0.0006 | U | | | | |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | | | | | | | 0.0008 | U | | | | | | | 0.0008 | U | 0.0008 | U | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 18 | | 18 | | 18 | | 18 | | 18 | | 18 | | 18 | | 19 | | 19 | | 19 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | I18-3 | | I18-3 | | I18-4 | | I18-4 | | I18-5 | | I18-5 | | I18-6 | | I18-6 | | I19-1 | | I19-2 | | I19-2 | |
| | | | Sample ID | SO-0203 | | SO-0406 | | SO-0102 | | SO-0810 | | SO-0102 | | SO-0506 | | SO-0102 | | SO-0405 | | SO-0608 | | SO-0102 | | SO-0810 | |
| | | | Sample Date | 6/12/08 | | 6/12/08 | | 6/13/08 | | 6/13/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/7/08 | | 6/12/08 | | 6/12/08 | |
| | | | Sample Depth | 02 to 03 | | 04 to 06 | | 01 to 02 | | 08 to 10 | | 01 to 02 | | 05 to 06 | | 01 to 02 | | 04 to 05 | | 06 to 08 | | 01 to 02 | | 08 to 10 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | | | | | | | 0.0005 | U | | | | | | | 0.0005 | U | 0.0005 | U | | | | |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | | | | | | | 0.00005 | U | | | | | | | 0.00005 | U | 0.00005 | U | | | | |
| 2-Butanone | | | mg/kg | | | | | | | 0.0005 | U | | | | | | | 0.0005 | U | 0.0005 | U | | | | |
| 2-Hexanone | | | mg/kg | | | | | | | 0.0006 | U | | | | | | | 0.0006 | U | 0.0006 | U | | | | |
| Acetone | Residential Soil [5] | 16 | mg/kg | | | | | | | 0.001 | U | | | | | | | 0.001 | U | 0.001 | U | | | | |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | | | | | | | 0.0006 | U | | | | | | | 0.0006 | U | 0.0006 | U | | | | |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U | | | | |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | | | | | | | 0.0003 | U | | | | | | | 0.0003 | U | 0.0003 | U | | | | |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | 0.0009 | U | | | | | | | 0.0009 | U | 0.0009 | U | | | | |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | | | | | | | 0.0009 | U | | | | | | | 0.0009 | U | 0.0009 | U | | | | |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | | | | | | | 0.0007 | U | | | | | | | 0.0007 | U | 0.0007 | U | | | | |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | | | | | | | 0.0005 | U | | | | | | | 0.0005 | U | 0.0005 | U | | | | |
| Chloroethane | | | mg/kg | | | | | | | 0.001 | U | | | | | | | 0.001 | U | 0.001 | U | | | | |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | | | | | | | 0.0006 | U | | | | | | | 0.0006 | U | 0.006 | | | | | |
| Chloromethane | | | mg/kg | | | | | | | 0.001 | U | | | | | | | 0.001 | U | 0.001 | U | | | | |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | | | | | | | 0.0006 | U | | | | | | | 0.0006 | U | 0.0006 | U | | | | |
| cis-1,3-Dichloropropylene | | | mg/kg | | | | | | | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U | | | | |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | | | | | | | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U | | | | |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | | | | | | | 0.0007 | U | | | | | | | 0.0007 | U | 0.0007 | U | | | | |
| Methyl Isobutyl Ketone | | | mg/kg | | | | | | | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U | | | | |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | | | | | | | 0.0006 | U | | | | | | | 0.0006 | U | 0.0006 | U | | | | |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | | | | | | | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U | | | | |
| Styrene | Industrial Soil [6] | 4 | mg/kg | | | | | | | 0.001 | U | | | | | | | 0.001 | U | 0.001 | U | | | | |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | | | | | | | 0.006 | | | | | | | | 0.0005 | U | 0.0005 | U | | | | |
| Toluene | Residential Soil [5] | 12 | mg/kg | | | | | | | 0.0007 | U | | | | | | | 0.0007 | U | 0.0007 | U | | | | |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | | | | | | | 0.0008 | U | | | | | | | 0.0008 | U | 0.0008 | U | | | | |
| trans-1,3-Dichloropropylene | | | mg/kg | | | | | | | 0.0004 | U | | | | | | | 0.0004 | U | 0.0004 | U | | | | |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | | | | | | | 0.0005 | U | | | | | | | 0.0005 | U | 0.0005 | U | | | | |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | | | | | | | 0.001 | U | | | | | | | 0.001 | U | 0.001 | U | | | | |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | | | | | | | 0.0007 | U | | | | | | | 0.0007 | U | 0.0007 | U | | | | |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | **Area** | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 20 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Boring** | I19-3 | | I19-3 | | I19-4 | | I19-4 | | I19-5 | | I19-5 | | I19-6 | | I19-6 | | I20-1 | |
| | | | **Sample ID** | SO-0002 | | SO-0809 | | SO-0102 | | SO-0809 | | SO-0102 | | SO-0810 | | SO-0001 | | SO-0809 | | SO-1011 | |
| | | | **Sample Date** | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/6/08 | |
| | | | **Sample Depth** | 00 to 02 | | 08 to 09 | | 01 to 02 | | 08 to 09 | | 01 to 02 | | 08 to 10 | | 00 to 01 | | 08 to 09 | | 10 to 11 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Antimony | Residential Ing. [1] | 31 | mg/kg | | | | | | | | | | | | | | | | | | |
| Arsenic | Inorg. Background [2] | 13 | mg/kg | 5.6 | | 0.29 | U | 3.9 | | 1.2 | | 3.6 | | 1.1 | | **30** | | 2.1 | | 0.33 | U |
| Barium | Residential Ing. [1] | 5500 | mg/kg | 38 | | 4.7 | | 4.8 | | 3.1 | | 23 | | 3.6 | | 120 | | 17 | | 4.9 | |
| Beryllium | Residential Ing. [1] | 160 | mg/kg | | | | | | | | | | | | | | | | | | |
| Cadmium | Residential Ing. [1] | 78 | mg/kg | 0.53 | | 0.16 | U | 0.15 | U | 0.17 | U | 0.16 | U | 0.16 | U | 0.95 | | 0.17 | U | 0.18 | U |
| Calcium | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Chromium | Residential Ing. [1] | 230 | mg/kg | 8.9 | | 3.4 | | 5.8 | | 2.7 | | 5.2 | | 3.7 | | 12 | | 5.9 | | 2.5 | |
| Cobalt | Residential Ing. [1] | 4700 | mg/kg | | | | | | | | | | | | | | | | | | |
| Copper | Residential Ing. [1] | 2900 | mg/kg | | | | | | | | | | | | | | | | | | |
| Iron | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Lead | Residential Ing. [1] | 400 | mg/kg | 140 | | 3.1 | | 11 | | 2.6 | | 68 | | 3.3 | | 320 | | 25 | | 2.8 | |
| Magnesium | Construction Ing. [3] | 730000 | mg/kg | | | | | | | | | | | | | | | | | | |
| Manganese | Residential Ing. [1] | 3700 | mg/kg | | | | | | | | | | | | | | | | | | |
| Mercury | Construction Inh. [4] | 0.1 | mg/kg | **0.49** | | 0.0016 | U | 0.0016 | U | 0.0017 | U | **0.46** | | 0.0015 | U | **0.97** | | **0.12** | | 0.0018 | U |
| Nickel | Residential Ing. [1] | 1600 | mg/kg | | | | | | | | | | | | | | | | | | |
| Potassium | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Selenium | Residential Ing. [1] | 390 | mg/kg | 0.56 | U | 0.54 | U | 0.53 | U | 0.58 | U | 0.54 | U | 0.55 | U | 0.61 | U | 0.58 | U | 0.62 | U |
| Silver | Residential Ing. [1] | 390 | mg/kg | 0.21 | U | 0.2 | U | 0.2 | U | 0.21 | U | 0.2 | U | 0.2 | U | 0.22 | U | 0.22 | U | 0.23 | U |
| Sodium | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Thallium | Residential Ing. [1] | 6.3 | mg/kg | | | | | | | | | | | | | | | | | | |
| Vanadium | Residential Ing. [1] | 550 | mg/kg | | | | | | | | | | | | | | | | | | |
| Zinc | Residential Ing. [1] | 23000 | mg/kg | | | | | | | | | | | | | | | | | | |
| % Solids | | | | 89.5 | | 91.8 | | 81.3 | | 84.7 | | 91.2 | | 92.5 | | 67.6 | | 80.4 | | 85 | |
| Cyanide | Residential Ing. [1] | 1600 | | | | | | | | | | | | | | | | | | | |
| pH | | | | 8.41 | | 9.11 | | 8.83 | | 8.86 | | 8.71 | | 9.03 | | 8.17 | | 8.27 | | 7.72 | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | |
| Aroclor-1221 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | |
| Aroclor-1232 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | |
| Aroclor-1242 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | |
| Aroclor-1248 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | |
| Aroclor-1254 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | |
| Aroclor-1260 | | 1 | mg/kg | | | | | | | | | | | | | | | | | | |
| **PESTICIDES** | | | | | | | | | | | | | | | | | | | | | |
| 4,4´-DDD | Residential Ing. [1] | 3 | mg/kg | | | | | | | | | | | | | | | | | | |
| 4,4´-DDE | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | | | | |
| 4,4´-DDT | Residential Ing. [1] | 2 | mg/kg | | | | | | | | | | | | | | | | | | |
| Aldrin | Residential Ing. [1] | 0.04 | mg/kg | | | | | | | | | | | | | | | | | | |
| alpha-BHC | Residential Soil [5] | 0.0005 | mg/kg | | | | | | | | | | | | | | | | | | |
| beta-BHC | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Chlordane | Residential Ing. [1] | 1.8 | mg/kg | | | | | | | | | | | | | | | | | | |
| delta-BHC | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Dieldrin | Industrial Soil [6] | 0.004 | mg/kg | | | | | | | | | | | | | | | | | | |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 20 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | I19-3 | | I19-3 | | I19-4 | | I19-4 | | I19-5 | | I19-5 | | I19-6 | | I19-6 | | I20-1 | |
| | | | Sample ID | SO-0002 | | SO-0809 | | SO-0102 | | SO-0809 | | SO-0102 | | SO-0810 | | SO-0001 | | SO-0809 | | SO-1011 | |
| | | | Sample Date | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/6/08 | |
| | | | Sample Depth | 00 to 02 | | 08 to 09 | | 01 to 02 | | 08 to 09 | | 01 to 02 | | 08 to 10 | | 00 to 01 | | 08 to 09 | | 10 to 11 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | |
| Endosulfan I | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Endosulfan II | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Endosulfan sulfate | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Endrin | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | |
| Endrin aldehyde | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Endrin ketone | | | mg/kg | | | | | | | | | | | | | | | | | | |
| gamma-BHC (Lindane) | Residential Soil [5] | 0.009 | mg/kg | | | | | | | | | | | | | | | | | | |
| Heptachlor | Residential Ing. [1] | 0.1 | mg/kg | | | | | | | | | | | | | | | | | | |
| Heptachlor epoxide | Residential Ing. [1] | 0.07 | mg/kg | | | | | | | | | | | | | | | | | | |
| Methoxychlor | Industrial Soil [6] | 160 | mg/kg | | | | | | | | | | | | | | | | | | |
| Toxaphene | Residential Ing. [1] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | Residential Soil [5] | 5 | mg/kg | | | | | | | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | Industrial Soil [6] | 17 | mg/kg | | | | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | mg/kg | | | | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | Residential Soil [5] | 2 | mg/kg | | | | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | Residential Soil [5] | 270 | mg/kg | | | | | | | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | Residential Soil [5] | 9 | mg/kg | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | Residential Soil [5] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | Residential Soil [5] | 0.0008 | mg/kg | | | | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | Industrial Soil [6] | 0.0007 | mg/kg | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | mg/kg | | | | | | | | | | | | | | | | | | |
| 2-Chlorophenol | Residential Soil [5] | 4 | mg/kg | | | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | Chemical Residential [7] | 7.2 | mg/kg | | | | | | | | | | | | | | | | | | |
| 2-Methylphenol | Residential Soil [5] | 15 | mg/kg | | | | | | | | | | | | | | | | | | |
| 2-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | |
| 2-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | | | | |
| 3,3´-Dichlorobenzidine | Industrial Soil [6] | 0.007 | mg/kg | | | | | | | | | | | | | | | | | | |
| 3/4-Methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | |
| 3-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | |
| 4-Bromophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | mg/kg | | | | | | | | | | | | | | | | | | |
| 4-Chloroaniline | Residential Soil [5] | 0.7 | mg/kg | | | | | | | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | mg/kg | | | | | | | | | | | | | | | | | | |
| 4-Nitroaniline | | | mg/kg | | | | | | | | | | | | | | | | | | |
| 4-Nitrophenol | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Acenaphthene | Residential Soil [5] | 570 | mg/kg | 0.0525 | | 0.00005 | U | 0.622 | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.141 | | 0.00005 | U | 0.00005 | U |
| Acenaphthylene | Chemical Residential [7] | 85 | mg/kg | 0.123 | | 0.00005 | U | 0.128 | | 0.00005 | U | 0.0625 | | 0.00005 | U | 0.524 | | 0.00005 | U | 0.00005 | U |
| Anthracene | Residential Soil [5] | 12000 | mg/kg | 0.276 | | 0.00008 | U | 3.78 | | 0.00008 | U | 0.104 | | 0.00008 | U | 0.972 | | 0.00008 | U | 0.00008 | U |
| Benzo (a) anthracene | Background PAHs [8] | 1.1 | mg/kg | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U | 0.000008 | U |
| Benzo (a) pyrene | Background PAHs [8] | 1.3 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |
| Benzo (b) fluoranthene | Background PAHs [8] | 1.5 | mg/kg | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.0176 | |
| Benzo (g,h,i) perylene | Chemical Residential [7] | 2300 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 20 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | I19-3 | | I19-3 | | I19-4 | | I19-4 | | I19-5 | | I19-5 | | I19-6 | | I19-6 | | I20-1 | |
| | | | Sample ID | SO-0002 | | SO-0809 | | SO-0102 | | SO-0809 | | SO-0102 | | SO-0810 | | SO-0001 | | SO-0809 | | SO-1011 | |
| | | | Sample Date | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/6/08 | |
| | | | Sample Depth | 00 to 02 | | 08 to 09 | | 01 to 02 | | 08 to 09 | | 01 to 02 | | 08 to 10 | | 00 to 01 | | 08 to 09 | | 10 to 11 | |
| **Analyte** | **Criteria Source** | **MSL [12]** | **Units** | | | | | | | | | | | | | | | | | | |
| Benzo (k) fluoranthene | Residential Ing. Exp. [10] | 9 | mg/kg | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U | 0.00001 | U |
| Benzyl alcohol | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | Residential Soil [5] | 0.0004 | mg/kg | | | | | | | | | | | | | | | | | | |
| Bis(2-chloroisopropyl)ether | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | Residential Ing. [1] | 46 | mg/kg | | | | | | | | | | | | | | | | | | |
| Butyl benzyl phthalate | Residential Soil [5] | 930 | mg/kg | | | | | | | | | | | | | | | | | | |
| Carbazole | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | | |
| Chrysene | Residential Ing. Exp. [10] | 88 | mg/kg | 1.73 | | 0.00005 | U | 6.36 | | 0.00005 | U | 0.554 | | 0.00005 | U | 4.52 | | 0.00005 | U | 0.00005 | U |
| Dibenz (a,h) anthracene | Background PAHs [8] | 0.2 | mg/kg | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U | 0.00002 | U |
| Dibenzofuran | Chemical Residential [7] | 6.1 | mg/kg | | | | | | | | | | | | | | | | | | |
| Diethyl phthalate | Industrial Soil [6] | 470 | mg/kg | | | | | | | | | | | | | | | | | | |
| Dimethyl phthalate | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Di-n-butyl phthalate | Residential Inh. [9] | 2300 | mg/kg | | | | | | | | | | | | | | | | | | |
| Di-n-octyl phthalate | Residential Inh. [9] | 1600 | mg/kg | | | | | | | | | | | | | | | | | | |
| Fluoranthene | Residential Ing. Exp. [10] | 3100 | mg/kg | 2.68 | | 0.0632 | | 16.7 | | 0.00005 | U | 0.902 | | 0.00005 | U | 8.16 | | 0.0771 | | 0.00005 | U |
| Fluorene | Residential Soil [5] | 560 | mg/kg | 0.0559 | | 0.00003 | U | 0.748 | | 0.00003 | U | 0.00003 | U | 0.00003 | U | 0.161 | | 0.00003 | U | 0.00003 | U |
| Hexachlorobenzene | Residential Inh. [9] | 0.4 | mg/kg | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | Construction Inh. [4] | 1.1 | mg/kg | | | | | | | | | | | | | | | | | | |
| Hexachloroethane | Residential Soil [5] | 0.5 | mg/kg | | | | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | Background PAHs [8] | 0.86 | mg/kg | **0.874** | | 0.0882 | | **1.99** | | 0.00002 | U | 0.228 | | 0.00002 | U | **1.77** | | 0.00002 | U | 0.00002 | U |
| Isophorone | Industrial Soil [6] | 8 | mg/kg | | | | | | | | | | | | | | | | | | |
| Naphthalene | Construction Inh. [4] | 1.8 | mg/kg | 0.232 | | 0.00005 | U | 0.279 | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.173 | | 0.00005 | U | 0.00005 | U |
| Nitrobenzene | Residential Soil [5] | 0.1 | mg/kg | | | | | | | | | | | | | | | | | | |
| N-Nitrosodi-n-propylamine | Soil Component [11] | 0.00005 | mg/kg | | | | | | | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | Residential Soil [5] | 1 | mg/kg | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | Industrial Soil [6] | 0.03 | mg/kg | | | | | | | | | | | | | | | | | | |
| Phenanthrene | Residential Soil [5] | 200 | mg/kg | 0.777 | | 0.00003 | U | 9.4 | | 0.00003 | U | 0.22 | | 0.00003 | U | 2.76 | | 0.0672 | | 0.00003 | U |
| Phenol | Residential Soil [5] | 100 | mg/kg | | | | | | | | | | | | | | | | | | |
| Pyrene | Residential Ing. Exp. [10] | 2300 | mg/kg | 2.62 | | 0.0545 | | 13.6 | | 0.00005 | U | 0.788 | | 0.00005 | U | 7.36 | | 0.0709 | | 0.00005 | U |
| **TCLP Metals** | | | | | | | | | | | | | | | | | | | | | |
| Chromium | Industrial Soil [6] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | |
| Lead | Industrial Soil [6] | 0.0075 | mg/L | | | | | | | | | | | | | | | | | | |
| Mercury | Industrial Soil [6] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Residential Soil [5] | 2 | mg/kg | | | | | | | | | | | | | | | | | 0.002 | U |
| 1,1,2,2-Tetrachloroethane | | | mg/kg | | | | | | | | | | | | | | | | | 0.004 | U |
| 1,1,2-Trichloroethane | Industrial Soil [6] | 0.02 | mg/kg | | | | | | | | | | | | | | | | | 0.0003 | U |
| 1,1-Dichloroethane | Residential Soil [5] | 23 | mg/kg | | | | | | | | | | | | | | | | | 0.0006 | U |
| 1,1-Dichloroethylene | Industrial Soil [6] | 0.06 | mg/kg | | | | | | | | | | | | | | | | | 0.0008 | U |

APPENDIX B
Summary of Phase II Soil Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 20 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring | I19-3 | | I19-3 | | I19-4 | | I19-4 | | I19-5 | | I19-5 | | I19-6 | | I19-6 | | I20-1 | |
| | | | Sample ID | SO-0002 | | SO-0809 | | SO-0102 | | SO-0809 | | SO-0102 | | SO-0810 | | SO-0001 | | SO-0809 | | SO-1011 | |
| | | | Sample Date | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 5/6/08 | |
| | | | Sample Depth | 00 to 02 | | 08 to 09 | | 01 to 02 | | 08 to 09 | | 01 to 02 | | 08 to 10 | | 00 to 01 | | 08 to 09 | | 10 to 11 | |
| **Analyte** | **Criteria Source** | **MSL** [12] | **Units** | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloroethane | Residential Soil [5] | 0.02 | mg/kg | | | | | | | | | | | | | | | | | 0.0005 | U |
| 1,2-Dichloropropane | Residential Soil [5] | 0.03 | mg/kg | | | | | | | | | | | | | | | | | 0.00005 | U |
| 2-Butanone | | | mg/kg | | | | | | | | | | | | | | | | | 0.0005 | U |
| 2-Hexanone | | | mg/kg | | | | | | | | | | | | | | | | | 0.0006 | U |
| Acetone | Residential Soil [5] | 16 | mg/kg | | | | | | | | | | | | | | | | | 0.001 | U |
| Benzene | Residential Soil [5] | 0.03 | mg/kg | | | | | | | | | | | | | | | | | 0.0006 | U |
| Bromodichloromethane | Industrial Soil [6] | 0.6 | mg/kg | | | | | | | | | | | | | | | | | 0.0004 | U |
| Bromoform | Industrial Soil [6] | 0.8 | mg/kg | | | | | | | | | | | | | | | | | 0.0003 | U |
| Bromomethane | Industrial Soil [6] | 0.2 | mg/kg | | | | | | | | | | | | | | | | | 0.0009 | U |
| Carbon disulfide | Construction Inh. [4] | 9 | mg/kg | | | | | | | | | | | | | | | | | 0.0009 | U |
| Carbon Tetrachloride | Residential Soil [5] | 0.07 | mg/kg | | | | | | | | | | | | | | | | | 0.0007 | U |
| Chlorobenzene | Industrial Soil [6] | 1 | mg/kg | | | | | | | | | | | | | | | | | 0.0005 | U |
| Chloroethane | | | mg/kg | | | | | | | | | | | | | | | | | 0.001 | U |
| Chloroform | Residential Inh. [9] | 0.3 | mg/kg | | | | | | | | | | | | | | | | | 0.0006 | U |
| Chloromethane | | | mg/kg | | | | | | | | | | | | | | | | | 0.001 | U |
| cis-1,2-Dichloroethylene | Residential Soil [5] | 0.4 | mg/kg | | | | | | | | | | | | | | | | | 0.0006 | U |
| cis-1,3-Dichloropropylene | | | mg/kg | | | | | | | | | | | | | | | | | 0.0004 | U |
| Dibromochloromethane | Residential Soil [5] | 0.4 | mg/kg | | | | | | | | | | | | | | | | | 0.0004 | U |
| Ethylbenzene | Industrial Soil [6] | 13 | mg/kg | | | | | | | | | | | | | | | | | 0.0007 | U |
| Methyl Isobutyl Ketone | | | mg/kg | | | | | | | | | | | | | | | | | 0.0004 | U |
| Methylene Chloride | Industrial Soil [6] | 0.02 | mg/kg | | | | | | | | | | | | | | | | | 0.0006 | U |
| Methyl-tert-Butyl Ether | Residential Soil [5] | 0.32 | mg/kg | | | | | | | | | | | | | | | | | 0.0004 | U |
| Styrene | Industrial Soil [6] | 4 | mg/kg | | | | | | | | | | | | | | | | | 0.001 | U |
| Tetrachloroethene | Industrial Soil [6] | 0.06 | mg/kg | | | | | | | | | | | | | | | | | 0.0005 | U |
| Toluene | Residential Soil [5] | 12 | mg/kg | | | | | | | | | | | | | | | | | 0.0007 | U |
| trans-1,2-Dichloroethylene | Residential Soil [5] | 0.7 | mg/kg | | | | | | | | | | | | | | | | | 0.0008 | U |
| trans-1,3-Dichloropropylene | | | mg/kg | | | | | | | | | | | | | | | | | 0.0004 | U |
| Trichloroethene | Residential Soil [5] | 0.06 | mg/kg | | | | | | | | | | | | | | | | | 0.0005 | U |
| Vinyl chloride | Residential Soil [5] | 0.01 | mg/kg | | | | | | | | | | | | | | | | | 0.001 | U |
| Xylenes, total | Construction Inh. [4] | 5.6 | mg/kg | | | | | | | | | | | | | | | | | 0.0007 | U |

[1] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Ingestion
[2] IEPA, TACO, Background, Inorganics, Within Metro Areas
[3] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Ingestion
[4] IEPA, TACO, Construction Worker, Exposure Route-Specific Values for Soils, Inhalation
[5] IEPA, TACO, Residential, Soil Component of the Groundwater Ingestion Exposure, Class 1
[6] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[7] IEPA, Non-TACO Chemical list, Residential Soil Threat to Groundwater Exposure, Class 1
[8] IEPA, TACO, Background, PAHs, Chicago
[9] IEPA, TACO, Residential, Exposure Route-Specific Values for Soils, Inhalation
[10] IEPA, TACO, Residential Ingestion Exposure
[11] IEPA, TACO, Industrial, Soil Component of the Groundwater Ingestion, Class 1
[12] MSL is the Minimum Screening Limit

U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

# Appendix C
# Summary of Phase II Groundwater Analytical Data

APPENDIX C
Summary of Phase II Groundwater Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area> | 1 | | 1 | | 1 | | 1 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring> | ASC1 | | ASC2a | | ASC4 | | ASC4 | | MWD | | MW-D | | U2-2 | | U2-2 | | U2-6 | | U2-6 | | U2-8 | |
| | | | Sample ID> | GW-050608 | | GW-050608 | | GW-050608 | | GW-050608D | | GW-050608 | | GW-051408 | | GW-050708 | | GW-051408 | | GW-061308 | | GW-061308FD | | GW-061308 | |
| | | | Sample Date> | 5/6/08 | | 5/6/08 | | 5/6/08 | | 5/6/08 | | 5/6/08 | | 5/14/08 | | 5/7/08 | | 5/14/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | |
| **Analyte** | **Criteria Source** | **MSL [1]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Arsenic | Groundwater [2] | 0.05 | mg/L | | | | | | | | | | | 0.0015 | U | | | | | | | | | | |
| Barium | Groundwater [2] | 2 | mg/L | | | | | | | | | | | 0.12 | | | | | | | | | | | |
| Cadmium | Groundwater [2] | 0.005 | mg/L | | | | | | | | | | | 0.00033 | U | | | | | | | | | | |
| Chromium | Groundwater [2] | 0.1 | mg/L | | | | | | | | | | | 0.0094 | | | | | | | | | | | |
| Lead | Groundwater [2] | 0.0075 | mg/L | | | | | | | | | | | **0.02** | | | | **0.9** | | **0.195** | | **0.031** | | **0.025** | |
| Mercury | Groundwater [2] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Selenium | Groundwater [2] | 0.05 | mg/L | | | | | | | | | | | 0.0016 | U | | | | | | | | | | |
| Silver | Groundwater [2] | 0.05 | mg/L | | | | | | | | | | | 0.00039 | U | | | | | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | Groundwater [2] | 0.42 | mg/L | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | | | 0.0000004 | U | | | 0.0000004 | U | | | 0.0000004 | U |
| Acenaphthylene | | | mg/L | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | | | 0.0000003 | U | | | 0.0000003 | U | | | 0.0000003 | U |
| Anthracene | Groundwater [2] | 2.1 | mg/L | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | | | 0.0000008 | U | | | 0.0000008 | U | | | 0.0000008 | U |
| Benzo (a) anthracene | Groundwater [2] | 0.00013 | mg/L | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | | | 0.0000001 | U | | | 0.0000001 | U | | | 0.0000001 | U |
| Benzo (a) pyrene | Groundwater [2] | 0.0002 | mg/L | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | | | 0.0000002 | U | | | 0.0000002 | U | | | 0.0000002 | U |
| Benzo (b) fluoranthene | Groundwater [2] | 0.00018 | mg/L | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | | | 0.0000001 | U | | | 0.0000001 | U | | | 0.0000001 | U |
| Benzo (g,h,i) perylene | | | mg/L | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | | | 0.0000007 | U | | | 0.0000007 | U | | | 0.0000007 | U |
| Benzo (k) fluoranthene | Groundwater [2] | 0.00017 | mg/L | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | | | 0.0000001 | U | | | 0.0000001 | U | | | 0.0000001 | U |
| Chrysene | Groundwater [2] | 0.0015 | mg/L | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | | | 0.000001 | U | | | 0.000001 | U | | | 0.000001 | U |
| Dibenz (a,h) anthracene | Groundwater [2] | 0.0003 | mg/L | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | | | 0.0000003 | U | | | 0.0000003 | U | | | 0.0000003 | U |
| Fluoranthene | Groundwater [2] | 0.28 | mg/L | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | | | 0.0000009 | U | | | 0.0000009 | U | | | 0.0000009 | U |
| Fluorene | Groundwater [2] | 0.28 | mg/L | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | | | 0.0000004 | U | | | 0.0000004 | U | | | 0.0000004 | U |
| Indeno(1,2,3-cd)pyrene | Groundwater [2] | 0.00043 | mg/L | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | | | 0.0000004 | U | | | 0.0000004 | U | | | 0.0000004 | U |
| Naphthalene | Groundwater [2] | 0.14 | mg/L | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | | | 0.0000006 | U | | | 0.0000006 | U | | | 0.0000006 | U |
| Phenanthrene | | | mg/L | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | | | 0.0000003 | U | | | 0.0000003 | U | | | 0.0000003 | U |
| Pyrene | Groundwater [2] | 0.21 | mg/L | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | | | 0.000002 | U | | | 0.000002 | U | | | 0.000002 | U |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Groundwater [2] | 0.2 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | | | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,2-Trichloroethane | Groundwater [2] | 0.005 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloroethane | Groundwater [2] | 0.7 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloroethylene | Groundwater [2] | 0.007 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloroethane | Groundwater [2] | 0.005 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloropropane | Groundwater [2] | 0.005 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| 2-Butanone | | | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| 2-Hexanone | | | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | Groundwater [2] | 6.3 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Benzene | Groundwater [2] | 0.005 | mg/L | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | | | 0.00004 | U | | | | | | | | |
| Bromodichloromethane | Groundwater [2] | 0.0002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Bromoform | Groundwater [2] | 0.001 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Bromomethane | Groundwater [2] | 0.0098 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Carbon disulfide | Groundwater [2] | 0.7 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Carbon Tetrachloride | Groundwater [2] | 0.005 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Chlorobenzene | Groundwater [2] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Chloroethane | | | mg/L | | | | | | | | | | | | | | | | | | | | | | |

APPENDIX C
Summary of Phase II Groundwater Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area> | 1 | | 1 | | 1 | | 1 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring> | ASC1 | | ASC2a | | ASC4 | | ASC4 | | MWD | | MW-D | | U2-2 | | U2-2 | | U2-6 | | U2-6 | | U2-8 | |
| | | | Sample ID> | GW-050608 | | GW-050608 | | GW-050608 | | GW-050608D | | GW-050608 | | GW-051408 | | GW-050708 | | GW-051408 | | GW-061308 | | GW-061308FD | | GW-061308 | |
| | | | Sample Date> | 5/6/08 | | 5/6/08 | | 5/6/08 | | 5/6/08 | | 5/6/08 | | 5/14/08 | | 5/7/08 | | 5/14/08 | | 6/13/08 | | 6/13/08 | | 6/13/08 | |
| **Analyte** | **Criteria Source** | **MSL [1]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Chloroform | Groundwater [2] | 0.0002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Chloromethane | | | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| cis-1,2-Dichloroethylene | Groundwater [2] | 0.07 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| cis-1,3-Dichloropropylene | | | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Dibromochloromethane | Groundwater [2] | 0.14 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Ethylbenzene | Groundwater [2] | 0.7 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | | | 0.0001 | U | | | | | | | | |
| Methyl Isobutyl Ketone | | | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Methylene Chloride | Groundwater [2] | 0.005 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Methyl-tert-Butyl Ether | Groundwater [2] | 0.07 | mg/L | | | | | | | | | | | 0.000123 | U | | | 0.000123 | U | | | | | | |
| Styrene | Groundwater [2] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Tetrachloroethene | Groundwater [2] | 0.005 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Toluene | Groundwater [2] | 1 | mg/L | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | | | 0.0002 | U | | | | | | | | |
| trans-1,2-Dichloroethylene | Groundwater [2] | 0.1 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| trans-1,3-Dichloropropylene | | | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Trichloroethene | Groundwater [2] | 0.005 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Vinyl chloride | Groundwater [2] | 0.002 | mg/L | | | | | | | | | | | | | | | | | | | | | | |
| Xylenes, total | Groundwater [2] | 10 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | | | 0.0001 | U | | | | | | | | |

Notes:
[1] MSL is the Minimum Screening Limit
[2] IEPA, TACO, Groundwater Remediation Objective, Class 1
U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX C
Summary of Phase II Groundwater Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area> | 3 | | 3 | | 4 | | 4 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring> | MW3 | | U3-3 | | U4-1 | | U4-4 | | I5-1 | | P5-1 | | P5-3 | | P5-4 | | P5-4 | | P5-5 | | P5-6 | |
| | | | Sample ID> | GW-050608 | | GW-051308 | | GW-050808 | | GW-050808 | | GW-051308 | | GW-051208 | | GW-051208 | | GW-051208 | | GW-051208D | | GW-050708 | | GW-061308 | |
| | | | Sample Date> | 5/6/08 | | 5/13/08 | | 5/8/08 | | 5/8/08 | | 5/13/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/7/08 | | 6/13/08 | |
| **Analyte** | **Criteria Source** | **MSL [1]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Arsenic | Groundwater [2] | 0.05 | mg/L | | | | | 0.0094 | | | | 0.0015 | U | **0.073** | | 0.0087 | | 0.0015 | U | 0.0015 | U | 0.045 | | 0.017 | |
| Barium | Groundwater [2] | 2 | mg/L | | | | | 0.26 | | | | 0.013 | | 0.39 | | 0.024 | | 0.043 | | 0.047 | | 0.12 | | 0.018 | |
| Cadmium | Groundwater [2] | 0.005 | mg/L | | | | | 0.00033 | U | | | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U |
| Chromium | Groundwater [2] | 0.1 | mg/L | | | | | 0.025 | | | | 0.00055 | U | **0.4** | | 0.0077 | | 0.00055 | U | 0.0048 | | 0.046 | | 0.0051 | |
| Lead | Groundwater [2] | 0.0075 | mg/L | | | | | **0.19** | | | | 0.0054 | | **0.24** | | **0.032** | | 0.0039 | | 0.0064 | | **0.12** | | **0.008** | |
| Mercury | Groundwater [2] | 0.002 | mg/L | | | | | 0.00047 | | | | 0.000021 | U | 0.00078 | | 0.000021 | U | 0.000021 | U | 0.000021 | U | 0.00026 | | 0.000021 | U |
| Selenium | Groundwater [2] | 0.05 | mg/L | | | | | 0.0016 | U | | | 0.0016 | U | 0.012 | | 0.0016 | U | 0.0079 | | 0.0085 | | 0.0073 | | 0.0016 | U |
| Silver | Groundwater [2] | 0.05 | mg/L | | | | | 0.00039 | U | | | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | Groundwater [2] | 0.42 | mg/L | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | | |
| Acenaphthylene | | | mg/L | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | | |
| Anthracene | Groundwater [2] | 2.1 | mg/L | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | | |
| Benzo (a) anthracene | Groundwater [2] | 0.00013 | mg/L | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | | |
| Benzo (a) pyrene | Groundwater [2] | 0.0002 | mg/L | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | | |
| Benzo (b) fluoranthene | Groundwater [2] | 0.00018 | mg/L | **0.00063** | | 0.0000001 | U | 0.00013 | | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | | |
| Benzo (g,h,i) perylene | | | mg/L | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | | |
| Benzo (k) fluoranthene | Groundwater [2] | 0.00017 | mg/L | **0.00035** | | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | | |
| Chrysene | Groundwater [2] | 0.0015 | mg/L | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | | |
| Dibenz (a,h) anthracene | Groundwater [2] | 0.0003 | mg/L | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | | |
| Fluoranthene | Groundwater [2] | 0.28 | mg/L | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | | |
| Fluorene | Groundwater [2] | 0.28 | mg/L | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | | |
| Indeno(1,2,3-cd)pyrene | Groundwater [2] | 0.00043 | mg/L | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | | |
| Naphthalene | Groundwater [2] | 0.14 | mg/L | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | | |
| Phenanthrene | | | mg/L | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | | |
| Pyrene | Groundwater [2] | 0.21 | mg/L | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Groundwater [2] | 0.2 | mg/L | | | | | 0.00005 | U | | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| 1,1,2,2-Tetrachloroethane | | | mg/L | | | | | 0.0002 | U | | | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U |
| 1,1,2-Trichloroethane | Groundwater [2] | 0.005 | mg/L | | | | | 0.0002 | U | | | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U |
| 1,1-Dichloroethane | Groundwater [2] | 0.7 | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| 1,1-Dichloroethylene | Groundwater [2] | 0.007 | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| 1,2-Dichloroethane | Groundwater [2] | 0.005 | mg/L | | | | | 0.00005 | U | | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| 1,2-Dichloropropane | Groundwater [2] | 0.005 | mg/L | | | | | 0.00005 | U | | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| 2-Butanone | | | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| 2-Hexanone | | | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Acetone | Groundwater [2] | 6.3 | mg/L | | | | | 0.0005 | U | | | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U |
| Benzene | Groundwater [2] | 0.005 | mg/L | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U |
| Bromodichloromethane | Groundwater [2] | 0.0002 | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Bromoform | Groundwater [2] | 0.001 | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Bromomethane | Groundwater [2] | 0.0098 | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Carbon disulfide | Groundwater [2] | 0.7 | mg/L | | | | | 0.00006 | U | | | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U |
| Carbon Tetrachloride | Groundwater [2] | 0.005 | mg/L | | | | | 0.00006 | U | | | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U |
| Chlorobenzene | Groundwater [2] | 0.1 | mg/L | | | | | 0.00004 | U | | | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U |
| Chloroethane | | | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |

APPENDIX C
Summary of Phase II Groundwater Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area> | 3 | | 3 | | 4 | | 4 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring> | MW3 | | U3-3 | | U4-1 | | U4-4 | | I5-1 | | P5-1 | | P5-3 | | P5-4 | | P5-4 | | P5-5 | | P5-6 | |
| | | | Sample ID> | GW-050608 | | GW-051308 | | GW-050808 | | GW-050808 | | GW-051308 | | GW-051208 | | GW-051208 | | GW-051208 | | GW-051208D | | GW-050708 | | GW-061308 | |
| | | | Sample Date> | 5/6/08 | | 5/13/08 | | 5/8/08 | | 5/8/08 | | 5/13/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/12/08 | | 5/7/08 | | 6/13/08 | |
| **Analyte** | **Criteria Source** | **MSL [1]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Chloroform | Groundwater [2] | 0.0002 | mg/L | | | | | 0.0001 | U | | | **0.006** | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Chloromethane | | | mg/L | | | | | 0.0002 | U | | | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U |
| cis-1,2-Dichloroethylene | Groundwater [2] | 0.07 | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| cis-1,3-Dichloropropylene | | | mg/L | | | | | 0.00004 | U | | | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U |
| Dibromochloromethane | Groundwater [2] | 0.14 | mg/L | | | | | 0.0004 | U | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U |
| Ethylbenzene | Groundwater [2] | 0.7 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Methyl Isobutyl Ketone | | | mg/L | | | | | 0.0004 | U | | | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U |
| Methylene Chloride | Groundwater [2] | 0.005 | mg/L | | | | | 0.0006 | U | | | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U |
| Methyl-tert-Butyl Ether | Groundwater [2] | 0.07 | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Styrene | Groundwater [2] | 0.1 | mg/L | | | | | 0.00005 | U | | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Tetrachloroethene | Groundwater [2] | 0.005 | mg/L | | | | | 0.00005 | U | | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Toluene | Groundwater [2] | 1 | mg/L | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U |
| trans-1,2-Dichloroethylene | Groundwater [2] | 0.1 | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| trans-1,3-Dichloropropylene | | | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Trichloroethene | Groundwater [2] | 0.005 | mg/L | | | | | 0.00005 | U | | | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Vinyl chloride | Groundwater [2] | 0.002 | mg/L | | | | | 0.0001 | U | | | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Xylenes, total | Groundwater [2] | 10 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |

Notes:
[1] MSL is the Minimum Screening Limit
[2] IEPA, TACO, Groundwater Remediation Objective, Class 1
U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX C
Summary of Phase II Groundwater Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area> | 5 | | 7 | | 8 | | 9 | | 9 | | 10 | | 11 | | 11 | | 12 | | 13 | | 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring> | U5-2 | | U7-1 | | U8-1 | | U9-1 | | U9-2 | | U10-2 | | P11-1 | | U11-2 | | U12-1 | | U13-2 | | U14-1 | |
| | | | Sample ID> | GW-051208 | | GW-050708 | | GW-051208 | | GW-050808 | | GW-050808 | | GW-050908 | | GW-050808 | | GW-050908 | | GW-051308 | | GW-051308 | | GW-050908 | |
| | | | Sample Date> | 5/12/08 | | 5/7/08 | | 5/12/08 | | 5/8/08 | | 5/8/08 | | 5/9/08 | | 5/8/08 | | 5/9/08 | | 5/13/08 | | 5/13/08 | | 5/9/08 | |
| **Analyte** | **Criteria Source** | **MSL [1]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Arsenic | Groundwater [2] | 0.05 | mg/L | | | 0.018 | | | | | | | | | | 0.017 | | | | | | 0.004 | | 0.012 | |
| Barium | Groundwater [2] | 2 | mg/L | | | 0.057 | | | | | | | | | | 0.058 | | | | | | 0.078 | | 0.067 | |
| Cadmium | Groundwater [2] | 0.005 | mg/L | | | 0.00033 | U | | | | | | | | | 0.00033 | U | | | | | 0.00033 | U | 0.00033 | U |
| Chromium | Groundwater [2] | 0.1 | mg/L | | | 0.00055 | U | | | | | | | | | 0.068 | | | | | | 0.019 | | 0.014 | |
| Lead | Groundwater [2] | 0.0075 | mg/L | | | 0.0009 | U | | | | | | | | | **0.04** | | | | **0.026** | | **0.015** | | **0.038** | |
| Mercury | Groundwater [2] | 0.002 | mg/L | | | 0.000021 | U | | | | | | | | | 0.000021 | U | | | | | 0.000021 | U | 0.000021 | U |
| Selenium | Groundwater [2] | 0.05 | mg/L | | | 0.0016 | U | | | | | | | | | 0.0016 | U | | | | | 0.0016 | U | 0.0016 | U |
| Silver | Groundwater [2] | 0.05 | mg/L | | | 0.00039 | U | | | | | | | | | 0.00039 | U | | | | | 0.00039 | U | 0.00039 | U |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | Groundwater [2] | 0.42 | mg/L | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U |
| Acenaphthylene | | | mg/L | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U |
| Anthracene | Groundwater [2] | 2.1 | mg/L | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U |
| Benzo (a) anthracene | Groundwater [2] | 0.00013 | mg/L | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U |
| Benzo (a) pyrene | Groundwater [2] | 0.0002 | mg/L | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U |
| Benzo (b) fluoranthene | Groundwater [2] | 0.00018 | mg/L | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U |
| Benzo (g,h,i) perylene | | | mg/L | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U |
| Benzo (k) fluoranthene | Groundwater [2] | 0.00017 | mg/L | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U |
| Chrysene | Groundwater [2] | 0.0015 | mg/L | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U | 0.000001 | U |
| Dibenz (a,h) anthracene | Groundwater [2] | 0.0003 | mg/L | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U |
| Fluoranthene | Groundwater [2] | 0.28 | mg/L | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U |
| Fluorene | Groundwater [2] | 0.28 | mg/L | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U |
| Indeno(1,2,3-cd)pyrene | Groundwater [2] | 0.00043 | mg/L | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U |
| Naphthalene | Groundwater [2] | 0.14 | mg/L | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U |
| Phenanthrene | | | mg/L | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U |
| Pyrene | Groundwater [2] | 0.21 | mg/L | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.000002 | U |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Groundwater [2] | 0.2 | mg/L | | | 0.00005 | U | | | | | | | | | 0.00005 | U | | | | | 0.00005 | U | 0.00005 | U |
| 1,1,2,2-Tetrachloroethane | | | mg/L | | | 0.0002 | U | | | | | | | | | 0.0002 | U | | | | | 0.0002 | U | 0.0002 | U |
| 1,1,2-Trichloroethane | Groundwater [2] | 0.005 | mg/L | | | 0.0002 | U | | | | | | | | | 0.0002 | U | | | | | 0.0002 | U | 0.0002 | U |
| 1,1-Dichloroethane | Groundwater [2] | 0.7 | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| 1,1-Dichloroethylene | Groundwater [2] | 0.007 | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| 1,2-Dichloroethane | Groundwater [2] | 0.005 | mg/L | | | 0.00005 | U | | | | | | | | | 0.00005 | U | | | | | 0.00005 | U | 0.00005 | U |
| 1,2-Dichloropropane | Groundwater [2] | 0.005 | mg/L | | | 0.00005 | U | | | | | | | | | 0.00005 | U | | | | | 0.00005 | U | 0.00005 | U |
| 2-Butanone | | | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| 2-Hexanone | | | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| Acetone | Groundwater [2] | 6.3 | mg/L | | | 0.0005 | U | | | | | | | | | 0.0005 | U | | | | | 0.0005 | U | 0.0005 | U |
| Benzene | Groundwater [2] | 0.005 | mg/L | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.000045 | U | 0.00004 | U | 0.00004 | U |
| Bromodichloromethane | Groundwater [2] | 0.0002 | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| Bromoform | Groundwater [2] | 0.001 | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| Bromomethane | Groundwater [2] | 0.0098 | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| Carbon disulfide | Groundwater [2] | 0.7 | mg/L | | | 0.00006 | U | | | | | | | | | 0.00006 | U | | | | | 0.00006 | U | 0.00006 | U |
| Carbon Tetrachloride | Groundwater [2] | 0.005 | mg/L | | | 0.00006 | U | | | | | | | | | 0.00006 | U | | | | | 0.00006 | U | 0.00006 | U |
| Chlorobenzene | Groundwater [2] | 0.1 | mg/L | | | 0.00004 | U | | | | | | | | | 0.00004 | U | | | | | 0.00004 | U | 0.00004 | U |
| Chloroethane | | | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |

APPENDIX C
Summary of Phase II Groundwater Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area> | 5 | | 7 | | 8 | | 9 | | 9 | | 10 | | 11 | | 11 | | 12 | | 13 | | 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring> | U5-2 | | U7-1 | | U8-1 | | U9-1 | | U9-2 | | U10-2 | | P11-1 | | U11-2 | | U12-1 | | U13-2 | | U14-1 | |
| | | | Sample ID> | GW-051208 | | GW-050708 | | GW-051208 | | GW-050808 | | GW-050808 | | GW-050908 | | GW-050808 | | GW-050908 | | GW-051308 | | GW-051308 | | GW-050908 | |
| | | | Sample Date> | 5/12/08 | | 5/7/08 | | 5/12/08 | | 5/8/08 | | 5/8/08 | | 5/9/08 | | 5/8/08 | | 5/9/08 | | 5/13/08 | | 5/13/08 | | 5/9/08 | |
| **Analyte** | **Criteria Source** | **MSL [1]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Chloroform | Groundwater [2] | 0.0002 | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| Chloromethane | | | mg/L | | | 0.0002 | U | | | | | | | | | 0.0002 | U | | | | | 0.0002 | U | 0.0002 | U |
| cis-1,2-Dichloroethylene | Groundwater [2] | 0.07 | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| cis-1,3-Dichloropropylene | | | mg/L | | | 0.00004 | U | | | | | | | | | 0.00004 | U | | | | | 0.00004 | U | 0.00004 | U |
| Dibromochloromethane | Groundwater [2] | 0.14 | mg/L | | | 0.0004 | U | | | | | | | | | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U |
| Ethylbenzene | Groundwater [2] | 0.7 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.000105 | U | 0.0001 | U | 0.0001 | U |
| Methyl Isobutyl Ketone | | | mg/L | | | 0.0004 | U | | | | | | | | | 0.0004 | U | | | | | 0.0004 | U | 0.0004 | U |
| Methylene Chloride | Groundwater [2] | 0.005 | mg/L | | | 0.0006 | U | | | | | | | | | 0.0006 | U | | | | | 0.0006 | U | 0.0006 | U |
| Methyl-tert-Butyl Ether | Groundwater [2] | 0.07 | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | 0.000123 | U | 0.0001 | U | 0.0001 | U |
| Styrene | Groundwater [2] | 0.1 | mg/L | | | 0.00005 | U | | | | | | | | | 0.00005 | U | | | | | 0.00005 | U | 0.00005 | U |
| Tetrachloroethene | Groundwater [2] | 0.005 | mg/L | | | 0.00005 | U | | | | | | | | | 0.00005 | U | | | | | 0.00005 | U | 0.00005 | U |
| Toluene | Groundwater [2] | 1 | mg/L | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.000172 | U | 0.0002 | U | 0.0002 | U |
| trans-1,2-Dichloroethylene | Groundwater [2] | 0.1 | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| trans-1,3-Dichloropropylene | | | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| Trichloroethene | Groundwater [2] | 0.005 | mg/L | | | 0.00005 | U | | | | | | | | | 0.00005 | U | | | | | 0.00005 | U | 0.00005 | U |
| Vinyl chloride | Groundwater [2] | 0.002 | mg/L | | | 0.0001 | U | | | | | | | | | 0.0001 | U | | | | | 0.0001 | U | 0.0001 | U |
| Xylenes, total | Groundwater [2] | 10 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.00014 | U | 0.0001 | U | 0.0001 | U |

Notes:
[1] MSL is the Minimum Screening Limit
[2] IEPA, TACO, Groundwater Remediation Objective, Class 1
U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX C
Summary of Phase II Groundwater Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area> | 14 | | 14 | | 14 | | 14 | | 15 | | 16 | | 17 | | 18 | | 18 | | 18 | | 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring> | U14-1 | | U14-2 | | U14-4 | | U14-5 | | U15-1 | | P16-1 | | P17-1 | | I18-1 | | I18-4 | | I18-4 | | I18-6 | |
| | | | Sample ID> | GW-050908D | | GW-050708 | | GW-061208 | | GW-061208 | | GW-050708 | | GW-050908 | | GW-051408 | | GW-050608 | | GW-061308 | | GW-061308FD | | GW-061208 | G |
| | | | Sample Date> | 5/9/08 | | 5/7/08 | | 6/12/08 | | 6/12/08 | | 5/7/08 | | 5/9/08 | | 5/14/08 | | 5/6/08 | | 6/13/08 | | 6/13/08 | | 6/12/08 | |
| **Analyte** | **Criteria Source** | **MSL [1]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Arsenic | Groundwater [2] | 0.05 | mg/L | 0.015 | | 0.033 | | 0.0015 | U | 0.0015 | U | 0.0073 | | 0.013 | | 0.0015 | U | 0.0067 | | | | | | | |
| Barium | Groundwater [2] | 2 | mg/L | 0.08 | | 0.23 | | 0.2 | | 0.12 | | 0.38 | | 0.05 | | 0.034 | | 0.1 | | | | | | | |
| Cadmium | Groundwater [2] | 0.005 | mg/L | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | | | | | | |
| Chromium | Groundwater [2] | 0.1 | mg/L | 0.023 | | 0.028 | | 0.00055 | U | 0.00055 | U | 0.0046 | | 0.033 | | 0.0089 | | 0.00055 | U | | | | | | |
| Lead | Groundwater [2] | 0.0075 | mg/L | **0.06** | | **0.38** | | **0.18** | | 0.0009 | U | **0.054** | | **0.042** | | **0.018** | | **0.15** | | **0.03** | | | | 0.006 | |
| Mercury | Groundwater [2] | 0.002 | mg/L | 0.000021 | U | 0.00084 | | 0.000021 | U | 0.000021 | U | 0.000021 | U | 0.000021 | U | 0.000021 | U | 0.00025 | | | | | | | |
| Selenium | Groundwater [2] | 0.05 | mg/L | 0.0016 | U | 0.0016 | U | 0.0056 | | 0.0069 | | 0.0016 | U | 0.011 | | 0.0016 | U | 0.011 | | | | | | | |
| Silver | Groundwater [2] | 0.05 | mg/L | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | | | | | | |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | Groundwater [2] | 0.42 | mg/L | 0.0000004 | U | 0.0000004 | U | | | | | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | | |
| Acenaphthylene | | | mg/L | 0.0000003 | U | 0.0000003 | U | | | | | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | | |
| Anthracene | Groundwater [2] | 2.1 | mg/L | 0.0000008 | U | 0.0000008 | U | | | | | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | 0.0000008 | U | | |
| Benzo (a) anthracene | Groundwater [2] | 0.00013 | mg/L | 0.0000001 | U | 0.0000001 | U | | | | | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | **0.00523** | | 0.0000001 | U | 0.0000001 | U | | |
| Benzo (a) pyrene | Groundwater [2] | 0.0002 | mg/L | 0.0000002 | U | 0.0000002 | U | | | | | 0.0000002 | U | 0.0000002 | U | 0.0000002 | U | **0.0126** | | 0.0000002 | U | 0.0000002 | U | | |
| Benzo (b) fluoranthene | Groundwater [2] | 0.00018 | mg/L | 0.0000001 | U | **0.00022** | | | | | | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | **0.02** | | 0.0000001 | U | 0.0000001 | U | | |
| Benzo (g,h,i) perylene | | | mg/L | 0.0000007 | U | 0.0000007 | U | | | | | 0.0000007 | U | 0.0000007 | U | 0.0000007 | U | 0.00512 | | 0.0000007 | U | 0.0000007 | U | | |
| Benzo (k) fluoranthene | Groundwater [2] | 0.00017 | mg/L | 0.0000001 | U | 0.0000001 | U | | | | | 0.0000001 | U | 0.0000001 | U | 0.0000001 | U | **0.0108** | | 0.0000001 | U | 0.0000001 | U | | |
| Chrysene | Groundwater [2] | 0.0015 | mg/L | 0.000001 | U | 0.000001 | U | | | | | 0.000001 | U | 0.000001 | U | 0.000001 | U | **0.00523** | | 0.000001 | U | 0.000001 | U | | |
| Dibenz (a,h) anthracene | Groundwater [2] | 0.0003 | mg/L | 0.0000003 | U | 0.0000003 | U | | | | | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | | |
| Fluoranthene | Groundwater [2] | 0.28 | mg/L | 0.0000009 | U | 0.0000009 | U | | | | | 0.0000009 | U | 0.0000009 | U | 0.0000009 | U | 0.00957 | | 0.0000009 | U | 0.0000009 | U | | |
| Fluorene | Groundwater [2] | 0.28 | mg/L | 0.0000004 | U | 0.0000004 | U | | | | | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | | |
| Indeno(1,2,3-cd)pyrene | Groundwater [2] | 0.00043 | mg/L | 0.0000004 | U | 0.0000004 | U | | | | | 0.0000004 | U | 0.0000004 | U | 0.0000004 | U | **0.00425** | | 0.0000004 | U | 0.0000004 | U | | |
| Naphthalene | Groundwater [2] | 0.14 | mg/L | 0.0000006 | U | 0.0000006 | U | | | | | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | 0.0000006 | U | | |
| Phenanthrene | | | mg/L | 0.0000003 | U | 0.0000003 | U | | | | | 0.0000003 | U | 0.0000003 | U | 0.0000003 | U | 0.00264 | | 0.0000003 | U | 0.0000003 | U | | |
| Pyrene | Groundwater [2] | 0.21 | mg/L | 0.000002 | U | 0.000002 | U | | | | | 0.000002 | U | 0.000002 | U | 0.000002 | U | 0.00957 | | 0.000002 | U | 0.000002 | U | | |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Groundwater [2] | 0.2 | mg/L | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| 1,1,2,2-Tetrachloroethane | | | mg/L | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U |
| 1,1,2-Trichloroethane | Groundwater [2] | 0.005 | mg/L | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U |
| 1,1-Dichloroethane | Groundwater [2] | 0.7 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| 1,1-Dichloroethylene | Groundwater [2] | 0.007 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| 1,2-Dichloroethane | Groundwater [2] | 0.005 | mg/L | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| 1,2-Dichloropropane | Groundwater [2] | 0.005 | mg/L | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| 2-Butanone | | | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| 2-Hexanone | | | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Acetone | Groundwater [2] | 6.3 | mg/L | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U | 0.0005 | U |
| Benzene | Groundwater [2] | 0.005 | mg/L | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U |
| Bromodichloromethane | Groundwater [2] | 0.0002 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Bromoform | Groundwater [2] | 0.001 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Bromomethane | Groundwater [2] | 0.0098 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Carbon disulfide | Groundwater [2] | 0.7 | mg/L | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U |
| Carbon Tetrachloride | Groundwater [2] | 0.005 | mg/L | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U | 0.00006 | U |
| Chlorobenzene | Groundwater [2] | 0.1 | mg/L | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U |
| Chloroethane | | | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |

APPENDIX C
Summary of Phase II Groundwater Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area> | 14 | | 14 | | 14 | | 14 | | 15 | | 16 | | 17 | | 18 | | 18 | | 18 | | 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring> | U14-1 | | U14-2 | | U14-4 | | U14-5 | | U15-1 | | P16-1 | | P17-1 | | I18-1 | | I18-4 | | I18-4 | | I18-6 | |
| | | | Sample ID> | GW-050908D | | GW-050708 | | GW-061208 | | GW-061208 | | GW-050708 | | GW-050908 | | GW-051408 | | GW-050608 | | GW-061308 | | GW-061308FD | | GW-061208 | G |
| | | | Sample Date> | 5/9/08 | | 5/7/08 | | 6/12/08 | | 6/12/08 | | 5/7/08 | | 5/9/08 | | 5/14/08 | | 5/6/08 | | 6/13/08 | | 6/13/08 | | 6/12/08 | |
| **Analyte** | **Criteria Source** | **MSL [1]** | **Units** | | | | | | | | | | | | | | | | | | | | | | |
| Chloroform | Groundwater [2] | 0.0002 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Chloromethane | | | mg/L | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U |
| cis-1,2-Dichloroethylene | Groundwater [2] | 0.07 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| cis-1,3-Dichloropropylene | | | mg/L | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U | 0.00004 | U |
| Dibromochloromethane | Groundwater [2] | 0.14 | mg/L | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U |
| Ethylbenzene | Groundwater [2] | 0.7 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Methyl Isobutyl Ketone | | | mg/L | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U | 0.0004 | U |
| Methylene Chloride | Groundwater [2] | 0.005 | mg/L | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U | 0.0006 | U |
| Methyl-tert-Butyl Ether | Groundwater [2] | 0.07 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Styrene | Groundwater [2] | 0.1 | mg/L | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Tetrachloroethene | Groundwater [2] | 0.005 | mg/L | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Toluene | Groundwater [2] | 1 | mg/L | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U |
| trans-1,2-Dichloroethylene | Groundwater [2] | 0.1 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| trans-1,3-Dichloropropylene | | | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Trichloroethene | Groundwater [2] | 0.005 | mg/L | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U | 0.00005 | U |
| Vinyl chloride | Groundwater [2] | 0.002 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |
| Xylenes, total | Groundwater [2] | 10 | mg/L | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U | 0.0001 | U |

Notes:
[1] MSL is the Minimum Screening Limit
[2] IEPA, TACO, Groundwater Remediation Objective, Class 1
U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

APPENDIX C
Summary of Phase II Groundwater Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area> | 18 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 20 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring> | I18-6 | | I19-1 | | I19-2 | | I19-2 | | I19-3 | | I19-4 | | I19-5 | | I19-6 | | I20-1 | |
| | | | Sample ID> | GW-061208-FD | | GW-050708 | | GW-061208 | | GW-061208-FD | | GW-061208 | | GW-061208 | | GW-061308 | | GW-061208 | | GW-050608 | |
| | | | Sample Date> | 6/12/08 | | 5/7/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/13/08 | | 6/12/08 | | 5/6/08 | |
| **Analyte** | **Criteria Source** | **MSL [1]** | **Units** | | | | | | | | | | | | | | | | | | |
| **METALS** | | | | | | | | | | | | | | | | | | | | | |
| Arsenic | Groundwater [2] | 0.05 | mg/L | | | 0.033 | | 0.0015 | U | 0.0015 | U | 0.0015 | U | 0.0015 | U | 0.0058 | | 0.0015 | U | 0.0015 | U |
| Barium | Groundwater [2] | 2 | mg/L | | | 0.067 | | 0.043 | | 0.044 | | 0.073 | | 0.09 | | 0.067 | | 0.023 | | 0.066 | |
| Cadmium | Groundwater [2] | 0.005 | mg/L | | | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U | 0.00033 | U |
| Chromium | Groundwater [2] | 0.1 | mg/L | | | 0.0079 | | 0.00055 | U | 0.00055 | U | 0.0067 | | 0.0098 | | 0.0099 | | 0.00055 | U | 0.00055 | U |
| Lead | Groundwater [2] | 0.0075 | mg/L | 0.002 | U | **0.055** | | 0.0009 | U | 0.0023 | | 0.0051 | | **0.011** | | **0.015** | | 0.0027 | | **0.0083** | |
| Mercury | Groundwater [2] | 0.002 | mg/L | | | **0.011** | | 0.000021 | U | 0.000021 | U | 0.000021 | U | 0.000021 | U | 0.000021 | U | 0.000021 | U | 0.000021 | U |
| Selenium | Groundwater [2] | 0.05 | mg/L | | | 0.0016 | U | 0.011 | | 0.01 | | 0.004 | | 0.0016 | U | 0.0016 | U | 0.0016 | U | 0.0046 | |
| Silver | Groundwater [2] | 0.05 | mg/L | | | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U | 0.00039 | U |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | Groundwater [2] | 0.42 | mg/L | | | 0.0000004 | U | | | | | | | | | | | | | 0.0000004 | U |
| Acenaphthylene | | | mg/L | | | 0.0000003 | U | | | | | | | | | | | | | 0.0000003 | U |
| Anthracene | Groundwater [2] | 2.1 | mg/L | | | 0.0000008 | U | | | | | | | | | | | | | 0.0000008 | U |
| Benzo (a) anthracene | Groundwater [2] | 0.00013 | mg/L | | | 0.0000001 | U | | | | | | | | | | | | | 0.0000001 | U |
| Benzo (a) pyrene | Groundwater [2] | 0.0002 | mg/L | | | 0.0000002 | U | | | | | | | | | | | | | 0.0000002 | U |
| Benzo (b) fluoranthene | Groundwater [2] | 0.00018 | mg/L | | | **0.00019** | | | | | | | | | | | | | | 0.0000001 | U |
| Benzo (g,h,i) perylene | | | mg/L | | | 0.0000007 | U | | | | | | | | | | | | | 0.0000007 | U |
| Benzo (k) fluoranthene | Groundwater [2] | 0.00017 | mg/L | | | 0.0000001 | U | | | | | | | | | | | | | 0.0000001 | U |
| Chrysene | Groundwater [2] | 0.0015 | mg/L | | | 0.000001 | U | | | | | | | | | | | | | 0.000001 | U |
| Dibenz (a,h) anthracene | Groundwater [2] | 0.0003 | mg/L | | | 0.0000003 | U | | | | | | | | | | | | | 0.0000003 | U |
| Fluoranthene | Groundwater [2] | 0.28 | mg/L | | | 0.0000009 | U | | | | | | | | | | | | | 0.0000009 | U |
| Fluorene | Groundwater [2] | 0.28 | mg/L | | | 0.0000004 | U | | | | | | | | | | | | | 0.0000004 | U |
| Indeno(1,2,3-cd)pyrene | Groundwater [2] | 0.00043 | mg/L | | | 0.0000004 | U | | | | | | | | | | | | | 0.0000004 | U |
| Naphthalene | Groundwater [2] | 0.14 | mg/L | | | 0.0000006 | U | | | | | | | | | | | | | 0.0000006 | U |
| Phenanthrene | | | mg/L | | | 0.0000003 | U | | | | | | | | | | | | | 0.0000003 | U |
| Pyrene | Groundwater [2] | 0.21 | mg/L | | | 0.000002 | U | | | | | | | | | | | | | 0.000002 | U |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | Groundwater [2] | 0.2 | mg/L | 0.00005 | U | 0.00005 | U | | | | | | | | | | | | | 0.00005 | U |
| 1,1,2,2-Tetrachloroethane | | | mg/L | 0.0002 | U | 0.0002 | U | | | | | | | | | | | | | 0.0002 | U |
| 1,1,2-Trichloroethane | Groundwater [2] | 0.005 | mg/L | 0.0002 | U | 0.0002 | U | | | | | | | | | | | | | 0.0002 | U |
| 1,1-Dichloroethane | Groundwater [2] | 0.7 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| 1,1-Dichloroethylene | Groundwater [2] | 0.007 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| 1,2-Dichloroethane | Groundwater [2] | 0.005 | mg/L | 0.00005 | U | 0.00005 | U | | | | | | | | | | | | | 0.00005 | U |
| 1,2-Dichloropropane | Groundwater [2] | 0.005 | mg/L | 0.00005 | U | 0.00005 | U | | | | | | | | | | | | | 0.00005 | U |
| 2-Butanone | | | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| 2-Hexanone | | | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| Acetone | Groundwater [2] | 6.3 | mg/L | 0.0005 | U | 0.0005 | U | | | | | | | | | | | | | 0.0005 | U |
| Benzene | Groundwater [2] | 0.005 | mg/L | 0.00004 | U | 0.00004 | U | | | | | | | | | | | | | 0.00004 | U |
| Bromodichloromethane | Groundwater [2] | 0.0002 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| Bromoform | Groundwater [2] | 0.001 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| Bromomethane | Groundwater [2] | 0.0098 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| Carbon disulfide | Groundwater [2] | 0.7 | mg/L | 0.00006 | U | 0.00006 | U | | | | | | | | | | | | | 0.00006 | U |
| Carbon Tetrachloride | Groundwater [2] | 0.005 | mg/L | 0.00006 | U | 0.00006 | U | | | | | | | | | | | | | 0.00006 | U |
| Chlorobenzene | Groundwater [2] | 0.1 | mg/L | 0.00004 | U | 0.00004 | U | | | | | | | | | | | | | 0.00004 | U |
| Chloroethane | | | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |

APPENDIX C
Summary of Phase II Groundwater Analytical Data
*Michael Reese Hospital Site, Chicago, Illinois*

| | | | Area> | 18 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 19 | | 20 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Boring> | I18-6 | | I19-1 | | I19-2 | | I19-2 | | I19-3 | | I19-4 | | I19-5 | | I19-6 | | I20-1 | |
| | | | Sample ID> | GW-061208-FD | | GW-050708 | | GW-061208 | | GW-061208-FD | | GW-061208 | | GW-061208 | | GW-061308 | | GW-061208 | | GW-050608 | |
| | | | Sample Date> | 6/12/08 | | 5/7/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/12/08 | | 6/13/08 | | 6/12/08 | | 5/6/08 | |
| **Analyte** | **Criteria Source** | **MSL [1]** | **Units** | | | | | | | | | | | | | | | | | | |
| Chloroform | Groundwater [2] | 0.0002 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| Chloromethane | | | mg/L | 0.0002 | U | 0.0002 | U | | | | | | | | | | | | | 0.0002 | U |
| cis-1,2-Dichloroethylene | Groundwater [2] | 0.07 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| cis-1,3-Dichloropropylene | | | mg/L | 0.00004 | U | 0.00004 | U | | | | | | | | | | | | | 0.00004 | U |
| Dibromochloromethane | Groundwater [2] | 0.14 | mg/L | 0.0004 | U | 0.0004 | U | | | | | | | | | | | | | 0.0004 | U |
| Ethylbenzene | Groundwater [2] | 0.7 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| Methyl Isobutyl Ketone | | | mg/L | 0.0004 | U | 0.0004 | U | | | | | | | | | | | | | 0.0004 | U |
| Methylene Chloride | Groundwater [2] | 0.005 | mg/L | 0.0006 | U | 0.0006 | U | | | | | | | | | | | | | 0.0006 | U |
| Methyl-tert-Butyl Ether | Groundwater [2] | 0.07 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| Styrene | Groundwater [2] | 0.1 | mg/L | 0.00005 | U | 0.00005 | U | | | | | | | | | | | | | 0.00005 | U |
| Tetrachloroethene | Groundwater [2] | 0.005 | mg/L | 0.00005 | U | 0.00005 | U | | | | | | | | | | | | | 0.00005 | U |
| Toluene | Groundwater [2] | 1 | mg/L | 0.0002 | U | 0.0002 | U | | | | | | | | | | | | | 0.0002 | U |
| trans-1,2-Dichloroethylene | Groundwater [2] | 0.1 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| trans-1,3-Dichloropropylene | | | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| Trichloroethene | Groundwater [2] | 0.005 | mg/L | 0.00005 | U | 0.00005 | U | | | | | | | | | | | | | 0.00005 | U |
| Vinyl chloride | Groundwater [2] | 0.002 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |
| Xylenes, total | Groundwater [2] | 10 | mg/L | 0.0001 | U | 0.0001 | U | | | | | | | | | | | | | 0.0001 | U |

Notes:
[1] MSL is the Minimum Screening Limit
[2] IEPA, TACO, Groundwater Remediation Objective, Class 1
U means that the analyte was not detected at a concentration above the detection limits.
J means that the analyte detected is below the quantitation limits.

# Appendix D
# Laboratory Data

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

June 09, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8050701

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 09-Jun-08 17:51 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-ASC1-GW-050608 | 8050701-01 | Water | 06-May-08 09:51 | 06-May-08 19:20 |
| CS-ASC4-GW-050608 | 8050701-02 | Water | 06-May-08 11:56 | 06-May-08 19:20 |
| CS-MWD-GW-050608 | 8050701-03 | Water | 06-May-08 14:56 | 06-May-08 19:20 |
| CS-ASC4-GW-050608D | 8050701-04 | Water | 06-May-08 11:58 | 06-May-08 19:20 |
| CS-ASC2a-GW-050608 | 8050701-05 | Water | 06-May-08 09:18 | 06-May-08 19:20 |
| CS-MW3-GW-050608 | 8050701-06 | Water | 06-May-08 12:14 | 06-May-08 19:20 |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 09-Jun-08 17:51 |

**Client Sample ID: CS-ASC1-GW-050608**

**Lab Sample ID: 8050701-01 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 08-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 08-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 08-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 08-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *88 %* | *60-128* | | *08-May-08* | *08-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *08-May-08* | *08-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *106 %* | *60-127* | | *08-May-08* | *08-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *105 %* | *70-135* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *71 %* | *60-125* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *67 %* | *60-130* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *60 %* | *60-125* | | *07-May-08* | *07-May-08* | *8270C* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 09-Jun-08 17:51 |

**Client Sample ID: CS-ASC4-GW-050608**

**Lab Sample ID: 8050701-02 (Water)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *92 %* | *60-128* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *108 %* | *60-127* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *109 %* | *70-135* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *65 %* | *60-125* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *70 %* | *60-130* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *61 %* | *60-125* | | *07-May-08* | *07-May-08* | *8270C* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 09-Jun-08 17:51 |

**Client Sample ID: CS-MWD-GW-050608**

**Lab Sample ID: 8050701-03 (Water)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *89 %* | *60-128* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *60-127* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *115 %* | *70-135* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *68 %* | *60-125* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *71 %* | *60-130* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *60 %* | *60-125* | | *07-May-08* | *07-May-08* | *8270C* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 09-Jun-08 17:51 |

**Client Sample ID: CS-ASC4-GW-050608D**

**Lab Sample ID: 8050701-04 (Water)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *93 %* | *60-128* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *103 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *108 %* | *60-127* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *115 %* | *70-135* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *70 %* | *60-125* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *74 %* | *60-130* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *62 %* | *60-125* | | *07-May-08* | *07-May-08* | *8270C* | |

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ACCREDITED IN ACCORDANCE WITH nelac

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 09-Jun-08 17:51 |

**Client Sample ID: CS-ASC2a-GW-050608**

**Lab Sample ID: 8050701-05 (Water)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *94 %* | *60-128* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *103 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *60-127* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 07-May-08 | 07-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *126 %* | *70-135* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *78 %* | *60-125* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *75 %* | *60-130* | | *07-May-08* | *07-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *61 %* | *60-125* | | *07-May-08* | *07-May-08* | *8270C* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 09-Jun-08 17:51 |

**Client Sample ID: CS-MW3-GW-050608**

**Lab Sample ID: 8050701-06 (Water)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *83 %* | *60-128* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *105 %* | *60-127* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Benzo (b) fluoranthene** | **0.63** | 0.10 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Benzo (k) fluoranthene** | **0.35** | 0.10 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *128 %* | *70-135* | | *07-May-08* | *08-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *89 %* | *60-125* | | *07-May-08* | *08-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *90 %* | *60-130* | | *07-May-08* | *08-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *79 %* | *60-125* | | *07-May-08* | *08-May-08* | *8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 09-Jun-08 17:51 |

## Grace Analytical Lab, Inc.

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805028 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805028-BLK1)** | | | | Prepared & Analyzed: 08-May-08 | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *47.7* | | *ug/L* | *50.0* | | *95* | *60-128* | | | |
| *Surrogate: Toluene-d8* | *50.7* | | *ug/L* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.2* | | *ug/L* | *50.0* | | *106* | *60-127* | | | |
| **LCS (G805028-BS1)** | | | | Prepared & Analyzed: 08-May-08 | | | | | | |
| Benzene | 53 | 5 | ug/L | 50.0 | | 107 | 60-140 | | | |
| Toluene | 51 | 5 | ug/L | 50.0 | | 102 | 60-145 | | | |
| *Surrogate: Dibromofluoromethane* | *43.8* | | *ug/L* | *50.0* | | *88* | *60-128* | | | |
| *Surrogate: Toluene-d8* | *51.4* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.3* | | *ug/L* | *50.0* | | *107* | *60-127* | | | |
| **Matrix Spike (G805028-MS1)** | **Source: 8050706-15** | | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| Benzene | 56 | 5 | ug/L | 50.0 | ND | 111 | 71-137 | | | |
| Toluene | 53 | 5 | ug/L | 50.0 | ND | 107 | 71-145 | | | |
| *Surrogate: Dibromofluoromethane* | *46.6* | | *ug/L* | *50.0* | | *93* | *60-128* | | | |
| *Surrogate: Toluene-d8* | *51.9* | | *ug/L* | *50.0* | | *104* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.8* | | *ug/L* | *50.0* | | *112* | *60-127* | | | |
| **Matrix Spike Dup (G805028-MSD1)** | **Source: 8050706-15** | | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| Benzene | 57 | 5 | ug/L | 50.0 | ND | 115 | 71-137 | 3 | 20 | |
| Toluene | 52 | 5 | ug/L | 50.0 | ND | 104 | 71-145 | 3 | 20 | |
| *Surrogate: Dibromofluoromethane* | *51.7* | | *ug/L* | *50.0* | | *103* | *60-128* | | | |
| *Surrogate: Toluene-d8* | *52.0* | | *ug/L* | *50.0* | | *104* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.8* | | *ug/L* | *50.0* | | *112* | *60-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 09-Jun-08 17:51 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805038 - EPA 3510C_MS** | | | | | | | | | | |
| **Blank (G805038-BLK1)** | | | | Prepared & Analyzed: 07-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.6* | | *ug/L* | *10.0* | | *106* | *70-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *7.27* | | *ug/L* | *10.0* | | *73* | *60-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.76* | | *ug/L* | *10.0* | | *68* | *60-130* | | | |
| *Surrogate: Terphenyl-d14* | *6.27* | | *ug/L* | *10.0* | | *63* | *60-125* | | | |
| **LCS (G805038-BS1)** | | | | Prepared & Analyzed: 07-May-08 | | | | | | |
| Acenaphthene | 6.65 | 2.50 | ug/L | 10.0 | | 66 | 46-128 | | | |
| Pyrene | 7.35 | 1.50 | ug/L | 10.0 | | 74 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *8.03* | | *ug/L* | *10.0* | | *80* | *70-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.95* | | *ug/L* | *10.0* | | *70* | *60-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.53* | | *ug/L* | *10.0* | | *65* | *60-130* | | | |
| *Surrogate: Terphenyl-d14* | *6.10* | | *ug/L* | *10.0* | | *61* | *60-125* | | | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 09-Jun-08 17:51 |

## Notes and Definitions

| | |
|---|---|
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

June 10, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8050702

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-I1-1-SO-0809 | 8050702-01 | Soil | 06-May-08 10:08 | 06-May-08 19:20 |
| CS-I1-1-SO-0203 | 8050702-02 | Soil | 06-May-08 09:51 | 06-May-08 19:20 |
| CS-I18-1-SO-0809 | 8050702-03 | Soil | 06-May-08 13:10 | 06-May-08 19:20 |
| CS-I18-1-SO-0001 | 8050702-04 | Soil | 06-May-08 11:55 | 06-May-08 19:20 |
| CS-I20-1-SO-1011 | 8050702-05 | Soil | 06-May-08 15:15 | 06-May-08 19:20 |
| CS-I20-1-GW-050608 | 8050702-06 | Water | 06-May-08 15:35 | 06-May-08 19:20 |
| CS-I18-1-GW-050608 | 8050702-07 | Water | 06-May-08 13:20 | 06-May-08 19:20 |
| CS-U14-2-SO-0809 | 8050702-08 | Soil | 06-May-08 16:45 | 06-May-08 19:20 |
| CS-U14-2-SO-0203 | 8050702-09 | Soil | 06-May-08 16:45 | 06-May-08 19:20 |

TCLP Lead analysis on the sample ID CS-U14-2-SO-0203 was requested on 5/29/08 per David Klatt.

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I1-1-SO-0809**

**Lab Sample ID: 8050702-01 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *65 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *73 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| **Chloroform** | **55** | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I1-1-SO-0809**

**Lab Sample ID: 8050702-01 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| **Bromodichloromethane** | **12** | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *107 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *101 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I1-1-SO-0809**

**Lab Sample ID: 8050702-01 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Naphthalene | ND | 86.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 116 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Acenaphthylene | ND | 69.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Acenaphthene | ND | 148 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Phenanthrene | ND | 122 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Anthracene | ND | 298 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Carbazole | ND | 131 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Pyrene | ND | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Chrysene | ND | 94.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I1-1-SO-0809**

**Lab Sample ID: 8050702-01 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *103 %* | *21-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *100 %* | *25-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *82 %* | *33-130* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *67 %* | *30-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *85 %* | *30-125* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *73 %* | *43-125* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *82 %* | *30-123* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *77 %* | *33-127* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **78.7** | | % by Weight | 1 | 10-May-08 | 10-May-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **17.7** | 0.01 | wt% | 1 | 07-May-08 | 08-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **4000** | 230 | mg/Kg-dry | 100 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Arsenic** | **13** | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Barium** | **140** | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Cadmium** | **1.1** | 0.58 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Chromium** | **14** | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Lead** | **430** | 0.58 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Beryllium** | **0.62** | 0.58 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I1-1-SO-0809**

**Lab Sample ID: 8050702-01 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Selenium | ND | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Calcium** | **36000** | 69 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Cobalt** | **4.7** | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Copper** | **53** | 2.9 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Iron** | **18000** | 35 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Magnesium** | **14000** | 35 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Manganese** | **200** | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Nickel** | **13** | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Potassium** | **790** | 35 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Sodium** | **200** | 69 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Vanadium** | **21** | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Zinc** | **280** | 5.8 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.29** | 0.03 | mg/Kg-dry | 1 | 08-May-08 | 08-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.3 | mg/Kg-dry | 1 | 07-May-08 | 09-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.0** | 0 | pH Units | 1 | 08-May-08 | 08-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I1-1-SO-0203**

**Lab Sample ID: 8050702-02 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| **4,4´-DDT** | **21.3** | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| **Methoxychlor** | **125** | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *67 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *96 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I1-1-SO-0203**

**Lab Sample ID: 8050702-02 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *116 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *106 %* | *62-129* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *115 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I1-1-SO-0203**

**Lab Sample ID: 8050702-02 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Naphthalene** | **387** | 86.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **2-Methylnaphthalene** | **208** | 116 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Acenaphthylene** | **168** | 69.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Acenaphthene** | **624** | 148 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Dibenzofuran** | **378** | 219 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Phenanthrene** | **7510** | 122 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Anthracene** | **2010** | 298 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Carbazole** | **717** | 131 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Pyrene** | **7410** | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **3530** | 68.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Chrysene** | **3260** | 94.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I1-1-SO-0203**

**Lab Sample ID: 8050702-02 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (b) fluoranthene** | **4190** | 230 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (k) fluoranthene** | **1830** | 122 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **8690** | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **1550** | 178 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **1750** | 205 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *96 %* | *21-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *93 %* | *25-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *80 %* | *33-130* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *66 %* | *30-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *82 %* | *30-125* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *70 %* | *43-125* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *70 %* | *30-123* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *72 %* | *33-127* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **83.8** | | % by Weight | 1 | 10-May-08 | 10-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.9** | 0.01 | wt% | 1 | 07-May-08 | 08-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **7.7** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Aluminum** | **5600** | 230 | mg/Kg-dry | 100 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Barium** | **140** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Cadmium** | **0.69** | 0.56 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Chromium** | **17** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.56 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Lead** | **290** | 0.56 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I1-1-SO-0203**

**Lab Sample ID: 8050702-02 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Calcium** | **43000** | 68 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Cobalt** | **5.8** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Copper** | **35** | 2.8 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Iron** | **13000** | 34 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Magnesium** | **19000** | 34 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Manganese** | **310** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Nickel** | **16** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Potassium** | **1100** | 34 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Sodium** | **200** | 68 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Vanadium** | **20** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Zinc** | **190** | 5.6 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.45** | 0.028 | mg/Kg-dry | 1 | 08-May-08 | 08-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.29 | mg/Kg-dry | 1 | 07-May-08 | 09-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.2** | 0 | pH Units | 1 | 08-May-08 | 08-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-SO-0809**

**Lab Sample ID: 8050702-03 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *69 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *86 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-SO-0809**

**Lab Sample ID: 8050702-03 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *115 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *100 %* | *62-129* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *106 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-SO-0809**

**Lab Sample ID: 8050702-03 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Naphthalene** | **679** | 86.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **2-Methylnaphthalene** | **297** | 116 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Acenaphthylene** | **255** | 69.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Acenaphthene** | **933** | 148 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Dibenzofuran** | **476** | 219 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Phenanthrene** | **10300** | 122 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Anthracene** | **3050** | 298 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Carbazole** | **1320** | 131 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Pyrene** | **14700** | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **8270** | 68.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Chrysene** | **7350** | 94.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-SO-0809**

**Lab Sample ID: 8050702-03 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (b) fluoranthene** | **9790** | 230 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (k) fluoranthene** | **5890** | 122 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **21400** | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **4390** | 178 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Dibenz (a,h) anthracene** | **2340** | 174 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **4650** | 205 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *92 %* | *21-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *94 %* | *25-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *80 %* | *33-130* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *72 %* | *30-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *88 %* | *30-125* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *73 %* | *43-125* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *82 %* | *30-123* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *75 %* | *33-127* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **82.6** | | % by Weight | 1 | 10-May-08 | 10-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **23.9** | 0.01 | wt% | 1 | 07-May-08 | 08-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **1300** | 250 | mg/Kg-dry | 100 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Arsenic** | **1.8** | 1.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Barium** | **8.6** | 1.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.5 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.63 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Chromium** | **3.1** | 1.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Lead** | **4.9** | 0.63 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.63 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-SO-0809**

**Lab Sample ID: 8050702-03 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Selenium | ND | 1.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Calcium** | **57000** | 76 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Cobalt** | **2** | 1.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Copper | ND | 3.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Iron** | **4500** | 38 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Magnesium** | **27000** | 38 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Manganese** | **220** | 1.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Nickel** | **4.2** | 1.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Potassium** | **330** | 38 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Sodium** | **110** | 76 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Vanadium** | **7.1** | 1.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Zinc** | **18** | 6.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.032 | mg/Kg-dry | 1 | 08-May-08 | 08-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.33 | mg/Kg-dry | 1 | 07-May-08 | 09-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.6** | 0 | pH Units | 1 | 08-May-08 | 08-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-SO-0001**

**Lab Sample ID: 8050702-04 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *86 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *37 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-SO-0001**

**Lab Sample ID: 8050702-04 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *115 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *108 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-SO-0001**

**Lab Sample ID: 8050702-04 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Naphthalene** | **3940** | 86.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **2-Methylnaphthalene** | **1930** | 116 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Acenaphthylene** | **676** | 69.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Acenaphthene** | **5150** | 148 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Dibenzofuran** | **2880** | 219 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Phenanthrene** | **41700** | 122 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Anthracene** | **12300** | 298 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Carbazole** | **8660** | 131 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Pyrene** | **40400** | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **24000** | 68.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Chrysene** | **21100** | 94.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-SO-0001**

**Lab Sample ID: 8050702-04 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (b) fluoranthene** | **26800** | 230 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (k) fluoranthene** | **12100** | 122 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **46700** | 66.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **7220** | 178 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Dibenz (a,h) anthracene** | **2060** | 174 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **7590** | 205 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *107 %* | *21-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *118 %* | *25-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *91 %* | *33-130* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *73 %* | *30-135* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *87 %* | *30-125* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69 %* | *43-125* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *70 %* | *30-123* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *33-127* | | *07-May-08* | *08-May-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **85.2** | | % by Weight | 1 | 10-May-08 | 10-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **14.1** | 0.01 | wt% | 1 | 07-May-08 | 08-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **3400** | 230 | mg/Kg-dry | 100 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Arsenic** | **3.7** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.3 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Barium** | **53** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.57 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Chromium** | **5.9** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Lead** | **180** | 0.57 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.57 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-SO-0001**

**Lab Sample ID: 8050702-04 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Calcium** | **61000** | 680 | mg/Kg-dry | 100 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Cobalt** | **2.1** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Copper** | **15** | 2.8 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Iron** | **5500** | 34 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Magnesium** | **16000** | 34 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Manganese** | **160** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Nickel** | **5.3** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Potassium** | **480** | 34 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Sodium** | **220** | 68 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Vanadium** | **15** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Zinc** | **35** | 5.7 | mg/Kg-dry | 10 | 08-May-08 | 09-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.1** | 0.029 | mg/Kg-dry | 1 | 08-May-08 | 08-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.29 | mg/Kg-dry | 1 | 07-May-08 | 09-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.6** | 0 | pH Units | 1 | 08-May-08 | 08-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I20-1-SO-1011**

**Lab Sample ID: 8050702-05 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *131 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *104 %* | *62-129* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *114 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I20-1-SO-1011**

**Lab Sample ID: 8050702-05 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **17.6** | 11.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *92 %* | *60-145* | | *07-May-08* | *08-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *82 %* | *65-130* | | *07-May-08* | *08-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *80 %* | *60-130* | | *07-May-08* | *08-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *55-130* | | *07-May-08* | *08-May-08* | *8270c* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **7.72** | | N/A | 1 | 08-May-08 | 08-May-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **85.0** | | % by Weight | 1 | 10-May-08 | 10-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I20-1-SO-1011**

**Lab Sample ID: 8050702-05 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **16.7** | 0.01 | wt% | 1 | 07-May-08 | 08-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **Barium** | **4.9** | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.58 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **Chromium** | **2.5** | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **Lead** | **2.8** | 0.58 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.029 | mg/Kg-dry | 1 | 08-May-08 | 08-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I20-1-GW-050608**

**Lab Sample ID: 8050702-06 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *104 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I20-1-GW-050608**

**Lab Sample ID: 8050702-06 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *122 %* | *70-135* | | *07-May-08* | *08-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *74 %* | *60-125* | | *07-May-08* | *08-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *74 %* | *60-130* | | *07-May-08* | *08-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *67 %* | *60-125* | | *07-May-08* | *08-May-08* | *8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **7.58** | | N/A | 1 | 08-May-08 | 08-May-08 | 9045C | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Barium** | **0.066** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Chromium | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Lead** | **0.0083** | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Selenium** | **0.0046** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I20-1-GW-050608**

**Lab Sample ID: 8050702-06 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 09-May-08 | 09-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-GW-050608**

**Lab Sample ID: 8050702-07 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *105 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *105 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-GW-050608**

**Lab Sample ID: 8050702-07 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Phenanthrene** | **2.64** | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Fluoranthene** | **9.57** | 1.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Pyrene** | **9.57** | 1.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Benzo (a) anthracene** | **5.23** | 0.10 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Chrysene** | **5.23** | 1.50 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Benzo (b) fluoranthene** | **20.0** | 0.10 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Benzo (k) fluoranthene** | **10.8** | 0.10 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Benzo (a) pyrene** | **12.6** | 0.20 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **4.25** | 0.40 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| **Benzo (g,h,i) perylene** | **5.12** | 0.70 | ug/L | 1 | 07-May-08 | 08-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *95 %* | *70-135* | | *07-May-08* | *08-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *61 %* | *60-125* | | *07-May-08* | *08-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *72 %* | *60-130* | | *07-May-08* | *08-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *68 %* | *60-125* | | *07-May-08* | *08-May-08* | *8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.40** | | N/A | 1 | 08-May-08 | 08-May-08 | 9045C | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.0067** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Barium** | **0.1** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Chromium | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Lead** | **0.15** | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Selenium** | **0.011** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-I18-1-GW-050608**

**Lab Sample ID: 8050702-07 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **SW7470A** | | | | | | | | |
| **Mercury** | **0.00025** | 0.00025 | mg/L | 1 | 09-May-08 | 09-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-U14-2-SO-0809**

**Lab Sample ID: 8050702-08 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 07-May-08 | 07-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *111 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *45-145* | | *07-May-08* | *07-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-U14-2-SO-0809**

**Lab Sample ID: 8050702-08 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Phenanthrene** | **97.2** | 33.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Anthracene** | **94.7** | 83.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Fluoranthene** | **121** | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Pyrene** | **121** | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Benzo (a) anthracene** | **56.6** | 8.50 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Chrysene** | **56.6** | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **200** | 11.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **108** | 11.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Benzo (a) pyrene** | **132** | 15.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **50.4** | 25.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **56.6** | 25.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *81 %* | *60-145* | | *07-May-08* | *08-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *83 %* | *65-130* | | *07-May-08* | *08-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *83 %* | *60-130* | | *07-May-08* | *08-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *71 %* | *55-130* | | *07-May-08* | *08-May-08* | *8270c* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **7.65** | | N/A | 1 | 08-May-08 | 08-May-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **81.3** | | % by Weight | 1 | 10-May-08 | 10-May-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-U14-2-SO-0809**

**Lab Sample ID: 8050702-08 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **13.2** | 0.01 | wt% | 1 | 07-May-08 | 08-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **3.8** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **Barium** | **85** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.56 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **Chromium** | **7.6** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **Lead** | **180** | 0.56 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.29** | 0.028 | mg/Kg-dry | 1 | 08-May-08 | 08-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-U14-2-SO-0203**

**Lab Sample ID: 8050702-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **TCLP Metals by 6000/7000 Series Methods** | | | | | | | | |
| Lead | ND | 0.00500 | mg/L | 1 | 03-Jun-08 | 03-Jun-08 | 1311/ 7421 | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *119 %* | *45-145* | | *07-May-08* | *08-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *100 %* | *62-129* | | *07-May-08* | *08-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-U14-2-SO-0203**

**Lab Sample ID: 8050702-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | | *92 %* | *45-145* | | *07-May-08* | *08-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Phenanthrene** | **61.1** | 33.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Fluoranthene** | **104** | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Pyrene** | **104** | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Benzo (a) anthracene** | **41.9** | 8.50 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **213** | 11.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **115** | 11.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Benzo (a) pyrene** | **114** | 15.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **53.9** | 25.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **58.7** | 25.0 | ug/kg dry | 1 | 07-May-08 | 08-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *72 %* | *60-145* | | *07-May-08* | *08-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *82 %* | *65-130* | | *07-May-08* | *08-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *84 %* | *60-130* | | *07-May-08* | *08-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *66 %* | *55-130* | | *07-May-08* | *08-May-08* | *8270c* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **7.85** | | N/A | 1 | 08-May-08 | 08-May-08 | 9045C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Client Sample ID: CS-U14-2-SO-0203**

**Lab Sample ID: 8050702-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **83.5** | | % by Weight | 1 | 10-May-08 | 10-May-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.7** | 0.01 | wt% | 1 | 07-May-08 | 08-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **13** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **Barium** | **190** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **Cadmium** | **0.63** | 0.55 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **Chromium** | **12** | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **Lead** | **600** | 0.55 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 08-May-08 | 08-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.73** | 0.027 | mg/Kg-dry | 1 | 08-May-08 | 08-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

**Grace Analytical Lab, Inc.**

## TCLP Metals by 6000/7000 Series Methods - Quality Control

### Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806007 - EPA 3010A** | | | | | | | | | | |
| **Blank (G806007-BLK1)** | | | | Prepared & Analyzed: 03-Jun-08 | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | | | | |
| **LCS (G806007-BS1)** | | | | Prepared & Analyzed: 03-Jun-08 | | | | | | |
| Lead | 0.838 | 0.100 | mg/L | 0.800 | | 105 | 80-120 | | | |
| **Matrix Spike (G806007-MS1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | 75-125 | | | |
| **Matrix Spike Dup (G806007-MSD1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | 75-125 | | 20 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Organochlorine Pesticides by EPA Method 8081A - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805044 - EPA 3545** | | | | | | | | | | |
| **Blank (G805044-BLK1)** | | | | Prepared & Analyzed: 14-May-08 | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg wet | | | | | | | |
| beta-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| Heptachlor | ND | 8.00 | ug/kg wet | | | | | | | |
| delta-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| Aldrin | ND | 8.00 | ug/kg wet | | | | | | | |
| Heptachlor epoxide | ND | 8.00 | ug/kg wet | | | | | | | |
| Endosulfan I | ND | 8.00 | ug/kg wet | | | | | | | |
| 4,4´-DDE | ND | 16.0 | ug/kg wet | | | | | | | |
| Dieldrin | ND | 16.0 | ug/kg wet | | | | | | | |
| Endrin | ND | 16.0 | ug/kg wet | | | | | | | |
| 4,4´-DDD | ND | 16.0 | ug/kg wet | | | | | | | |
| Endosulfan II | ND | 16.0 | ug/kg wet | | | | | | | |
| 4,4´-DDT | ND | 16.0 | ug/kg wet | | | | | | | |
| Endrin aldehyde | ND | 16.0 | ug/kg wet | | | | | | | |
| Endosulfan sulfate | ND | 16.0 | ug/kg wet | | | | | | | |
| Methoxychlor | ND | 80.0 | ug/kg wet | | | | | | | |
| Endrin ketone | ND | 16.0 | ug/kg wet | | | | | | | |
| Chlordane | ND | 80.0 | ug/kg wet | | | | | | | |
| Toxaphene | ND | 160 | ug/kg wet | | | | | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *ND* | | *ug/kg wet* | *100* | | *63* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *85.0* | | *ug/kg wet* | *100* | | *85* | *30-170* | | | |
| **LCS (G805044-BS1)** | | | | Prepared & Analyzed: 14-May-08 | | | | | | |
| gamma-BHC (Lindane) | 21.0 | 8.00 | ug/kg wet | 25.0 | | 84 | 30-150 | | | |
| Heptachlor | 20.5 | 8.00 | ug/kg wet | 25.0 | | 82 | 30-150 | | | |
| Aldrin | 21.2 | 8.00 | ug/kg wet | 25.0 | | 85 | 30-150 | | | |
| Dieldrin | 50.3 | 16.0 | ug/kg wet | 50.0 | | 101 | 30-150 | | | |
| Endrin | 57.6 | 16.0 | ug/kg wet | 50.0 | | 115 | 30-150 | | | |
| 4,4´-DDT | 50.9 | 16.0 | ug/kg wet | 50.0 | | 102 | 30-150 | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *70.3* | | *ug/kg wet* | *100* | | *70* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *88.4* | | *ug/kg wet* | *100* | | *88* | *30-170* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Organochlorine Pesticides by EPA Method 8081A - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805044 - EPA 3545** | | | | | | | | | | |
| **Matrix Spike (G805044-MS1)** | **Source: 8050804-18** | | | Prepared: 14-May-08 Analyzed: 21-May-08 | | | | | | |
| gamma-BHC (Lindane) | 22.9 | 8.00 | ug/kg dry | 26.6 | ND | 86 | 30-150 | | | |
| Heptachlor | 25.2 | 8.00 | ug/kg dry | 26.6 | ND | 95 | 30-150 | | | |
| Aldrin | 23.1 | 8.00 | ug/kg dry | 26.6 | ND | 87 | 30-150 | | | |
| Dieldrin | 55.4 | 16.0 | ug/kg dry | 53.2 | ND | 104 | 30-150 | | | |
| Endrin | 62.1 | 16.0 | ug/kg dry | 53.2 | ND | 117 | 30-150 | | | |
| 4,4´-DDT | 50.7 | 16.0 | ug/kg dry | 53.2 | ND | 95 | 30-150 | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *76.0* | | *ug/kg dry* | *106* | | *71* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *105* | | *ug/kg dry* | *106* | | *99* | *30-170* | | | |
| **Matrix Spike Dup (G805044-MSD1)** | **Source: 8050804-18** | | | Prepared: 14-May-08 Analyzed: 21-May-08 | | | | | | |
| gamma-BHC (Lindane) | 25.0 | 8.00 | ug/kg dry | 26.6 | ND | 94 | 30-150 | 9 | 20 | |
| Heptachlor | 27.2 | 8.00 | ug/kg dry | 26.6 | ND | 102 | 30-150 | 8 | 20 | |
| Aldrin | 24.9 | 8.00 | ug/kg dry | 26.6 | ND | 94 | 30-150 | 8 | 20 | |
| Dieldrin | 57.0 | 16.0 | ug/kg dry | 53.2 | ND | 107 | 30-150 | 3 | 20 | |
| Endrin | 64.0 | 16.0 | ug/kg dry | 53.2 | ND | 120 | 30-150 | 3 | 20 | |
| 4,4´-DDT | 55.1 | 16.0 | ug/kg dry | 53.2 | ND | 103 | 30-150 | 8 | 20 | |
| *Surrogate: Tetrachloro-meta-xylene* | *86.5* | | *ug/kg dry* | *106* | | *81* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *109* | | *ug/kg dry* | *106* | | *103* | *30-170* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805019 - EPA 5035** | | | | | | | | | | |
| **Blank (G805019-BLK1)** | | | | Prepared & Analyzed: 07-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Vinyl chloride | ND | 2 | ug/kg wet | | | | | | | |
| Bromomethane | ND | 5 | ug/kg wet | | | | | | | |
| Chloroethane | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Acetone | ND | 50 | ug/kg wet | | | | | | | |
| Carbon disulfide | ND | 5 | ug/kg wet | | | | | | | |
| Methylene Chloride | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Butanone | ND | 5 | ug/kg wet | | | | | | | |
| Chloroform | ND | 5 | ug/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Trichloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/kg wet | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/kg wet | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Hexanone | ND | 5 | ug/kg wet | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Chlorobenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Styrene | ND | 5 | ug/kg wet | | | | | | | |
| Bromoform | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *60.0* | | *ug/kg wet* | *50.0* | | *120* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *51.7* | | *ug/kg wet* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *51.1* | | *ug/kg wet* | *50.0* | | *102* | *45-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805019 - EPA 5035** | | | | | | | | | | |
| **LCS (G805019-BS1)** | | | | Prepared & Analyzed: 07-May-08 | | | | | | |
| 1,1-Dichloroethylene | 54 | 5 | ug/kg wet | 50.0 | | 108 | 35-155 | | | |
| Benzene | 51 | 5 | ug/kg wet | 50.0 | | 102 | 35-150 | | | |
| Trichloroethene | 48 | 5 | ug/kg wet | 50.0 | | 96 | 42-135 | | | |
| Toluene | 50 | 5 | ug/kg wet | 50.0 | | 101 | 40-151 | | | |
| Chlorobenzene | 48 | 5 | ug/kg wet | 50.0 | | 97 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *51.7* | | *ug/kg wet* | *50.0* | | *103* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *50.7* | | *ug/kg wet* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *51.0* | | *ug/kg wet* | *50.0* | | *102* | *45-145* | | | |
| **Matrix Spike (G805019-MS1)** | **Source: 8050702-05** | | | Prepared & Analyzed: 07-May-08 | | | | | | |
| 1,1-Dichloroethylene | 65 | 5 | ug/kg dry | 58.8 | ND | 111 | 35-155 | | | |
| Benzene | 58 | 5 | ug/kg dry | 58.8 | ND | 99 | 35-150 | | | |
| Trichloroethene | 50 | 5 | ug/kg dry | 58.8 | ND | 86 | 42-166 | | | |
| Toluene | 49 | 5 | ug/kg dry | 58.8 | ND | 83 | 40-151 | | | |
| Chlorobenzene | 44 | 5 | ug/kg dry | 58.8 | ND | 74 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *66.1* | | *ug/kg dry* | *58.8* | | *112* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *60.2* | | *ug/kg dry* | *58.8* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *62.5* | | *ug/kg dry* | *58.8* | | *106* | *45-145* | | | |
| **Matrix Spike Dup (G805019-MSD1)** | **Source: 8050702-05** | | | Prepared & Analyzed: 07-May-08 | | | | | | |
| 1,1-Dichloroethylene | 84 | 5 | ug/kg dry | 58.8 | ND | 143 | 35-155 | 25 | 30 | |
| Benzene | 74 | 5 | ug/kg dry | 58.8 | ND | 126 | 35-150 | 24 | 30 | |
| Trichloroethene | 58 | 5 | ug/kg dry | 58.8 | ND | 99 | 42-166 | 15 | 30 | |
| Toluene | 56 | 5 | ug/kg dry | 58.8 | ND | 95 | 40-151 | 14 | 30 | |
| Chlorobenzene | 48 | 5 | ug/kg dry | 58.8 | ND | 82 | 34-158 | 10 | 30 | |
| *Surrogate: Dibromofluoromethane* | *74.7* | | *ug/kg dry* | *58.8* | | *127* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *62.8* | | *ug/kg dry* | *58.8* | | *107* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *70.7* | | *ug/kg dry* | *58.8* | | *120* | *45-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805028 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805028-BLK1)** | | | | Prepared & Analyzed: 08-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *47.7* | | *ug/L* | *50.0* | | *95* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *50.7* | | *ug/L* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.2* | | *ug/L* | *50.0* | | *106* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805028 - EPA 5030B** | | | | | | | | | | |
| **LCS (G805028-BS1)** | | | | Prepared & Analyzed: 08-May-08 | | | | | | |
| 1,1-Dichloroethylene | 62 | 5 | ug/L | 50.0 | | 124 | 56-135 | | | |
| Benzene | 53 | 5 | ug/L | 50.0 | | 107 | 71-137 | | | |
| Trichloroethene | 51 | 5 | ug/L | 50.0 | | 101 | 70-138 | | | |
| Toluene | 51 | 5 | ug/L | 50.0 | | 102 | 71-145 | | | |
| Chlorobenzene | 49 | 5 | ug/L | 50.0 | | 98 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *43.8* | | *ug/L* | *50.0* | | *88* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *51.4* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.3* | | *ug/L* | *50.0* | | *107* | *60-145* | | | |
| **Matrix Spike (G805028-MS1)** | **Source: 8050706-15** | | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| 1,1-Dichloroethylene | 63 | 5 | ug/L | 50.0 | ND | 125 | 56-150 | | | |
| Benzene | 56 | 5 | ug/L | 50.0 | ND | 111 | 71-165 | | | |
| Trichloroethene | 58 | 5 | ug/L | 50.0 | ND | 115 | 70-138 | | | |
| Toluene | 53 | 5 | ug/L | 50.0 | ND | 107 | 71-145 | | | |
| Chlorobenzene | 50 | 5 | ug/L | 50.0 | ND | 100 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *46.6* | | *ug/L* | *50.0* | | *93* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *51.9* | | *ug/L* | *50.0* | | *104* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.8* | | *ug/L* | *50.0* | | *112* | *60-145* | | | |
| **Matrix Spike Dup (G805028-MSD1)** | **Source: 8050706-15** | | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| 1,1-Dichloroethylene | 65 | 5 | ug/L | 50.0 | ND | 131 | 56-150 | 4 | 20 | |
| Benzene | 57 | 5 | ug/L | 50.0 | ND | 115 | 71-165 | 3 | 20 | |
| Trichloroethene | 54 | 5 | ug/L | 50.0 | ND | 108 | 70-138 | 6 | 20 | |
| Toluene | 52 | 5 | ug/L | 50.0 | ND | 104 | 71-145 | 3 | 20 | |
| Chlorobenzene | 48 | 5 | ug/L | 50.0 | ND | 97 | 72-143 | 3 | 20 | |
| *Surrogate: Dibromofluoromethane* | *51.7* | | *ug/L* | *50.0* | | *103* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *52.0* | | *ug/L* | *50.0* | | *104* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.8* | | *ug/L* | *50.0* | | *112* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805021 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805021-BLK1)** | | | | Prepared: 07-May-08 Analyzed: 08-May-08 | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg wet | | | | | | | |
| Phenol | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Benzyl alcohol | ND | 1300 | ug/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| 2-Methylphenol | ND | 660 | ug/kg wet | | | | | | | |
| Hexachloroethane | ND | 132 | ug/kg wet | | | | | | | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg wet | | | | | | | |
| Nitrobenzene | ND | 232 | ug/kg wet | | | | | | | |
| Isophorone | ND | 660 | ug/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Naphthalene | ND | 86.0 | ug/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 1300 | ug/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 660 | ug/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 116 | ug/kg wet | | | | | | | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg wet | | | | | | | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 660 | ug/kg wet | | | | | | | |
| 2-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| 3-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| Dimethyl phthalate | ND | 3300 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 69.0 | ug/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 148 | ug/kg wet | | | | | | | |
| Dibenzofuran | ND | 219 | ug/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Diethyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| Fluorene | ND | 136 | ug/kg wet | | | | | | | |
| 4-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg wet | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg wet | | | | | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805021 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805021-BLK1)** | | | | Prepared: 07-May-08 Analyzed: 08-May-08 | | | | | | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 66.0 | ug/kg wet | | | | | | | |
| Pentachlorophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 122 | ug/kg wet | | | | | | | |
| Anthracene | ND | 298 | ug/kg wet | | | | | | | |
| Carbazole | ND | 131 | ug/kg wet | | | | | | | |
| Di-n-butyl phthalate | ND | 500 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 94.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| Butyl benzyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg wet | | | | | | | |
| Chrysene | ND | 94.0 | ug/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg wet | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Di-n-octyl phthalate | ND | 860 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg wet | | | | | | | |
| *Surrogate: 2-Fluorophenol* | *14600* | | *ug/kg wet* | *15000* | | *98* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *14800* | | *ug/kg wet* | *15000* | | *99* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *12900* | | *ug/kg wet* | *15000* | | *86* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *6970* | | *ug/kg wet* | *10000* | | *70* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *8330* | | *ug/kg wet* | *10000* | | *83* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *7600* | | *ug/kg wet* | *10000* | | *76* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *12000* | | *ug/kg wet* | *15000* | | *80* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *7850* | | *ug/kg wet* | *10000* | | *78* | *33-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805021 - EPA 3545 MS** | | | | | | | | | | |
| **LCS (G805021-BS1)** | | | | Prepared: 07-May-08 Analyzed: 08-May-08 | | | | | | |
| Phenol | 12000 | 660 | ug/kg wet | 15000 | | 80 | 20-125 | | | |
| 2-Chlorophenol | 11600 | 660 | ug/kg wet | 15000 | | 78 | 20-125 | | | |
| 1,4-Dichlorobenzene | 6690 | 660 | ug/kg wet | 10000 | | 67 | 20-125 | | | |
| N-Nitrosodi-n-propylamine | 7710 | 330 | ug/kg wet | 10000 | | 77 | 20-125 | | | |
| 1,2,4-Trichlorobenzene | 6700 | 660 | ug/kg wet | 10000 | | 67 | 20-125 | | | |
| 4-Chloro-3-methylphenol | 12500 | 1300 | ug/kg wet | 15000 | | 83 | 20-125 | | | |
| 2,4-Dinitrotoluene | 9200 | 107 | ug/kg wet | 10000 | | 92 | 20-125 | | | |
| Acenaphthene | 7870 | 148 | ug/kg wet | 10000 | | 79 | 20-125 | | | |
| 4-Nitrophenol | 19700 | 3300 | ug/kg wet | 15000 | | 131 | 30-140 | | | |
| Pentachlorophenol | 14900 | 3300 | ug/kg wet | 15000 | | 99 | 20-125 | | | |
| Pyrene | 8550 | 66.0 | ug/kg wet | 10000 | | 86 | 30-135 | | | |
| *Surrogate: 2-Fluorophenol* | *14000* | | *ug/kg wet* | *15000* | | *94* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *13800* | | *ug/kg wet* | *15000* | | *92* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *12000* | | *ug/kg wet* | *15000* | | *80* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *6380* | | *ug/kg wet* | *10000* | | *64* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *7310* | | *ug/kg wet* | *10000* | | *73* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *7380* | | *ug/kg wet* | *10000* | | *74* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *12600* | | *ug/kg wet* | *15000* | | *84* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *7950* | | *ug/kg wet* | *10000* | | *80* | *33-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805020 - EPA 3510C_MS** | | | | | | | | | | |
| **Blank (G805020-BLK1)** | | | | Prepared & Analyzed: 07-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.6* | | *ug/L* | *10.0* | | *106* | *70-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *7.27* | | *ug/L* | *10.0* | | *73* | *60-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.76* | | *ug/L* | *10.0* | | *68* | *60-130* | | | |
| *Surrogate: Terphenyl-d14* | *6.27* | | *ug/L* | *10.0* | | *63* | *60-125* | | | |
| **LCS (G805020-BS1)** | | | | Prepared & Analyzed: 07-May-08 | | | | | | |
| Acenaphthene | 6.65 | 2.50 | ug/L | 10.0 | | 66 | 46-128 | | | |
| Pyrene | 7.35 | 1.50 | ug/L | 10.0 | | 74 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *8.03* | | *ug/L* | *10.0* | | *80* | *70-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.95* | | *ug/L* | *10.0* | | *70* | *60-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.53* | | *ug/L* | *10.0* | | *65* | *60-130* | | | |
| *Surrogate: Terphenyl-d14* | *6.10* | | *ug/L* | *10.0* | | *61* | *60-125* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805064 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805064-BLK1)** | | | | Prepared & Analyzed: 07-May-08 | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 33.0 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 33.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 83.0 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg wet | | | | | | | |
| Chrysene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1060* | | *ug/kg wet* | *1000* | | *106* | *60-145* | | | |
| *Surrogate: Nitrobenzene-d5* | *727* | | *ug/kg wet* | *1000* | | *73* | *65-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *676* | | *ug/kg wet* | *1000* | | *68* | *60-130* | | | |
| *Surrogate: Terphenyl-d14* | *627* | | *ug/kg wet* | *1000* | | *63* | *55-130* | | | |
| **LCS (G805064-BS1)** | | | | Prepared & Analyzed: 07-May-08 | | | | | | |
| Acenaphthene | 665 | 50.0 | ug/kg wet | 1000 | | 66 | 31-137 | | | |
| Pyrene | 735 | 50.0 | ug/kg wet | 1000 | | 74 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *803* | | *ug/kg wet* | *1000* | | *80* | *60-145* | | | |
| *Surrogate: Nitrobenzene-d5* | *695* | | *ug/kg wet* | *1000* | | *70* | *65-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *653* | | *ug/kg wet* | *1000* | | *65* | *60-130* | | | |
| *Surrogate: Terphenyl-d14* | *610* | | *ug/kg wet* | *1000* | | *61* | *55-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 19:09 |

## Notes and Definitions

| | |
|---|---|
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

June 12, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8050706

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-U2-2-GW-050708 | 8050706-01 | Water | 07-May-08 14:40 | 07-May-08 19:00 |
| CS-U2-2-SO-0609 | 8050706-02 | Soil | 07-May-08 14:30 | 07-May-08 19:00 |
| CS-U2-3-SO-0203 | 8050706-03 | Soil | 07-May-08 13:20 | 07-May-08 19:00 |
| CS-U2-5-SO-0506 | 8050706-04 | Soil | 07-May-08 12:38 | 07-May-08 19:00 |
| CS-U2-4-SO-0203 | 8050706-05 | Soil | 07-May-08 12:10 | 07-May-08 19:00 |
| CS-U2-1-SO-1012 | 8050706-06 | Soil | 07-May-08 11:44 | 07-May-08 19:00 |
| CS-U1-3-SO-0103D | 8050706-07 | Soil | 07-May-08 10:38 | 07-May-08 19:00 |
| CS-U1-3-SO-0103 | 8050706-08 | Soil | 07-May-08 10:36 | 07-May-08 19:00 |
| CS-U1--2-S0-0106 | 8050706-09 | Soil | 07-May-08 09:25 | 07-May-08 19:00 |
| CS-U1--1-SO-0607 | 8050706-10 | Soil | 07-May-08 09:00 | 07-May-08 19:00 |
| CS-U14-2-GW-050708 | 8050706-11 | Water | 07-May-08 07:50 | 07-May-08 19:00 |
| CS-I19-1-GW-050708 | 8050706-12 | Water | 07-May-08 16:55 | 07-May-08 19:00 |
| CS-U7-1-GW-050708 | 8050706-13 | Water | 07-May-08 14:40 | 07-May-08 19:00 |
| CS-U15-1-GW-050708 | 8050706-14 | Water | 07-May-08 12:27 | 07-May-08 19:00 |
| CS-P5-5-GW-050708 | 8050706-15 | Water | 07-May-08 10:00 | 07-May-08 19:00 |
| CS-I19-1-SO-0608 | 8050706-16 | Soil | 07-May-08 16:21 | 07-May-08 19:00 |
| CS-U15-1-SO-1012 | 8050706-17 | Soil | 07-May-08 12:00 | 07-May-08 19:00 |
| CS-U7-1-SO-0304 | 8050706-18 | Soil | 07-May-08 14:18 | 07-May-08 19:00 |
| CS-P5-5-SO-0607 | 8050706-19 | Soil | 07-May-08 09:40 | 07-May-08 19:00 |
| CS-P5-5-SO-0204 | 8050706-20 | Soil | 07-May-08 09:05 | 07-May-08 19:00 |

TCLP Chromium, Lead, and Mercury analyses on the sample ID, 8050706-16 were requested on 5/29/08 at 4:46pm per David Klatt.

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-2-GW-050708**

**Lab Sample ID: 8050706-01 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *102 %* | *60-128* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *60-127* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *108 %* | *70-135* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *68 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *76 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-2-SO-0609**

**Lab Sample ID: 8050706-02 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **453** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthylene** | **177** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthene** | **812** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluorene** | **763** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Phenanthrene** | **6780** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Anthracene** | **2840** | 83.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluoranthene** | **14500** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Pyrene** | **12800** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) anthracene** | **5710** | 8.50 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Chrysene** | **6450** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **6820** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **4220** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) pyrene** | **8490** | 15.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **6190** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **6250** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *98 %* | *60-145* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *79 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *95 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *55-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| **BTEX and MTBE by EPA 8260B** | | | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 10-May-08 | 8260B | |
| Benzene | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 10-May-08 | 8260B | |
| Toluene | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 10-May-08 | 8260B | |
| Ethylbenzene | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 10-May-08 | 8260B | |
| Xylenes, total | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 10-May-08 | 8260B | |
| *Surrogate: Dibromofluoromethane* | | *63 %* | *45-155* | | *08-May-08* | *10-May-08* | *8260B* | |
| *Surrogate: Toluene-d8* | | *95 %* | *62-129* | | *08-May-08* | *10-May-08* | *8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *89 %* | *45-127* | | *08-May-08* | *10-May-08* | *8260B* | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


ACCREDITED IN ACCORDANCE WITH nelac

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-2-SO-0609**

**Lab Sample ID: 8050706-02 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **80.3** | | % by Weight | 1 | 10-May-08 | 09-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **20.3** | 0.01 | wt% | 1 | 09-May-08 | 12-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **9** | 1.2 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Barium** | **190** | 1.2 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Cadmium** | **1.3** | 0.58 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Chromium** | **18** | 1.2 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Lead** | **420** | 0.58 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.2 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.33** | 0.03 | mg/Kg-dry | 1 | 08-May-08 | 09-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-3-SO-0203**

**Lab Sample ID: 8050706-03 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *79 %* | *30-170* | | *14-May-08* | *22-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *99 %* | *30-170* | | *14-May-08* | *22-May-08* | *8081A* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **2-Methylnaphthalene** | **134** | 116 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-3-SO-0203**

**Lab Sample ID: 8050706-03 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Acenaphthene** | **267** | 148 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Acenaphthylene** | **202** | 69.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Anthracene** | **4090** | 298 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **34400** | 68.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **81600** | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (b) fluoranthene** | **65300** | 230 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **13600** | 205 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (k) fluoranthene** | **20700** | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Carbazole** | **635** | 131 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Chrysene** | **36600** | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Dibenz (a,h) anthracene** | **6840** | 174 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **16200** | 178 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-3-SO-0203**

**Lab Sample ID: 8050706-03 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Naphthalene** | **110** | 86.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Phenanthrene** | **13600** | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Pyrene** | **40200** | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *62 %* | *30-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *62 %* | *30-123* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *69 %* | *33-130* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *71 %* | *43-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorophenol* | | *84 %* | *21-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *80 %* | *30-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *94 %* | *25-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *71 %* | *33-127* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| **BTEX and MTBE by EPA 8260B** | | | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| Benzene | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| **Toluene** | **15.3** | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| **Ethylbenzene** | **10.3** | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| **Xylenes, total** | **57.9** | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| *Surrogate: Dibromofluoromethane* | | *86 %* | *45-155* | | *08-May-08* | *09-May-08* | *8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *08-May-08* | *09-May-08* | *8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *61 %* | *45-127* | | *08-May-08* | *09-May-08* | *8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-3-SO-0203**

**Lab Sample ID: 8050706-03 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **16.5** | 0.01 | wt% | 1 | 09-May-08 | 12-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **3800** | 23 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.3 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Arsenic** | **4.5** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Barium** | **42** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.56 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Cadmium** | **0.61** | 0.56 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Calcium** | **35000** | 67 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **8.1** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Cobalt** | **5.4** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Copper** | **15** | 2.9 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Iron** | **8100** | 34 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Lead** | **56** | 0.56 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Magnesium** | **18000** | 34 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Manganese** | **190** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Nickel** | **15** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Potassium** | **440** | 34 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Sodium** | **240** | 67 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Vanadium** | **16** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Zinc** | **89** | 5.6 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-3-SO-0203**

**Lab Sample ID: 8050706-03 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.15** | 0.029 | mg/Kg-dry | 1 | 08-May-08 | 09-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.3 | mg/Kg-dry | 1 | 10-May-08 | 10-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.0** | 0 | pH Units | 1 | 09-May-08 | 09-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-5-SO-0506**

**Lab Sample ID: 8050706-04 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Phenanthrene** | **52.4** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluoranthene** | **187** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Pyrene** | **204** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) anthracene** | **150** | 8.50 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Chrysene** | **223** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **358** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **234** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) pyrene** | **356** | 15.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **481** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **483** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *103 %* | *60-145* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *83 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *96 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *55-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| **BTEX and MTBE by EPA 8260B** | | | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| **Benzene** | **29.3** | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| **Toluene** | **48.9** | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| **Ethylbenzene** | **17.8** | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| **Xylenes, total** | **99.6** | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| *Surrogate: Dibromofluoromethane* | | *181 %* | *45-155* | | *08-May-08* | *09-May-08* | *8260B* | |
| *Surrogate: Toluene-d8* | | *112 %* | *62-129* | | *08-May-08* | *09-May-08* | *8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *110 %* | *45-127* | | *08-May-08* | *09-May-08* | *8260B* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-5-SO-0506**

**Lab Sample ID: 8050706-04 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **93.6** | | % by Weight | 1 | 10-May-08 | 09-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **6.1** | 0.01 | wt% | 1 | 09-May-08 | 12-May-08 | Percent Moisture | |
| **SW7420** | | | | | | | | |
| **Lead** | **78** | 26 | mg/Kg-dry | 1 | 12-May-08 | 13-May-08 | Lead by FLAA | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-4-SO-0203**

**Lab Sample ID: 8050706-05 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **264** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthylene** | **217** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthene** | **409** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluorene** | **498** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Phenanthrene** | **3600** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Anthracene** | **1630** | 83.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluoranthene** | **7210** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Pyrene** | **6460** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) anthracene** | **2960** | 8.50 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Chrysene** | **3550** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **3780** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **1560** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) pyrene** | **4360** | 15.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **3320** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **3520** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *78 %* | *60-145* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *69 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *81 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *64 %* | *55-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| **BTEX and MTBE by EPA 8260B** | | | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| Benzene | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| **Toluene** | **9.91** | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| Ethylbenzene | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| **Xylenes, total** | **22.6** | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| *Surrogate: Dibromofluoromethane* | | *92 %* | *45-155* | | *08-May-08* | *09-May-08* | *8260B* | |
| *Surrogate: Toluene-d8* | | *99 %* | *62-129* | | *08-May-08* | *09-May-08* | *8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *88 %* | *45-127* | | *08-May-08* | *09-May-08* | *8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-4-SO-0203**

**Lab Sample ID: 8050706-05 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **17.7** | 0.01 | wt% | 1 | 09-May-08 | 12-May-08 | Percent Moisture | |
| **SW7420** | | | | | | | | |
| **Lead** | **160** | 29 | mg/Kg-dry | 1 | 12-May-08 | 13-May-08 | Lead by FLAA | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-1-SO-1012**

**Lab Sample ID: 8050706-06 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **1400** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthylene** | **149** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthene** | **1150** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluorene** | **1250** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Phenanthrene** | **9260** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Anthracene** | **3400** | 83.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluoranthene** | **10900** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Pyrene** | **10200** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) anthracene** | **3520** | 8.50 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Chrysene** | **4190** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **3540** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **1990** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) pyrene** | **4670** | 15.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **3230** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **3450** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *93 %* | *60-145* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *76 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *88 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *72 %* | *55-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| **BTEX and MTBE by EPA 8260B** | | | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| Benzene | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| Toluene | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| Ethylbenzene | ND | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| **Xylenes, total** | **6.11** | 5.00 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | 8260B | |
| *Surrogate: Dibromofluoromethane* | | *168 %* | *45-155* | | *08-May-08* | *09-May-08* | *8260B* | |
| *Surrogate: Toluene-d8* | | *111 %* | *62-129* | | *08-May-08* | *09-May-08* | *8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *103 %* | *45-127* | | *08-May-08* | *09-May-08* | *8260B* | |

**GRACE ANALYTICAL LAB, INC.**
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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U2-1-SO-1012**

**Lab Sample ID: 8050706-06 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **21.0** | 0.01 | wt% | 1 | 09-May-08 | 12-May-08 | Percent Moisture | |
| **SW7420** | | | | | | | | |
| **Lead** | **440** | 30 | mg/Kg-dry | 1 | 12-May-08 | 13-May-08 | Lead by FLAA | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U1-3-SO-0103D**

**Lab Sample ID: 8050706-07 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| **Xylenes, total** | **16** | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *115 %* | *45-155* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *104 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *83 %* | *45-127* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **648** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthylene** | **263** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthene** | **308** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluorene** | **409** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Phenanthrene** | **3580** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Anthracene** | **1360** | 83.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluoranthene** | **5310** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Pyrene** | **5150** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) anthracene** | **3050** | 8.50 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Chrysene** | **3440** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **4400** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **4290** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) pyrene** | **6420** | 15.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **5760** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **5890** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *94 %* | *60-145* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *73 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *94 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *55-130* | | *09-May-08* | *09-May-08* | *8270c* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U1-3-SO-0103**

**Lab Sample ID: 8050706-08 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| **Toluene** | **35** | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| **Ethylbenzene** | **23** | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| **Xylenes, total** | **120** | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *77 %* | *45-155* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *73 %* | *45-127* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **483** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthylene** | **62.8** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthene** | **53.5** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluorene** | **74.9** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Phenanthrene** | **805** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Anthracene** | **332** | 83.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluoranthene** | **1110** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Pyrene** | **1130** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) anthracene** | **429** | 8.50 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Chrysene** | **560** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **484** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **388** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) pyrene** | **648** | 15.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **483** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **600** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *90 %* | *60-145* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *71 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *92 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *55-130* | | *09-May-08* | *09-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U1--2-S0-0106**

**Lab Sample ID: 8050706-09 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| **Xylenes, total** | **7** | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *108 %* | *45-155* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *106 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *103 %* | *45-127* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **2260** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthylene** | **53.6** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthene** | **1150** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluorene** | **1200** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Phenanthrene** | **10100** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Anthracene** | **3010** | 83.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluoranthene** | **13400** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Pyrene** | **11500** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) anthracene** | **5980** | 8.50 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Chrysene** | **6150** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **8580** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **2880** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) pyrene** | **2710** | 15.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **2720** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **2950** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *58 %* | *50-135* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *43 %* | *26-135* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *37 %* | *25-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *36 %* | *25-130* | | *09-May-08* | *09-May-08* | *8270c* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U1--2-S0-0106**

**Lab Sample ID: 8050706-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **85.9** | | % by Weight | 1 | 10-May-08 | 09-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U1--1-SO-0607**

**Lab Sample ID: 8050706-10 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| **Benzene** | **7** | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| **Toluene** | **7** | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| **Xylenes, total** | **8** | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *68 %* | *45-155* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *88 %* | *45-127* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **542** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthylene** | **95.2** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthene** | **3030** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluorene** | **2460** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Phenanthrene** | **24600** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Anthracene** | **8590** | 83.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluoranthene** | **27100** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Pyrene** | **27800** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) anthracene** | **9210** | 8.50 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Chrysene** | **10100** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **7500** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **7530** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) pyrene** | **11100** | 15.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **7370** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **8020** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *90 %* | *60-145* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *60 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *97 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | *55-130* | | *09-May-08* | *09-May-08* | *8270c* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U1--1-SO-0607**

**Lab Sample ID: 8050706-10 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **90.3** | | % by Weight | 1 | 10-May-08 | 09-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U14-2-GW-050708**

**Lab Sample ID: 8050706-11 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *100 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U14-2-GW-050708**

**Lab Sample ID: 8050706-11 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| **Benzo (b) fluoranthene** | **0.22** | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *111 %* | *70-135* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *69 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *77 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *71 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.033** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Barium** | **0.23** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.028** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Lead** | **0.38** | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U14-2-GW-050708**

**Lab Sample ID: 8050706-11 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| **Mercury** | **0.00084** | 0.00025 | mg/L | 1 | 09-May-08 | 09-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-I19-1-GW-050708**

**Lab Sample ID: 8050706-12 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *99 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *103 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *106 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-I19-1-GW-050708**

**Lab Sample ID: 8050706-12 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| **Benzo (b) fluoranthene** | **0.19** | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *108 %* | *70-135* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *68 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *79 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.033** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Barium** | **0.067** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.0079** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Lead** | **0.055** | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-I19-1-GW-050708**

**Lab Sample ID: 8050706-12 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **SW7470A** | | | | | | | | |
| **Mercury** | **0.011** | 0.0005 | mg/L | 2 | 09-May-08 | 09-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U7-1-GW-050708**

**Lab Sample ID: 8050706-13 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *103 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *106 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U7-1-GW-050708**

**Lab Sample ID: 8050706-13 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *96 %* | *70-135* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *60 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *62 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *61 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **7.84** | | N/A | 1 | 09-May-08 | 09-May-08 | 9045C | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.018** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Barium** | **0.057** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Chromium | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Lead | ND | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U7-1-GW-050708**

**Lab Sample ID: 8050706-13 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 09-May-08 | 09-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U15-1-GW-050708**

**Lab Sample ID: 8050706-14 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *103 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *103 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *106 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U15-1-GW-050708**

**Lab Sample ID: 8050706-14 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *121 %* | *70-135* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *69 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *82 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *75 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **7.18** | | N/A | 1 | 09-May-08 | 09-May-08 | 9045C | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.0073** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Barium** | **0.38** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.0046** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Lead** | **0.054** | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U15-1-GW-050708**

**Lab Sample ID: 8050706-14 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 09-May-08 | 09-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-GW-050708**

**Lab Sample ID: 8050706-15 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *96 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *105 %* | *60-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-GW-050708**

**Lab Sample ID: 8050706-15 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 09-May-08 | 09-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *94 %* | *55-135* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *83 %* | *40-125* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *103 %* | *40-130* | | *09-May-08* | *09-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *80 %* | *35-125* | | *09-May-08* | *09-May-08* | *8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.20** | | N/A | 1 | 09-May-08 | 09-May-08 | 9045C | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.045** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Barium** | **0.12** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.046** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Lead** | **0.12** | 0.002 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Selenium** | **0.0073** | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-GW-050708**

**Lab Sample ID: 8050706-15 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| **Mercury** | **0.00026** | 0.00025 | mg/L | 1 | 09-May-08 | 09-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-I19-1-SO-0608**

**Lab Sample ID: 8050706-16 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **TCLP Metals by 6000/7000 Series Methods** | | | | | | | | |
| **Chromium** | **0.00510** | 0.00500 | mg/L | 1 | 03-Jun-08 | 06-Jun-08 | 1311/7191 | |
| **Lead** | **0.0737** | 0.00500 | mg/L | 1 | 03-Jun-08 | 03-Jun-08 | 1311/ 7421 | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| **Chloroform** | **6** | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *102 %* | *45-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-I19-1-SO-0608**

**Lab Sample ID: 8050706-16 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| *Surrogate: Toluene-d8* | | *110 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *95 %* | *45-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Acenaphthylene** | **60.4** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Phenanthrene** | **482** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Anthracene** | **335** | 83.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluoranthene** | **1170** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Pyrene** | **1020** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) anthracene** | **470** | 8.50 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Chrysene** | **650** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **673** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **556** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) pyrene** | **754** | 15.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **668** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **778** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *96 %* | *60-145* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *63 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *92 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *72 %* | *55-130* | | *09-May-08* | *09-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-I19-1-SO-0608**

**Lab Sample ID: 8050706-16 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **TCLP Extraction by EPA 1311** | | | | | | | | |
| Mercury | ND | 0.000250 | mg/L | 1 | 03-Jun-08 | 06-Jun-08 | Mercury TCLP 1311/ 7470A(W) | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **11.0** | | N/A | 1 | 15-May-08 | 09-May-08 | 9045C | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **14.4** | 0.01 | wt% | 1 | 09-May-08 | 12-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **33** | 1.1 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Barium** | **860** | 1.1 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Cadmium** | **3.7** | 0.55 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Chromium** | **75** | 1.1 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Lead** | **560** | 0.55 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Selenium** | **2** | 1.1 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Silver** | **2.5** | 1.1 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **97** | 5.7 | mg/Kg-dry | 200 | 08-May-08 | 09-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U15-1-SO-1012**

**Lab Sample ID: 8050706-17 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 10-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| **Xylenes, total** | **9** | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *110 %* | *45-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *112 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *116 %* | *45-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U15-1-SO-1012**

**Lab Sample ID: 8050706-17 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *100 %* | *60-145* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *86 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *95 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *55-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.42** | | N/A | 1 | 14-May-08 | 09-May-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **78.2** | | % by Weight | 1 | 10-May-08 | 09-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U15-1-SO-1012**

**Lab Sample ID: 8050706-17 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **24.9** | 0.01 | wt% | 1 | 09-May-08 | 12-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **4.2** | 1.3 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Barium** | **5.8** | 1.3 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.63 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Chromium** | **4** | 1.3 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Lead** | **5.1** | 0.63 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.3 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.3 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.031 | mg/Kg-dry | 1 | 08-May-08 | 09-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U7-1-SO-0304**

**Lab Sample ID: 8050706-18 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *132 %* | *45-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *108 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *104 %* | *45-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U7-1-SO-0304**

**Lab Sample ID: 8050706-18 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Phenanthrene** | **305** | 33.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Anthracene** | **257** | 83.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Fluoranthene** | **579** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Pyrene** | **520** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) anthracene** | **234** | 8.50 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Chrysene** | **303** | 50.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **331** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **169** | 11.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (a) pyrene** | **345** | 15.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **238** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **202** | 25.0 | ug/kg dry | 1 | 09-May-08 | 09-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *108 %* | *60-145* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *82 %* | *60-125* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *94 %* | *60-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *55-130* | | *09-May-08* | *09-May-08* | *8270c* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.58** | | N/A | 1 | 15-May-08 | 09-May-08 | 9045C | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **6.6** | 0.01 | wt% | 1 | 09-May-08 | 12-May-08 | Percent Moisture | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-U7-1-SO-0304**

**Lab Sample ID: 8050706-18 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **2.5** | 1 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Barium** | **50** | 1 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.51 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Chromium** | **4.8** | 1 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **Lead** | **69** | 0.51 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 09-May-08 | 09-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.19** | 0.026 | mg/Kg-dry | 1 | 08-May-08 | 09-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-SO-0607**

**Lab Sample ID: 8050706-19 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *72 %* | *30-170* | | *14-May-08* | *22-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *108 %* | *30-170* | | *14-May-08* | *22-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| **Carbon disulfide** | **6** | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-SO-0607**

**Lab Sample ID: 8050706-19 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *134 %* | *45-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *108 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *106 %* | *45-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 116 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-SO-0607**

**Lab Sample ID: 8050706-19 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthene | ND | 148 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthylene | ND | 69.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Anthracene | ND | 298 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **397** | 205 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Carbazole | ND | 131 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Chrysene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **185** | 178 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-SO-0607**

**Lab Sample ID: 8050706-19 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Naphthalene | ND | 86.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenanthrene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pyrene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *71 %* | *30-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *76 %* | *30-123* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *86 %* | *33-130* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *67 %* | *43-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorophenol* | | *110 %* | *21-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *82 %* | *30-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *111 %* | *25-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *33-127* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **83.3** | | % by Weight | 1 | 10-May-08 | 10-May-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **16.9** | 0.01 | wt% | 1 | 09-May-08 | 12-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **930** | 23 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.3 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Arsenic | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Barium** | **2.4** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.57 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.57 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Calcium** | **26000** | 67 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **3.1** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-SO-0607**

**Lab Sample ID: 8050706-19 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Cobalt** | **1.8** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Copper | ND | 2.8 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Iron** | **3200** | 34 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Lead** | **1.9** | 0.57 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Magnesium** | **14000** | 34 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Manganese** | **120** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Nickel** | **3** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Potassium** | **190** | 34 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Sodium** | **220** | 67 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Vanadium** | **5.7** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Zinc** | **10** | 5.7 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.028 | mg/Kg-dry | 1 | 08-May-08 | 09-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.3 | mg/Kg-dry | 1 | 10-May-08 | 10-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **7.5** | 0 | pH Units | 1 | 09-May-08 | 09-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-SO-0204**

**Lab Sample ID: 8050706-20 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 22-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *75 %* | *30-170* | | *14-May-08* | *22-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *95 %* | *30-170* | | *14-May-08* | *22-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-SO-0204**

**Lab Sample ID: 8050706-20 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 08-May-08 | 09-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *109 %* | *45-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *105 %* | *62-129* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *109 %* | *45-145* | | *08-May-08* | *09-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 116 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-SO-0204**

**Lab Sample ID: 8050706-20 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthene | ND | 148 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthylene | ND | 69.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Anthracene | ND | 298 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **469** | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Carbazole | ND | 131 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Chrysene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-SO-0204**

**Lab Sample ID: 8050706-20 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Naphthalene | ND | 86.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenanthrene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pyrene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *70 %* | *30-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *78 %* | *30-123* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *91 %* | *33-130* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *74 %* | *43-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorophenol* | | *108 %* | *21-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *83 %* | *30-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *115 %* | *25-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *33-127* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **16.6** | 0.01 | wt% | 1 | 09-May-08 | 12-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **2400** | 24 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.4 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Arsenic** | **2.2** | 1.2 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Barium** | **17** | 1.2 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.59 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.59 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Calcium** | **5200** | 71 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **4.6** | 1.2 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Cobalt** | **2.2** | 1.2 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Copper** | **4.1** | 2.9 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

**Client Sample ID: CS-P5-5-SO-0204**

**Lab Sample ID: 8050706-20 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Iron** | **4200** | 35 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Lead** | **5.7** | 0.59 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Magnesium** | **3000** | 35 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Manganese** | **48** | 1.2 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Nickel** | **3.9** | 1.2 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Potassium** | **370** | 35 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Selenium** | **1.2** | 1.2 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Sodium** | **1800** | 71 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.2 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Vanadium** | **9.6** | 1.2 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Zinc** | **19** | 5.9 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.029 | mg/Kg-dry | 1 | 08-May-08 | 09-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| **Cyanide** | **0.34** | 0.3 | mg/Kg-dry | 1 | 10-May-08 | 10-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **9.6** | 0 | pH Units | 1 | 09-May-08 | 09-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Grace Analytical Lab, Inc.

## TCLP Metals by 6000/7000 Series Methods - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806007 - EPA 3010A** | | | | | | | | | | |
| **Blank (G806007-BLK1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Chromium | ND | 0.00500 | mg/L | | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | | | | |
| **LCS (G806007-BS1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Chromium | 0.880 | 0.100 | mg/L | 0.800 | | 110 | 80-120 | | | |
| Lead | 0.838 | 0.100 | mg/L | 0.800 | | 105 | 80-120 | | | |
| **Matrix Spike (G806007-MS1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Chromium | ND | 0.00500 | mg/L | | | | 75-125 | | | |
| Lead | ND | 0.00500 | mg/L | | | | 75-125 | | | |
| **Matrix Spike Dup (G806007-MSD1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Chromium | ND | 0.00500 | mg/L | | | | 75-125 | | 20 | |
| Lead | ND | 0.00500 | mg/L | | | | 75-125 | | 20 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805026 - EPA 5035** | | | | | | | | | | |
| **Blank (G805026-BLK1)** | | | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Vinyl chloride | ND | 2 | ug/kg wet | | | | | | | |
| Bromomethane | ND | 5 | ug/kg wet | | | | | | | |
| Chloroethane | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Acetone | ND | 50 | ug/kg wet | | | | | | | |
| Carbon disulfide | ND | 5 | ug/kg wet | | | | | | | |
| Methylene Chloride | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Butanone | ND | 5 | ug/kg wet | | | | | | | |
| Chloroform | ND | 5 | ug/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Trichloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/kg wet | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/kg wet | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Hexanone | ND | 5 | ug/kg wet | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Chlorobenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Styrene | ND | 5 | ug/kg wet | | | | | | | |
| Bromoform | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *35.1* | | *ug/kg wet* | *50.0* | | *70* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *35.1* | | *ug/kg wet* | *50.0* | | *70* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *48.8* | | *ug/kg wet* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *48.8* | | *ug/kg wet* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *50.8* | | *ug/kg wet* | *50.0* | | *102* | *45-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805026 - EPA 5035** | | | | | | | | | | |
| **Blank (G805026-BLK1)** | | | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *50.8* | | *ug/kg wet* | *50.0* | | *102* | *45-127* | | | |
| **LCS (G805026-BS1)** | | | | Prepared: 08-May-08 Analyzed: 10-May-08 | | | | | | |
| 1,1-Dichloroethylene | 30 | 5 | ug/kg wet | 50.0 | | 59 | 35-155 | | | |
| Benzene | 33 | 5 | ug/kg wet | 50.0 | | 66 | 35-150 | | | |
| Benzene | 33 | 5 | ug/kg wet | 50.0 | | 66 | 35-150 | | | |
| Trichloroethene | 51 | 5 | ug/kg wet | 50.0 | | 101 | 42-135 | | | |
| Toluene | 54 | 5 | ug/kg wet | 50.0 | | 109 | 40-151 | | | |
| Toluene | 54 | 5 | ug/kg wet | 50.0 | | 109 | 40-151 | | | |
| Chlorobenzene | 51 | 5 | ug/kg wet | 50.0 | | 102 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *24.5* | | *ug/kg wet* | *50.0* | | *49* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *24.5* | | *ug/kg wet* | *50.0* | | *49* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *50.2* | | *ug/kg wet* | *50.0* | | *100* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *50.2* | | *ug/kg wet* | *50.0* | | *100* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *49.0* | | *ug/kg wet* | *50.0* | | *98* | *45-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *49.0* | | *ug/kg wet* | *50.0* | | *98* | *45-127* | | | |
| **Matrix Spike (G805026-MS1)** | **Source: 8050706-20** | | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| 1,1-Dichloroethylene | 58 | 5 | ug/kg dry | 60.2 | ND | 97 | 35-155 | | | |
| Benzene | 60 | 5 | ug/kg dry | 60.2 | 2 | 97 | 45-150 | | | |
| Benzene | 60 | 5 | ug/kg dry | 60.2 | 2 | 97 | 35-150 | | | |
| Trichloroethene | 43 | 5 | ug/kg dry | 60.2 | 2 | 69 | 42-166 | | | |
| Toluene | 49 | 5 | ug/kg dry | 60.2 | 2 | 78 | 40-151 | | | |
| Toluene | 49 | 5 | ug/kg dry | 60.2 | 2 | 78 | 40-151 | | | |
| Chlorobenzene | 41 | 5 | ug/kg dry | 60.2 | ND | 68 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/kg dry* | *60.2* | | *72* | *45-155* | | | |
| *Surrogate: Dibromofluoromethane* | *43.1* | | *ug/kg dry* | *60.2* | | *72* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *59.3* | | *ug/kg dry* | *60.2* | | *99* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *59.3* | | *ug/kg dry* | *60.2* | | *99* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *ND* | | *ug/kg dry* | *60.2* | | *93* | *45-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.9* | | *ug/kg dry* | *60.2* | | *93* | *45-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805026 - EPA 5035** | | | | | | | | | | |
| **Matrix Spike Dup (G805026-MSD1)** | **Source: 8050706-20** | | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| 1,1-Dichloroethylene | 62 | 5 | ug/kg dry | 60.2 | ND | 103 | 35-155 | 6 | 30 | |
| Benzene | 63 | 5 | ug/kg dry | 60.2 | 2 | 102 | 35-150 | 5 | 30 | |
| Benzene | 63 | 5 | ug/kg dry | 60.2 | 2 | 102 | 45-150 | 5 | 30 | |
| Trichloroethene | 47 | 5 | ug/kg dry | 60.2 | 2 | 76 | 42-166 | 9 | 30 | |
| Toluene | 53 | 5 | ug/kg dry | 60.2 | 2 | 84 | 40-151 | 7 | 30 | |
| Toluene | 53 | 5 | ug/kg dry | 60.2 | 2 | 84 | 40-151 | 7 | 30 | |
| Chlorobenzene | 44 | 5 | ug/kg dry | 60.2 | ND | 73 | 34-158 | 7 | 30 | |
| *Surrogate: Dibromofluoromethane* | *42.3* | | *ug/kg dry* | *60.2* | | *70* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *42.3* | | *ug/kg dry* | *60.2* | | *70* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *58.7* | | *ug/kg dry* | *60.2* | | *98* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *58.7* | | *ug/kg dry* | *60.2* | | *98* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *54.7* | | *ug/kg dry* | *60.2* | | *91* | *45-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *54.7* | | *ug/kg dry* | *60.2* | | *91* | *45-127* | | | |
| **Batch G805028 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805028-BLK1)** | | | | Prepared & Analyzed: 08-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805028 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805028-BLK1)** | | | | Prepared & Analyzed: 08-May-08 | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *47.7* | | *ug/L* | *50.0* | | *95* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *47.7* | | *ug/L* | *50.0* | | *95* | *60-128* | | | |
| *Surrogate: Toluene-d8* | *50.7* | | *ug/L* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *50.7* | | *ug/L* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.2* | | *ug/L* | *50.0* | | *106* | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.2* | | *ug/L* | *50.0* | | *106* | *60-145* | | | |
| **LCS (G805028-BS1)** | | | | Prepared & Analyzed: 08-May-08 | | | | | | |
| 1,1-Dichloroethylene | 62 | 5 | ug/L | 50.0 | | 124 | 56-135 | | | |
| Benzene | 53 | 5 | ug/L | 50.0 | | 107 | 71-137 | | | |
| Benzene | 53 | 5 | ug/L | 50.0 | | 107 | 60-140 | | | |
| Trichloroethene | 51 | 5 | ug/L | 50.0 | | 101 | 70-138 | | | |
| Toluene | 51 | 5 | ug/L | 50.0 | | 102 | 71-145 | | | |
| Toluene | 51 | 5 | ug/L | 50.0 | | 102 | 60-145 | | | |
| Chlorobenzene | 49 | 5 | ug/L | 50.0 | | 98 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *43.8* | | *ug/L* | *50.0* | | *88* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *43.8* | | *ug/L* | *50.0* | | *88* | *60-128* | | | |
| *Surrogate: Toluene-d8* | *51.4* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.4* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.3* | | *ug/L* | *50.0* | | *107* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.3* | | *ug/L* | *50.0* | | *107* | *60-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805028 - EPA 5030B** | | | | | | | | | | |
| **Matrix Spike (G805028-MS1)** | **Source: 8050706-15** | | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| 1,1-Dichloroethylene | 63 | 5 | ug/L | 50.0 | ND | 125 | 56-150 | | | |
| Benzene | 56 | 5 | ug/L | 50.0 | ND | 111 | 71-137 | | | |
| Benzene | 56 | 5 | ug/L | 50.0 | ND | 111 | 71-165 | | | |
| Trichloroethene | 58 | 5 | ug/L | 50.0 | ND | 115 | 70-138 | | | |
| Toluene | 53 | 5 | ug/L | 50.0 | ND | 107 | 71-145 | | | |
| Toluene | 53 | 5 | ug/L | 50.0 | ND | 107 | 71-145 | | | |
| Chlorobenzene | 50 | 5 | ug/L | 50.0 | ND | 100 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *46.6* | | *ug/L* | *50.0* | | *93* | *60-128* | | | |
| *Surrogate: Dibromofluoromethane* | *46.6* | | *ug/L* | *50.0* | | *93* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *51.9* | | *ug/L* | *50.0* | | *104* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.9* | | *ug/L* | *50.0* | | *104* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.8* | | *ug/L* | *50.0* | | *112* | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.8* | | *ug/L* | *50.0* | | *112* | *60-145* | | | |
| **Matrix Spike Dup (G805028-MSD1)** | **Source: 8050706-15** | | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| 1,1-Dichloroethylene | 65 | 5 | ug/L | 50.0 | ND | 131 | 56-150 | 4 | 20 | |
| Benzene | 57 | 5 | ug/L | 50.0 | ND | 115 | 71-137 | 3 | 20 | |
| Benzene | 57 | 5 | ug/L | 50.0 | ND | 115 | 71-165 | 3 | 20 | |
| Trichloroethene | 54 | 5 | ug/L | 50.0 | ND | 108 | 70-138 | 6 | 20 | |
| Toluene | 52 | 5 | ug/L | 50.0 | ND | 104 | 71-145 | 3 | 20 | |
| Toluene | 52 | 5 | ug/L | 50.0 | ND | 104 | 71-145 | 3 | 20 | |
| Chlorobenzene | 48 | 5 | ug/L | 50.0 | ND | 97 | 72-143 | 3 | 20 | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/L* | *50.0* | | *103* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *51.7* | | *ug/L* | *50.0* | | *103* | *60-128* | | | |
| *Surrogate: Toluene-d8* | *52.0* | | *ug/L* | *50.0* | | *104* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *52.0* | | *ug/L* | *50.0* | | *104* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.8* | | *ug/L* | *50.0* | | *112* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.8* | | *ug/L* | *50.0* | | *112* | *60-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805031 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805031-BLK1)** | | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 660 | ug/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 116 | ug/kg wet | | | | | | | |
| 2-Methylphenol | ND | 660 | ug/kg wet | | | | | | | |
| 2-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg wet | | | | | | | |
| 3-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg wet | | | | | | | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 1300 | ug/kg wet | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| 4-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 148 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 69.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 298 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg wet | | | | | | | |
| Benzyl alcohol | ND | 1300 | ug/kg wet | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Butyl benzyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Carbazole | ND | 131 | ug/kg wet | | | | | | | |
| Chrysene | ND | 94.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg wet | | | | | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805031 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805031-BLK1)** | | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| Dibenzofuran | ND | 219 | ug/kg wet | | | | | | | |
| Diethyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Dimethyl phthalate | ND | 3300 | ug/kg wet | | | | | | | |
| Di-n-butyl phthalate | ND | 500 | ug/kg wet | | | | | | | |
| Di-n-octyl phthalate | ND | 860 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 94.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 136 | ug/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 66.0 | ug/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 660 | ug/kg wet | | | | | | | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg wet | | | | | | | |
| Hexachloroethane | ND | 132 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg wet | | | | | | | |
| Isophorone | ND | 660 | ug/kg wet | | | | | | | |
| Naphthalene | ND | 86.0 | ug/kg wet | | | | | | | |
| Nitrobenzene | ND | 232 | ug/kg wet | | | | | | | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg wet | | | | | | | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg wet | | | | | | | |
| Pentachlorophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 122 | ug/kg wet | | | | | | | |
| Phenol | ND | 660 | ug/kg wet | | | | | | | |
| Pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *7540* | | *ug/kg wet* | *10000* | | *75* | *30-135* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *11700* | | *ug/kg wet* | *15000* | | *78* | *30-123* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *13400* | | *ug/kg wet* | *15000* | | *90* | *33-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6790* | | *ug/kg wet* | *10000* | | *68* | *43-125* | | | |
| *Surrogate: 2-Fluorophenol* | *17100* | | *ug/kg wet* | *15000* | | *114* | *21-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *8200* | | *ug/kg wet* | *10000* | | *82* | *30-125* | | | |
| *Surrogate: Phenol-d5* | *17200* | | *ug/kg wet* | *15000* | | *114* | *25-135* | | | |
| *Surrogate: Terphenyl-d14* | *8380* | | *ug/kg wet* | *10000* | | *84* | *33-127* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805031 - EPA 3545 MS** | | | | | | | | | | |
| **LCS (G805031-BS1)** | | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| 1,2,4-Trichlorobenzene | 7420 | 660 | ug/kg wet | 10000 | | 74 | 20-125 | | | |
| 1,4-Dichlorobenzene | 7300 | 660 | ug/kg wet | 10000 | | 73 | 20-125 | | | |
| 2,4-Dinitrotoluene | 9170 | 107 | ug/kg wet | 10000 | | 92 | 20-125 | | | |
| 2-Chlorophenol | 12400 | 660 | ug/kg wet | 15000 | | 82 | 20-125 | | | |
| 4-Chloro-3-methylphenol | 16200 | 1300 | ug/kg wet | 15000 | | 108 | 20-125 | | | |
| 4-Nitrophenol | 19800 | 3300 | ug/kg wet | 15000 | | 132 | 30-140 | | | |
| Acenaphthene | 8170 | 148 | ug/kg wet | 10000 | | 82 | 20-125 | | | |
| N-Nitrosodi-n-propylamine | 9360 | 330 | ug/kg wet | 10000 | | 94 | 20-125 | | | |
| Pentachlorophenol | 15900 | 3300 | ug/kg wet | 15000 | | 106 | 20-125 | | | |
| Phenol | 14100 | 660 | ug/kg wet | 15000 | | 94 | 20-125 | | | |
| Pyrene | 9180 | 66.0 | ug/kg wet | 10000 | | 92 | 30-135 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *6530* | | *ug/kg wet* | *10000* | | *65* | *30-135* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *13100* | | *ug/kg wet* | *15000* | | *87* | *30-123* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *12100* | | *ug/kg wet* | *15000* | | *81* | *33-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6920* | | *ug/kg wet* | *10000* | | *69* | *43-125* | | | |
| *Surrogate: 2-Fluorophenol* | *15000* | | *ug/kg wet* | *15000* | | *100* | *21-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *8730* | | *ug/kg wet* | *10000* | | *87* | *30-125* | | | |
| *Surrogate: Phenol-d5* | *16200* | | *ug/kg wet* | *15000* | | *108* | *25-135* | | | |
| *Surrogate: Terphenyl-d14* | *7770* | | *ug/kg wet* | *10000* | | *78* | *33-127* | | | |
| **Matrix Spike (G805031-MS1)** | **Source: 8050706-19** | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| 1,2,4-Trichlorobenzene | 8630 | 660 | ug/kg dry | 12000 | ND | 72 | 30-107 | | | |
| 1,4-Dichlorobenzene | 8490 | 660 | ug/kg dry | 12000 | ND | 71 | 20-125 | | | |
| 2,4-Dinitrotoluene | 10400 | 107 | ug/kg dry | 12000 | ND | 86 | 28-98 | | | |
| 4-Chloro-3-methylphenol | 19000 | 1300 | ug/kg dry | 18000 | ND | 106 | 26-115 | | | |
| 4-Nitrophenol | 23800 | 3300 | ug/kg dry | 18000 | ND | 132 | 30-140 | | | |
| Acenaphthene | 8990 | 148 | ug/kg dry | 12000 | ND | 75 | 31-137 | | | |
| N-Nitrosodi-n-propylamine | 10900 | 330 | ug/kg dry | 12000 | ND | 90 | 25-126 | | | |
| Pentachlorophenol | 17300 | 3300 | ug/kg dry | 18000 | ND | 96 | 10-130 | | | |
| Pyrene | 10100 | 66.0 | ug/kg dry | 12000 | ND | 84 | 35-150 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *7330* | | *ug/kg dry* | *12000* | | *61* | *30-135* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *14800* | | *ug/kg dry* | *18000* | | *82* | *30-123* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *13300* | | *ug/kg dry* | *18000* | | *74* | *33-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *7750* | | *ug/kg dry* | *12000* | | *65* | *43-125* | | | |
| *Surrogate: 2-Fluorophenol* | *18000* | | *ug/kg dry* | *18000* | | *100* | *21-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *10000* | | *ug/kg dry* | *12000* | | *84* | *30-125* | | | |
| *Surrogate: Phenol-d5* | *19100* | | *ug/kg dry* | *18000* | | *106* | *25-135* | | | |
| *Surrogate: Terphenyl-d14* | *9040* | | *ug/kg dry* | *12000* | | *75* | *33-127* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805031 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike Dup (G805031-MSD1)** | **Source: 8050706-19** | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| 1,2,4-Trichlorobenzene | 9160 | 660 | ug/kg dry | 12000 | ND | 76 | 30-107 | 6 | 35 | |
| 1,4-Dichlorobenzene | 8460 | 660 | ug/kg dry | 12000 | ND | 70 | 20-125 | 0.4 | 31 | |
| 2,4-Dinitrotoluene | 10400 | 107 | ug/kg dry | 12000 | ND | 86 | 28-98 | 0.1 | 45 | |
| 4-Chloro-3-methylphenol | 20400 | 1300 | ug/kg dry | 18000 | ND | 113 | 26-115 | 7 | 40 | |
| 4-Nitrophenol | 22700 | 3300 | ug/kg dry | 18000 | ND | 126 | 30-140 | 5 | 40 | |
| Acenaphthene | 9260 | 148 | ug/kg dry | 12000 | ND | 77 | 31-137 | 3 | 40 | |
| N-Nitrosodi-n-propylamine | 10900 | 330 | ug/kg dry | 12000 | ND | 91 | 25-126 | 0.1 | 38 | |
| Pentachlorophenol | 17200 | 3300 | ug/kg dry | 18000 | ND | 96 | 10-130 | 0.5 | 47 | |
| Pyrene | 10200 | 66.0 | ug/kg dry | 12000 | ND | 85 | 35-150 | 1 | 36 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *7400* | | *ug/kg dry* | *12000* | | *62* | *30-135* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *14800* | | *ug/kg dry* | *18000* | | *82* | *30-123* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *13800* | | *ug/kg dry* | *18000* | | *76* | *33-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *8180* | | *ug/kg dry* | *12000* | | *68* | *43-125* | | | |
| *Surrogate: 2-Fluorophenol* | *18100* | | *ug/kg dry* | *18000* | | *101* | *21-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *11300* | | *ug/kg dry* | *12000* | | *94* | *30-125* | | | |
| *Surrogate: Phenol-d5* | *18700* | | *ug/kg dry* | *18000* | | *104* | *25-135* | | | |
| *Surrogate: Terphenyl-d14* | *9240* | | *ug/kg dry* | *12000* | | *77* | *33-127* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805029 - EPA 3510C_MS** | | | | | | | | | | |
| **Blank (G805029-BLK1)** | | | | Prepared & Analyzed: 09-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *12.6* | | *ug/L* | *10.0* | | *126* | *70-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *ND* | | *ug/L* | *10.0* | | *68* | *60-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *7.16* | | *ug/L* | *10.0* | | *72* | *60-130* | | | |
| *Surrogate: Terphenyl-d14* | *6.55* | | *ug/L* | *10.0* | | *66* | *60-125* | | | |
| **LCS (G805029-BS1)** | | | | Prepared & Analyzed: 09-May-08 | | | | | | |
| Acenaphthene | 6.31 | 2.50 | ug/L | 10.0 | | 63 | 46-128 | | | |
| Pyrene | 8.63 | 1.50 | ug/L | 10.0 | | 86 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *11.3* | | *ug/L* | *10.0* | | *113* | *70-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.27* | | *ug/L* | *10.0* | | *63* | *60-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *7.01* | | *ug/L* | *10.0* | | *70* | *60-130* | | | |
| *Surrogate: Terphenyl-d14* | *6.73* | | *ug/L* | *10.0* | | *67* | *60-125* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805030 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805030-BLK1)** | | | | Prepared & Analyzed: 09-May-08 | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 33.0 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 33.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 83.0 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg wet | | | | | | | |
| Chrysene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1020* | | *ug/kg wet* | *1000* | | *102* | *60-145* | | | |
| *Surrogate: Nitrobenzene-d5* | *659* | | *ug/kg wet* | *1000* | | *66* | *60-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *756* | | *ug/kg wet* | *1000* | | *76* | *60-130* | | | |
| *Surrogate: Terphenyl-d14* | *635* | | *ug/kg wet* | *1000* | | *64* | *55-130* | | | |
| **LCS (G805030-BS1)** | | | | Prepared & Analyzed: 09-May-08 | | | | | | |
| Acenaphthene | 678 | 50.0 | ug/kg wet | 1000 | | 68 | 31-137 | | | |
| Pyrene | 852 | 50.0 | ug/kg wet | 1000 | | 85 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1130* | | *ug/kg wet* | *1000* | | *113* | *60-145* | | | |
| *Surrogate: Nitrobenzene-d5* | *636* | | *ug/kg wet* | *1000* | | *64* | *60-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *746* | | *ug/kg wet* | *1000* | | *75* | *60-130* | | | |
| *Surrogate: Terphenyl-d14* | *677* | | *ug/kg wet* | *1000* | | *68* | *55-130* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805030 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike (G805030-MS1)** | **Source: 8050706-18** | | | Prepared & Analyzed: 09-May-08 | | | | | | |
| Acenaphthene | 1000 | 50.0 | ug/kg dry | 1090 | 34.8 | 89 | 31-137 | | | |
| Pyrene | 1170 | 50.0 | ug/kg dry | 1090 | 520 | 60 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1040* | | *ug/kg dry* | *1090* | | *95* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *734* | | *ug/kg dry* | *1090* | | *68* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1030* | | *ug/kg dry* | *1090* | | *95* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *781* | | *ug/kg dry* | *1090* | | *72* | *25-130* | | | |
| **Matrix Spike Dup (G805030-MSD1)** | **Source: 8050706-18** | | | Prepared & Analyzed: 09-May-08 | | | | | | |
| Acenaphthene | 905 | 50.0 | ug/kg dry | 1090 | 34.8 | 80 | 31-137 | 10 | 25 | |
| Pyrene | 1250 | 50.0 | ug/kg dry | 1090 | 520 | 67 | 35-142 | 12 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1040* | | *ug/kg dry* | *1090* | | *95* | *60-145* | | | |
| *Surrogate: Nitrobenzene-d5* | *872* | | *ug/kg dry* | *1090* | | *80* | *60-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1010* | | *ug/kg dry* | *1090* | | *93* | *60-130* | | | |
| *Surrogate: Terphenyl-d14* | *782* | | *ug/kg dry* | *1090* | | *72* | *55-130* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## TCLP Extraction by EPA 1311 - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806007 - EPA 3010A** | | | | | | | | | | |
| **Blank (G806007-BLK1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Mercury | ND | 0.000250 | mg/L | | | | | | | |
| **LCS (G806007-BS1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Mercury | ND | 0.000250 | mg/L | | | | 0-200 | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## BTEX and MTBE by EPA 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805026 - EPA 5035** | | | | | | | | | | |
| **Blank (G805026-BLK1)** | | | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/kg wet | | | | | | | |
| Benzene | ND | 5.00 | ug/kg wet | | | | | | | |
| Toluene | ND | 5.00 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5.00 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5.00 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *35.1* | | *ug/kg wet* | *50.0* | | *70* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *48.8* | | *ug/kg wet* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *50.8* | | *ug/kg wet* | *50.0* | | *102* | *45-127* | | | |
| **LCS (G805026-BS1)** | | | | Prepared: 08-May-08 Analyzed: 10-May-08 | | | | | | |
| Benzene | 33.1 | 5.00 | ug/kg wet | 50.0 | | 66 | 35-150 | | | |
| Toluene | 54.3 | 5.00 | ug/kg wet | 50.0 | | 109 | 40-151 | | | |
| *Surrogate: Dibromofluoromethane* | *24.5* | | *ug/kg wet* | *50.0* | | *49* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *50.2* | | *ug/kg wet* | *50.0* | | *100* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *49.0* | | *ug/kg wet* | *50.0* | | *98* | *45-127* | | | |
| **Matrix Spike (G805026-MS1)** | | **Source: 8050706-20** | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| Benzene | 60.0 | 5.00 | ug/kg dry | 60.2 | 1.56 | 97 | 45-150 | | | |
| Toluene | 49.1 | 5.00 | ug/kg dry | 60.2 | 1.90 | 78 | 40-151 | | | |
| *Surrogate: Dibromofluoromethane* | *43.1* | | *ug/kg dry* | *60.2* | | *72* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *59.3* | | *ug/kg dry* | *60.2* | | *99* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.9* | | *ug/kg dry* | *60.2* | | *93* | *45-127* | | | |
| **Matrix Spike Dup (G805026-MSD1)** | | **Source: 8050706-20** | | Prepared: 08-May-08 Analyzed: 09-May-08 | | | | | | |
| Benzene | 62.7 | 5.00 | ug/kg dry | 60.2 | 1.56 | 102 | 45-150 | 5 | 30 | |
| Toluene | 52.6 | 5.00 | ug/kg dry | 60.2 | 1.90 | 84 | 40-151 | 7 | 30 | |
| *Surrogate: Dibromofluoromethane* | *42.3* | | *ug/kg dry* | *60.2* | | *70* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *58.7* | | *ug/kg dry* | *60.2* | | *98* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *54.7* | | *ug/kg dry* | *60.2* | | *91* | *45-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## STAT

## D2974 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch R44502 - D2974** | | | | | | | | | | |
| **LCS (PMLCS-S6 5/9/08)** | | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| Percent Moisture | 4.8 | 0.01 | wt% | 5 | | 96 | 80-120 | | | |
| **LCS (PMLCS-W6 5/9/08)** | | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| Percent Moisture | 99.78 | 0.01 | wt% | 99.8 | | 100 | 80-120 | | | |
| **MBLK (PMMBLK6 5/9/08)** | | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| Percent Moisture | ND | 0.01 | wt% | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## SW9012A - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35048 - SW9012A** | | | | | | | | | | |
| **LCS (TCNLCSS1 051008)** | | | | Prepared & Analyzed: 10-May-08 | | | | | | |
| Cyanide | 10.03 | 0.25 | mg/Kg-dry | 10 | | 100 | 90-110 | | | |
| **MBLK (TCNMBS1 051008)** | | | | Prepared & Analyzed: 10-May-08 | | | | | | |
| Cyanide | ND | 0.25 | mg/Kg-dry | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:07 |

## Notes and Definitions

| | |
|---|---|
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

June 10, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8050804

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-U4-1-SO-0507 | 8050804-01 | Soil | 08-May-08 10:50 | 08-May-08 19:00 |
| CS-U4-2-SO-0507 | 8050804-02 | Soil | 08-May-08 11:36 | 08-May-08 19:00 |
| CS-U9-2-SO-0103 | 8050804-03 | Soil | 08-May-08 14:18 | 08-May-08 19:00 |
| CS-U9-2-SO-1012 | 8050804-04 | Soil | 08-May-08 14:25 | 08-May-08 19:00 |
| CS-U9-1-SO-0506 | 8050804-05 | Soil | 08-May-08 14:07 | 08-May-08 19:00 |
| CS-U3-1-SO-1112 | 8050804-06 | Soil | 08-May-08 08:20 | 08-May-08 19:00 |
| CS-U4-3-SO-0607 | 8050804-07 | Soil | 08-May-08 09:15 | 08-May-08 19:00 |
| CS-U4-4-SO-0103 | 8050804-08 | Soil | 08-May-08 12:14 | 08-May-08 19:00 |
| CS-U9-2-SO-1012MSMSD | 8050804-09 | Soil | 08-May-08 14:25 | 08-May-08 19:00 |
| CS-U4-5-SO-0506 | 8050804-10 | Soil | 08-May-08 09:55 | 08-May-08 19:00 |
| CS-T520-2ASS-001 | 8050804-11 | Soil | 08-May-08 16:15 | 08-May-08 19:00 |
| CS-T520-2BSS-001 | 8050804-12 | Soil | 08-May-08 16:15 | 08-May-08 19:00 |
| CS-U4-3-SO-0607D | 8050804-13 | Soil | 08-May-08 09:25 | 08-May-08 19:00 |
| CS-U4-5-SO-0004 | 8050804-14 | Soil | 08-May-08 09:50 | 08-May-08 19:00 |
| CS-U4-1-GW-050808 | 8050804-15 | Water | 08-May-08 10:50 | 08-May-08 19:00 |
| CS-U9-1-GW-050808 | 8050804-16 | Water | 08-May-08 14:00 | 08-May-08 19:00 |
| CS-P11-1-SO-0103 | 8050804-17 | Soil | 08-May-08 15:08 | 08-May-08 19:00 |
| CS-P11-1-SO-0508MS | 8050804-18 | Soil | 08-May-08 15:15 | 08-May-08 19:00 |
| CS-P11-1-SO-0508 | 8050804-19 | Soil | 08-May-08 15:15 | 08-May-08 19:00 |
| CS-U4-4-GW-050808 | 8050804-20 | Water | 08-May-08 16:06 | 08-May-08 19:00 |
| CS-P11-1-GW-050808 | 8050804-21 | Water | 08-May-08 15:25 | 08-May-08 19:00 |
| CS-U9-2-GW-050808 | 8050804-22 | Water | 08-May-08 14:30 | 08-May-08 19:00 |
| CS-U9-2-GW-050808MS | 8050804-23 | Water | 08-May-08 14:30 | 08-May-08 19:00 |

TCLP Lead analysis on the sample ID, CS-U4-1-SO-0507 was requested on 5/29/08 at 4:46pm per David Klatt.

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-1-SO-0507**

**Lab Sample ID: 8050804-01 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **TCLP Metals by 6000/7000 Series Methods** | | | | | | | | |
| **Lead** | **0.476** | 0.00500 | mg/L | 1 | 03-Jun-08 | 03-Jun-08 | 1311/ 7421 | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| **Xylenes, total** | **13** | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *145 %* | *45-145* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-1-SO-0507**

**Lab Sample ID: 8050804-01 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | | *104 %* | *45-145* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **638** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Acenaphthylene** | **230** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Acenaphthene** | **3500** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluorene** | **3280** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Phenanthrene** | **31700** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Anthracene** | **9380** | 83.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluoranthene** | **40700** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Pyrene** | **35000** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) anthracene** | **18800** | 8.50 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Chrysene** | **17000** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **14800** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **14900** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) pyrene** | **12600** | 15.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **5830** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **6180** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *113 %* | *50-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *63 %* | *26-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *68 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.16** | | N/A | 1 | 09-May-08 | 09-May-08 | 9045C | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-1-SO-0507**

**Lab Sample ID: 8050804-01 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **9.6** | 0.01 | wt% | 1 | 13-May-08 | 14-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **7** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Barium** | **190** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Cadmium** | **1.1** | 0.54 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **10** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Lead** | **550** | 0.54 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **1** | 0.053 | mg/Kg-dry | 2 | 12-May-08 | 12-May-08 | Mercury | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-2-SO-0507**

**Lab Sample ID: 8050804-02 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *90 %* | *45-155* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *96 %* | *62-129* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *91 %* | *45-127* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Phenanthrene** | **258** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluoranthene** | **446** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Pyrene** | **405** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) anthracene** | **310** | 8.50 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Chrysene** | **294** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **352** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **125** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) pyrene** | **303** | 15.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **154** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **170** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *115 %* | *50-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *65 %* | *26-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *70 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *74 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U9-2-SO-0103**

**Lab Sample ID: 8050804-03 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| **Xylenes, total** | **12** | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *145 %* | *45-155* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *105 %* | *45-127* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **415** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Acenaphthylene** | **68.6** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Acenaphthene** | **1340** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluorene** | **1250** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Phenanthrene** | **8540** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Anthracene** | **3080** | 83.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluoranthene** | **7790** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Pyrene** | **6380** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) anthracene** | **3610** | 8.50 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Chrysene** | **2920** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **2530** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **999** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) pyrene** | **2420** | 15.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **939** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **935** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *117 %* | *50-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *68 %* | *26-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *71 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U9-2-SO-1012**

**Lab Sample ID: 8050804-04 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| **Xylenes, total** | **11** | 5 | ug/kg dry | 1 | 10-May-08 | 12-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *91 %* | *45-155* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *94 %* | *45-127* | | *10-May-08* | *12-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **86.3** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Acenaphthylene** | **150** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Acenaphthene** | **148** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluorene** | **245** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Phenanthrene** | **2030** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Anthracene** | **712** | 83.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluoranthene** | **3470** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Pyrene** | **2870** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) anthracene** | **1770** | 8.50 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Chrysene** | **1430** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **1420** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **529** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) pyrene** | **1300** | 15.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **540** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **539** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *110 %* | *50-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *63 %* | *26-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *67 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U9-1-SO-0506**

**Lab Sample ID: 8050804-05 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **Xylenes, total** | **8** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *89 %* | *45-155* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *94 %* | *62-129* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *80 %* | *45-127* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Phenanthrene** | **49.0** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluoranthene** | **64.3** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Pyrene** | **57.7** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) anthracene** | **34.9** | 8.50 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **39.2** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **14.2** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) pyrene** | **29.4** | 15.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *116 %* | *50-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *66 %* | *26-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *71 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U3-1-SO-1112**

**Lab Sample ID: 8050804-06 (Soil)**

**Grace Analytical Lab, Inc.**

### Volatile Organic Compounds by EPA Method 8260B

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **25** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **Xylenes, total** | **14** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *120 %* | *45-155* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *100 %* | *62-129* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *76 %* | *45-127* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |

### Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Naphthalene** | **67.0** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Acenaphthylene** | **113** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluorene** | **57.1** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Phenanthrene** | **1150** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Anthracene** | **339** | 83.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluoranthene** | **2660** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Pyrene** | **2300** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) anthracene** | **1820** | 8.50 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Chrysene** | **1560** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **1640** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **630** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) pyrene** | **1440** | 15.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **632** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **636** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *116 %* | *50-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *66 %* | *26-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *70 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-3-SO-0607**

**Lab Sample ID: 8050804-07 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **Xylenes, total** | **10** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *126 %* | *45-155* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *105 %* | *62-129* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *90 %* | *45-127* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **291** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Acenaphthene** | **146** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluorene** | **110** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Phenanthrene** | **1270** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Anthracene** | **262** | 83.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluoranthene** | **1130** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Pyrene** | **1080** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) anthracene** | **674** | 8.50 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Chrysene** | **636** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **665** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **231** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) pyrene** | **617** | 15.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **294** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **352** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *97 %* | *50-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *58 %* | *26-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *60 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *65 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-4-SO-0103**

**Lab Sample ID: 8050804-08 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **Xylenes, total** | **12** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *123 %* | *45-155* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *92 %* | *45-127* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Phenanthrene** | **114** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluoranthene** | **213** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Pyrene** | **197** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) anthracene** | **135** | 8.50 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Chrysene** | **122** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **132** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **44.6** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) pyrene** | **111** | 15.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **51.1** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **56.5** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *97 %* | *50-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *58 %* | *26-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *63 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *69 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U9-2-SO-1012MSMSD**

**Lab Sample ID: 8050804-09 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *84 %* | *45-155* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *94 %* | *45-127* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **137** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Acenaphthylene** | **101** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Acenaphthene** | **179** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluorene** | **234** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Phenanthrene** | **2100** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Anthracene** | **610** | 83.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluoranthene** | **2830** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Pyrene** | **2370** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) anthracene** | **1380** | 8.50 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Chrysene** | **1160** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **1210** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **432** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) pyrene** | **1070** | 15.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **453** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **465** | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *111 %* | *50-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *63 %* | *26-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *68 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U9-2-SO-1012MSMSD**

**Lab Sample ID: 8050804-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **93.1** | | % by Weight | 1 | 14-May-08 | 14-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-5-SO-0506**

**Lab Sample ID: 8050804-10 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *61 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *86 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-5-SO-0506**

**Lab Sample ID: 8050804-10 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **Xylenes, total** | **12** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *142 %* | *45-145* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *108 %* | *45-145* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-5-SO-0506**

**Lab Sample ID: 8050804-10 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Naphthalene | ND | 86.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 116 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthylene | ND | 69.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthene | ND | 148 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenanthrene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Anthracene | ND | 298 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Carbazole | ND | 131 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pyrene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Chrysene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-5-SO-0506**

**Lab Sample ID: 8050804-10 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *96 %* | *21-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *102 %* | *25-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *76 %* | *33-130* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *61 %* | *30-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *95 %* | *30-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *70 %* | *43-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *76 %* | *30-123* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *75 %* | *33-127* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **10.0** | 0.01 | wt% | 1 | 13-May-08 | 14-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **2500** | 21 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Arsenic** | **4.5** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Barium** | **70** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.52 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.52 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Calcium** | **43000** | 63 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **16** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Cobalt** | **2.1** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Copper** | **18** | 2.7 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-5-SO-0506**

**Lab Sample ID: 8050804-10 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Iron** | **7200** | 31 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Lead** | **140** | 0.52 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Magnesium** | **18000** | 31 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Manganese** | **220** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Nickel** | **6.7** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Potassium** | **350** | 31 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Sodium** | **150** | 63 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Vanadium** | **12** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Zinc** | **110** | 5.2 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.83** | 0.053 | mg/Kg-dry | 2 | 12-May-08 | 12-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.28 | mg/Kg-dry | 1 | 10-May-08 | 10-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.8** | 0 | pH Units | 1 | 12-May-08 | 12-May-08 | pH (25 °C) | |

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5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-T520-2ASS-001**

**Lab Sample ID: 8050804-11 (Soil)**

**Grace Analytical Lab, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1221 | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1232 | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1242 | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1248 | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1254 | ND | 160 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1260 | ND | 160 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| *Surrogate: Tetrachloro-meta-xylene* | | *78.7 %* | *30-170* | | *14-May-08* | *21-May-08* | *8082* | |
| *Surrogate: Decachlorobiphenyl* | | *94.4 %* | *30-170* | | *14-May-08* | *21-May-08* | *8082* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-T520-2BSS-001**

**Lab Sample ID: 8050804-12 (Soil)**

**Grace Analytical Lab, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1221 | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1232 | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1242 | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1248 | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1254 | ND | 160 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| Aroclor-1260 | ND | 160 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8082 | |
| *Surrogate: Tetrachloro-meta-xylene* | | *81.4 %* | | *30-170* | *14-May-08* | *21-May-08* | *8082* | |
| *Surrogate: Decachlorobiphenyl* | | *105 %* | | *30-170* | *14-May-08* | *21-May-08* | *8082* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-3-SO-0607D**

**Lab Sample ID: 8050804-13 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **Xylenes, total** | **6** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *89 %* | *45-155* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *94 %* | *62-129* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *77 %* | *45-127* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Phenanthrene** | **58.3** | 33.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Fluoranthene** | **75.1** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Pyrene** | **68.7** | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) anthracene** | **40.2** | 8.50 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **40.2** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **14.2** | 11.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| **Benzo (a) pyrene** | **31.1** | 15.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 12-May-08 | 17-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *53 %* | *50-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *33 %* | *26-135* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *35 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *39 %* | *25-130* | | *12-May-08* | *17-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-5-SO-0004**

**Lab Sample ID: 8050804-14 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *64 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *72 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-5-SO-0004**

**Lab Sample ID: 8050804-14 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **Xylenes, total** | **10** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *145 %* | *45-145* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *105 %* | *45-145* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-5-SO-0004**

**Lab Sample ID: 8050804-14 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Naphthalene | ND | 86.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 116 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthylene | ND | 69.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthene | ND | 148 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Phenanthrene** | **762** | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Anthracene** | **305** | 298 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Carbazole | ND | 131 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Pyrene** | **1020** | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **607** | 68.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Chrysene** | **615** | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-5-SO-0004**

**Lab Sample ID: 8050804-14 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (b) fluoranthene** | **486** | 230 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (k) fluoranthene** | **546** | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **1630** | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **260** | 178 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **280** | 205 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *108 %* | *21-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *115 %* | *25-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *90 %* | *33-130* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *74 %* | *30-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *84 %* | *30-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *74 %* | *43-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *75 %* | *30-123* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *33-127* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **9.5** | 0.01 | wt% | 1 | 13-May-08 | 14-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **1900** | 21 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Arsenic** | **2.6** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Barium** | **19** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.53 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.53 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Calcium** | **67000** | 640 | mg/Kg-dry | 100 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **3.3** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Cobalt | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Copper | ND | 2.7 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-5-SO-0004**

**Lab Sample ID: 8050804-14 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Iron** | **4100** | 32 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Lead** | **25** | 0.53 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Magnesium** | **14000** | 32 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Manganese** | **130** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Nickel** | **3** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Potassium** | **170** | 32 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Sodium** | **94** | 64 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Vanadium** | **9.8** | 1.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Zinc** | **17** | 5.3 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.2** | 0.027 | mg/Kg-dry | 1 | 12-May-08 | 12-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.28 | mg/Kg-dry | 1 | 10-May-08 | 10-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.9** | 0 | pH Units | 1 | 12-May-08 | 12-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-1-GW-050808**

**Lab Sample ID: 8050804-15 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *78 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *96 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *99 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-1-GW-050808**

**Lab Sample ID: 8050804-15 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| **Benzo (b) fluoranthene** | **0.13** | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *84 %* | *55-135* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *61 %* | *40-125* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *84 %* | *40-130* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *77 %* | *35-125* | | *10-May-08* | *12-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| Silver | ND | 0.004 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Barium** | **0.26** | 0.004 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Lead** | **0.19** | 0.002 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.025** | 0.004 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Arsenic** | **0.0094** | 0.004 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-1-GW-050808**

**Lab Sample ID: 8050804-15 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **SW7470A** | | | | | | | | |
| **Mercury** | **0.00047** | 0.00025 | mg/L | 1 | 12-May-08 | 12-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U9-1-GW-050808**

**Lab Sample ID: 8050804-16 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *87 %* | *60-128* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *99 %* | *60-127* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *82 %* | *55-135* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *58 %* | *40-125* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *80 %* | *40-130* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *35-125* | | *10-May-08* | *12-May-08* | *8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0103**

**Lab Sample ID: 8050804-17 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *62 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *33 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **2-Butanone** | **19** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0103**

**Lab Sample ID: 8050804-17 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *89 %* | *45-145* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *96 %* | *45-145* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0103**

**Lab Sample ID: 8050804-17 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Naphthalene | ND | 86.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 116 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthylene | ND | 69.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthene | ND | 148 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenanthrene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Anthracene | ND | 298 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Carbazole | ND | 131 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pyrene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Chrysene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0103**

**Lab Sample ID: 8050804-17 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *103 %* | *21-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *111 %* | *25-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *87 %* | *33-130* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *70 %* | *30-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *79 %* | *30-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *70 %* | *43-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *78 %* | *30-123* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *77 %* | *33-127* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **5.0** | 0.01 | wt% | 1 | 13-May-08 | 14-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **1200** | 20 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Arsenic** | **7.8** | 0.99 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Barium** | **7.4** | 0.99 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.49 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.49 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Calcium** | **29000** | 60 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **2.5** | 0.99 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Cobalt** | **2.1** | 0.99 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Copper** | **3.8** | 2.5 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0103**

**Lab Sample ID: 8050804-17 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Iron** | **3800** | 29 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Lead** | **3.9** | 0.49 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Magnesium** | **15000** | 29 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Manganese** | **140** | 0.99 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Nickel** | **3.7** | 0.99 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Potassium** | **220** | 29 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.99 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.99 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Sodium** | **65** | 60 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Thallium | ND | 0.99 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Vanadium** | **5.9** | 0.99 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Zinc** | **13** | 4.9 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.054** | 0.025 | mg/Kg-dry | 1 | 12-May-08 | 12-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.26 | mg/Kg-dry | 1 | 10-May-08 | 10-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **9.0** | 0 | pH Units | 1 | 12-May-08 | 12-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0508MS**

**Lab Sample ID: 8050804-18 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 21-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *79 %* | *30-170* | | *14-May-08* | *21-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *95 %* | *30-170* | | *14-May-08* | *21-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **Vinyl chloride** | **3** | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **2-Butanone** | **24** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0508MS**

**Lab Sample ID: 8050804-18 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **Xylenes, total** | **7** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *153 %* | *45-145* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *105 %* | *62-129* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *109 %* | *45-145* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0508MS**

**Lab Sample ID: 8050804-18 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Naphthalene | ND | 86.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 116 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthylene | ND | 69.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Acenaphthene | ND | 148 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Phenanthrene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Anthracene | ND | 298 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Carbazole | ND | 131 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Pyrene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Chrysene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0508MS**

**Lab Sample ID: 8050804-18 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg dry | 1 | 09-May-08 | 10-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *102 %* | *21-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *109 %* | *25-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *83 %* | *33-130* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *62 %* | *30-135* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *84 %* | *30-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *67 %* | *43-125* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *77 %* | *30-123* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *33-127* | | *09-May-08* | *10-May-08* | *EPA 8270C* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **5.5** | 0.01 | wt% | 1 | 13-May-08 | 14-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **2000** | 20 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Arsenic** | **3.3** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Barium** | **6.1** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.51 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.51 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Calcium** | **46000** | 61 | mg/Kg-dry | 10 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **3.9** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Cobalt** | **3.5** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Copper | ND | 2.5 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0508MS**

**Lab Sample ID: 8050804-18 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Iron** | **5600** | 31 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Lead** | **4.7** | 0.51 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Magnesium** | **22000** | 31 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Manganese** | **210** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Nickel** | **5.9** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Potassium** | **380** | 31 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Sodium** | **96** | 61 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Vanadium** | **7.9** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Zinc** | **20** | 5.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.026 | mg/Kg-dry | 1 | 12-May-08 | 12-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.26 | mg/Kg-dry | 1 | 10-May-08 | 10-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.9** | 0 | pH Units | 1 | 12-May-08 | 12-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0508**

**Lab Sample ID: 8050804-19 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 14-May-08 | 15-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *56 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *75 %* | *30-170* | | *14-May-08* | *15-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| **2-Butanone** | **9** | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0508**

**Lab Sample ID: 8050804-19 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 10-May-08 | 13-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *91 %* | *45-145* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *92 %* | *45-145* | | *10-May-08* | *13-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0508**

**Lab Sample ID: 8050804-19 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Naphthalene | ND | 86.0 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 116 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Acenaphthylene | ND | 69.0 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Acenaphthene | ND | 148 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Phenanthrene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Anthracene | ND | 298 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Carbazole | ND | 131 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Pyrene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Chrysene | ND | 94.0 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0508**

**Lab Sample ID: 8050804-19 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg dry | 1 | 09-May-08 | 20-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *58 %* | *21-135* | | *09-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *61 %* | *25-135* | | *09-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *57 %* | *33-130* | | *09-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *50 %* | *30-135* | | *09-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *46 %* | *30-125* | | *09-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *64 %* | *43-125* | | *09-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *64 %* | *30-123* | | *09-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *33-127* | | *09-May-08* | *20-May-08* | *EPA 8270C* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **5.0** | 0.01 | wt% | 1 | 13-May-08 | 14-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **1600** | 200 | mg/Kg-dry | 100 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Arsenic** | **4.2** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Barium** | **6.2** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.51 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.51 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Calcium** | **44000** | 610 | mg/Kg-dry | 100 | 12-May-08 | 12-May-08 | Metals by ICP/MS | |
| **Chromium** | **3** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Cobalt** | **2.5** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Copper | ND | 2.5 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-SO-0508**

**Lab Sample ID: 8050804-19 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Iron** | **4600** | 31 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Lead** | **4.5** | 0.51 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Magnesium** | **21000** | 31 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Manganese** | **190** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Nickel** | **4.6** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Potassium** | **300** | 31 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Sodium** | **82** | 61 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Vanadium** | **6.9** | 1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **Zinc** | **16** | 5.1 | mg/Kg-dry | 10 | 12-May-08 | 13-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.026 | mg/Kg-dry | 1 | 12-May-08 | 12-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.26 | mg/Kg-dry | 1 | 10-May-08 | 10-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.9** | 0 | pH Units | 1 | 12-May-08 | 12-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U4-4-GW-050808**

**Lab Sample ID: 8050804-20 (Water)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *87 %* | *60-128* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *96 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *100 %* | *60-127* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *85 %* | *55-135* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *58 %* | *40-125* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *81 %* | *40-130* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *80 %* | *35-125* | | *10-May-08* | *12-May-08* | *8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-GW-050808**

**Lab Sample ID: 8050804-21 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *87 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *96 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *101 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-GW-050808**

**Lab Sample ID: 8050804-21 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *86 %* | *55-135* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *58 %* | *40-125* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *82 %* | *40-130* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | *35-125* | | *10-May-08* | *12-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| Selenium | ND | 0.004 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Lead** | **0.04** | 0.002 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.068** | 0.004 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Barium** | **0.058** | 0.004 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Arsenic** | **0.017** | 0.004 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 13-May-08 | 14-May-08 | Metals by ICP/MS | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-P11-1-GW-050808**

**Lab Sample ID: 8050804-21 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 12-May-08 | 12-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U9-2-GW-050808**

**Lab Sample ID: 8050804-22 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *91 %* | *60-128* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *102 %* | *60-127* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 10-May-08 | 12-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *80 %* | *55-135* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *53 %* | *40-125* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *64 %* | *40-130* | | *10-May-08* | *12-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *35-125* | | *10-May-08* | *12-May-08* | *8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

**Client Sample ID: CS-U9-2-GW-050808MS**

**Lab Sample ID: 8050804-23 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *92 %* | | *60-128* | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *94 %* | | *62-129* | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *104 %* | | *60-127* | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Grace Analytical Lab, Inc.

## TCLP Metals by 6000/7000 Series Methods - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806007 - EPA 3010A** | | | | | | | | | | |
| **Blank (G806007-BLK1)** | | | | Prepared & Analyzed: 03-Jun-08 | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | | | | |
| **LCS (G806007-BS1)** | | | | Prepared & Analyzed: 03-Jun-08 | | | | | | |
| Lead | 0.838 | 0.100 | mg/L | 0.800 | | 105 | 80-120 | | | |
| **Matrix Spike (G806007-MS1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | 75-125 | | | |
| **Matrix Spike Dup (G806007-MSD1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | 75-125 | | 20 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Organochlorine Pesticides by EPA Method 8081A - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805044 - EPA 3545** | | | | | | | | | | |
| **Blank (G805044-BLK1)** | | | | Prepared & Analyzed: 14-May-08 | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg wet | | | | | | | |
| beta-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| Heptachlor | ND | 8.00 | ug/kg wet | | | | | | | |
| delta-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| Aldrin | ND | 8.00 | ug/kg wet | | | | | | | |
| Heptachlor epoxide | ND | 8.00 | ug/kg wet | | | | | | | |
| Endosulfan I | ND | 8.00 | ug/kg wet | | | | | | | |
| 4,4´-DDE | ND | 16.0 | ug/kg wet | | | | | | | |
| Dieldrin | ND | 16.0 | ug/kg wet | | | | | | | |
| Endrin | ND | 16.0 | ug/kg wet | | | | | | | |
| 4,4´-DDD | ND | 16.0 | ug/kg wet | | | | | | | |
| Endosulfan II | ND | 16.0 | ug/kg wet | | | | | | | |
| 4,4´-DDT | ND | 16.0 | ug/kg wet | | | | | | | |
| Endrin aldehyde | ND | 16.0 | ug/kg wet | | | | | | | |
| Endosulfan sulfate | ND | 16.0 | ug/kg wet | | | | | | | |
| Methoxychlor | ND | 80.0 | ug/kg wet | | | | | | | |
| Endrin ketone | ND | 16.0 | ug/kg wet | | | | | | | |
| Chlordane | ND | 80.0 | ug/kg wet | | | | | | | |
| Toxaphene | ND | 160 | ug/kg wet | | | | | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *63.1* | | *ug/kg wet* | *100* | | *63* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *85.0* | | *ug/kg wet* | *100* | | *85* | *30-170* | | | |
| **LCS (G805044-BS1)** | | | | Prepared & Analyzed: 14-May-08 | | | | | | |
| gamma-BHC (Lindane) | 21.0 | 8.00 | ug/kg wet | 25.0 | | 84 | 30-150 | | | |
| Heptachlor | 20.5 | 8.00 | ug/kg wet | 25.0 | | 82 | 30-150 | | | |
| Aldrin | 21.2 | 8.00 | ug/kg wet | 25.0 | | 85 | 30-150 | | | |
| Dieldrin | 50.3 | 16.0 | ug/kg wet | 50.0 | | 101 | 30-150 | | | |
| Endrin | 57.6 | 16.0 | ug/kg wet | 50.0 | | 115 | 30-150 | | | |
| 4,4´-DDT | 50.9 | 16.0 | ug/kg wet | 50.0 | | 102 | 30-150 | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *70.3* | | *ug/kg wet* | *100* | | *70* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *88.4* | | *ug/kg wet* | *100* | | *88* | *30-170* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Organochlorine Pesticides by EPA Method 8081A - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805044 - EPA 3545** | | | | | | | | | | |
| **Matrix Spike (G805044-MS1)** | **Source: 8050804-18** | | | Prepared: 14-May-08 Analyzed: 21-May-08 | | | | | | |
| gamma-BHC (Lindane) | 22.9 | 8.00 | ug/kg dry | 26.6 | ND | 86 | 30-150 | | | |
| Heptachlor | 25.2 | 8.00 | ug/kg dry | 26.6 | ND | 95 | 30-150 | | | |
| Aldrin | 23.1 | 8.00 | ug/kg dry | 26.6 | ND | 87 | 30-150 | | | |
| Dieldrin | 55.4 | 16.0 | ug/kg dry | 53.2 | ND | 104 | 30-150 | | | |
| Endrin | 62.1 | 16.0 | ug/kg dry | 53.2 | ND | 117 | 30-150 | | | |
| 4,4´-DDT | 50.7 | 16.0 | ug/kg dry | 53.2 | ND | 95 | 30-150 | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *76.0* | | *ug/kg dry* | *106* | | *71* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *105* | | *ug/kg dry* | *106* | | *99* | *30-170* | | | |
| **Matrix Spike Dup (G805044-MSD1)** | **Source: 8050804-18** | | | Prepared: 14-May-08 Analyzed: 21-May-08 | | | | | | |
| gamma-BHC (Lindane) | 25.0 | 8.00 | ug/kg dry | 26.6 | ND | 94 | 30-150 | 9 | 20 | |
| Heptachlor | 27.2 | 8.00 | ug/kg dry | 26.6 | ND | 102 | 30-150 | 8 | 20 | |
| Aldrin | 24.9 | 8.00 | ug/kg dry | 26.6 | ND | 94 | 30-150 | 8 | 20 | |
| Dieldrin | 57.0 | 16.0 | ug/kg dry | 53.2 | ND | 107 | 30-150 | 3 | 20 | |
| Endrin | 64.0 | 16.0 | ug/kg dry | 53.2 | ND | 120 | 30-150 | 3 | 20 | |
| 4,4´-DDT | 55.1 | 16.0 | ug/kg dry | 53.2 | ND | 103 | 30-150 | 8 | 20 | |
| *Surrogate: Tetrachloro-meta-xylene* | *86.5* | | *ug/kg dry* | *106* | | *81* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *109* | | *ug/kg dry* | *106* | | *103* | *30-170* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805045 - EPA 3545** | | | | | | | | | | |
| **Blank (G805045-BLK1)** | | | | Prepared: 14-May-08 Analyzed: 15-May-08 | | | | | | |
| Aroclor-1016 | ND | 80.0 | ug/kg wet | | | | | | | |
| Aroclor-1221 | ND | 80.0 | ug/kg wet | | | | | | | |
| Aroclor-1232 | ND | 80.0 | ug/kg wet | | | | | | | |
| Aroclor-1242 | ND | 80.0 | ug/kg wet | | | | | | | |
| Aroclor-1248 | ND | 80.0 | ug/kg wet | | | | | | | |
| Aroclor-1254 | ND | 160 | ug/kg wet | | | | | | | |
| Aroclor-1260 | ND | 160 | ug/kg wet | | | | | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *ND* | | *ug/kg wet* | *100* | | *58.1* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *ND* | | *ug/kg wet* | *100* | | *72.0* | *30-170* | | | |
| **LCS (G805045-BS1)** | | | | Prepared: 14-May-08 Analyzed: 15-May-08 | | | | | | |
| gamma-BHC (Lindane) | 16.0 | 8.00 | ug/kg wet | 25.0 | | 64.2 | 30-150 | | | |
| Heptachlor | 16.9 | 8.00 | ug/kg wet | 25.0 | | 67.6 | 30-150 | | | |
| Aldrin | 16.2 | 8.00 | ug/kg wet | 25.0 | | 64.9 | 30-150 | | | |
| Dieldrin | 39.7 | 16.0 | ug/kg wet | 50.0 | | 79.4 | 30-150 | | | |
| Endrin | 43.4 | 16.0 | ug/kg wet | 50.0 | | 86.7 | 30-150 | | | |
| 4,4´-DDT | 38.7 | 16.0 | ug/kg wet | 50.0 | | 77.4 | 30-150 | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *52.6* | | *ug/kg wet* | *100* | | *52.6* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *72.1* | | *ug/kg wet* | *100* | | *72.1* | *30-170* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805035 - EPA 5035** | | | | | | | | | | |
| **Blank (G805035-BLK1)** | | | | Prepared: 10-May-08 Analyzed: 12-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Vinyl chloride | ND | 2 | ug/kg wet | | | | | | | |
| Bromomethane | ND | 5 | ug/kg wet | | | | | | | |
| Chloroethane | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Acetone | ND | 50 | ug/kg wet | | | | | | | |
| Carbon disulfide | ND | 5 | ug/kg wet | | | | | | | |
| Methylene Chloride | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Butanone | ND | 5 | ug/kg wet | | | | | | | |
| Chloroform | ND | 5 | ug/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Trichloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/kg wet | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/kg wet | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Hexanone | ND | 5 | ug/kg wet | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Chlorobenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Styrene | ND | 5 | ug/kg wet | | | | | | | |
| Bromoform | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *61.3* | | *ug/kg wet* | *50.0* | | *123* | *45-155* | | | |
| *Surrogate: Dibromofluoromethane* | *61.3* | | *ug/kg wet* | *50.0* | | *123* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *49.2* | | *ug/kg wet* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *49.2* | | *ug/kg wet* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *44.7* | | *ug/kg wet* | *50.0* | | *89* | *45-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805035 - EPA 5035** | | | | | | | | | | |
| **Blank (G805035-BLK1)** | | | | Prepared: 10-May-08 Analyzed: 12-May-08 | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *ND* | | *ug/kg wet* | *50.0* | | *89* | *45-127* | | | |
| **LCS (G805035-BS1)** | | | | Prepared: 10-May-08 Analyzed: 12-May-08 | | | | | | |
| 1,1-Dichloroethylene | 28 | 5 | ug/kg wet | 50.0 | | 55 | 35-155 | | | |
| Benzene | 40 | 5 | ug/kg wet | 50.0 | | 80 | 35-150 | | | |
| Benzene | 40 | 5 | ug/kg wet | 50.0 | | 80 | 35-150 | | | |
| Trichloroethene | 52 | 5 | ug/kg wet | 50.0 | | 105 | 42-135 | | | |
| Toluene | 45 | 5 | ug/kg wet | 50.0 | | 90 | 40-151 | | | |
| Toluene | 45 | 5 | ug/kg wet | 50.0 | | 90 | 40-151 | | | |
| Chlorobenzene | 47 | 5 | ug/kg wet | 50.0 | | 93 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *40.2* | | *ug/kg wet* | *50.0* | | *80* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *40.2* | | *ug/kg wet* | *50.0* | | *80* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *49.0* | | *ug/kg wet* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *49.0* | | *ug/kg wet* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *46.6* | | *ug/kg wet* | *50.0* | | *93* | *45-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *46.6* | | *ug/kg wet* | *50.0* | | *93* | *45-127* | | | |
| **Matrix Spike (G805035-MS1)** | **Source: 8050804-09** | | | Prepared: 10-May-08 Analyzed: 13-May-08 | | | | | | |
| 1,1-Dichloroethylene | 34 | 5 | ug/kg dry | 53.7 | ND | 63 | 35-155 | | | |
| Benzene | 45 | 5 | ug/kg dry | 53.7 | ND | 83 | 45-150 | | | |
| Benzene | 45 | 5 | ug/kg dry | 53.7 | ND | 83 | 35-150 | | | |
| Trichloroethene | 43 | 5 | ug/kg dry | 53.7 | 0.9 | 78 | 42-166 | | | |
| Toluene | 43 | 5 | ug/kg dry | 53.7 | 2 | 77 | 40-151 | | | |
| Toluene | 43 | 5 | ug/kg dry | 53.7 | 2 | 77 | 40-151 | | | |
| Chlorobenzene | 42 | 5 | ug/kg dry | 53.7 | ND | 79 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *61.0* | | *ug/kg dry* | *53.7* | | *114* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *61.0* | | *ug/kg dry* | *53.7* | | *114* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *54.9* | | *ug/kg dry* | *53.7* | | *102* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *54.9* | | *ug/kg dry* | *53.7* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.2* | | *ug/kg dry* | *53.7* | | *103* | *45-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55.2* | | *ug/kg dry* | *53.7* | | *103* | *45-127* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805035 - EPA 5035** | | | | | | | | | | |
| **Matrix Spike Dup (G805035-MSD1)** | **Source: 8050804-09** | | | Prepared: 10-May-08 Analyzed: 13-May-08 | | | | | | |
| 1,1-Dichloroethylene | 38 | 5 | ug/kg dry | 53.7 | ND | 71 | 35-155 | 11 | 30 | |
| Benzene | 48 | 5 | ug/kg dry | 53.7 | ND | 90 | 45-150 | 8 | 30 | |
| Benzene | 48 | 5 | ug/kg dry | 53.7 | ND | 90 | 35-150 | 8 | 30 | |
| Trichloroethene | 54 | 5 | ug/kg dry | 53.7 | 0.9 | 98 | 42-166 | 23 | 30 | |
| Toluene | 54 | 5 | ug/kg dry | 53.7 | 2 | 97 | 40-151 | 23 | 30 | |
| Toluene | 54 | 5 | ug/kg dry | 53.7 | 2 | 97 | 40-151 | 23 | 30 | |
| Chlorobenzene | 53 | 5 | ug/kg dry | 53.7 | ND | 99 | 34-158 | 22 | 30 | |
| *Surrogate: Dibromofluoromethane* | *46.4* | | *ug/kg dry* | *53.7* | | *86* | *45-155* | | | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/kg dry* | *53.7* | | *86* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *52.8* | | *ug/kg dry* | *53.7* | | *98* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *52.8* | | *ug/kg dry* | *53.7* | | *98* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.9* | | *ug/kg dry* | *53.7* | | *91* | *45-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.9* | | *ug/kg dry* | *53.7* | | *91* | *45-127* | | | |
| **Batch G805051 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805051-BLK1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805051 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805051-BLK1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *52.2* | | *ug/L* | *50.0* | | *104* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *52.2* | | *ug/L* | *50.0* | | *104* | *60-128* | | | |
| *Surrogate: Toluene-d8* | *49.4* | | *ug/L* | *50.0* | | *99* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *49.4* | | *ug/L* | *50.0* | | *99* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *47.7* | | *ug/L* | *50.0* | | *95* | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *47.7* | | *ug/L* | *50.0* | | *95* | *60-145* | | | |
| **LCS (G805051-BS1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 34 | 5 | ug/L | 50.0 | | 67 | 56-135 | | | |
| Benzene | 43 | 5 | ug/L | 50.0 | | 85 | 71-137 | | | |
| Benzene | 43 | 5 | ug/L | 50.0 | | 85 | 60-140 | | | |
| Trichloroethene | 55 | 5 | ug/L | 50.0 | | 110 | 70-138 | | | |
| Toluene | 47 | 5 | ug/L | 50.0 | | 95 | 60-145 | | | |
| Toluene | 47 | 5 | ug/L | 50.0 | | 95 | 71-145 | | | |
| Chlorobenzene | 48 | 5 | ug/L | 50.0 | | 96 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *40.4* | | *ug/L* | *50.0* | | *81* | *60-128* | | | |
| *Surrogate: Dibromofluoromethane* | *40.4* | | *ug/L* | *50.0* | | *81* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *49.0* | | *ug/L* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *49.0* | | *ug/L* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.4* | | *ug/L* | *50.0* | | *97* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.4* | | *ug/L* | *50.0* | | *97* | *60-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805051 - EPA 5030B** | | | | | | | | | | |
| **Matrix Spike (G805051-MS1)** | **Source: 8051201-12** | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 37 | 5 | ug/L | 50.0 | ND | 74 | 56-150 | | | |
| Benzene | 52 | 5 | ug/L | 50.0 | ND | 104 | 71-137 | | | |
| Benzene | 52 | 5 | ug/L | 50.0 | ND | 104 | 71-165 | | | |
| Trichloroethene | 53 | 5 | ug/L | 50.0 | ND | 107 | 70-138 | | | |
| Toluene | 51 | 5 | ug/L | 50.0 | ND | 102 | 71-145 | | | |
| Toluene | 51 | 5 | ug/L | 50.0 | ND | 102 | 71-145 | | | |
| Chlorobenzene | 48 | 5 | ug/L | 50.0 | ND | 97 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *47.1* | | *ug/L* | *50.0* | | *94* | *60-128* | | | |
| *Surrogate: Dibromofluoromethane* | *47.1* | | *ug/L* | *50.0* | | *94* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *51.3* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.3* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.4* | | *ug/L* | *50.0* | | *107* | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.4* | | *ug/L* | *50.0* | | *107* | *60-145* | | | |
| **Matrix Spike Dup (G805051-MSD1)** | **Source: 8051201-12** | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 35 | 5 | ug/L | 50.0 | ND | 70 | 56-150 | 5 | 20 | |
| Benzene | 48 | 5 | ug/L | 50.0 | ND | 96 | 71-165 | 8 | 20 | |
| Benzene | 48 | 5 | ug/L | 50.0 | ND | 96 | 71-137 | 8 | 20 | |
| Trichloroethene | 52 | 5 | ug/L | 50.0 | ND | 105 | 70-138 | 2 | 20 | |
| Toluene | 49 | 5 | ug/L | 50.0 | ND | 98 | 71-145 | 4 | 20 | |
| Toluene | 49 | 5 | ug/L | 50.0 | ND | 98 | 71-145 | 4 | 20 | |
| Chlorobenzene | 47 | 5 | ug/L | 50.0 | ND | 94 | 72-143 | 2 | 20 | |
| *Surrogate: Dibromofluoromethane* | *43.5* | | *ug/L* | *50.0* | | *87* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *43.5* | | *ug/L* | *50.0* | | *87* | *60-128* | | | |
| *Surrogate: Toluene-d8* | *50.6* | | *ug/L* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *50.6* | | *ug/L* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.4* | | *ug/L* | *50.0* | | *107* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.4* | | *ug/L* | *50.0* | | *107* | *60-127* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805031 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805031-BLK1)** | | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg wet | | | | | | | |
| Phenol | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Benzyl alcohol | ND | 1300 | ug/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| 2-Methylphenol | ND | 660 | ug/kg wet | | | | | | | |
| Hexachloroethane | ND | 132 | ug/kg wet | | | | | | | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg wet | | | | | | | |
| Nitrobenzene | ND | 232 | ug/kg wet | | | | | | | |
| Isophorone | ND | 660 | ug/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Naphthalene | ND | 86.0 | ug/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 1300 | ug/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 660 | ug/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 116 | ug/kg wet | | | | | | | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg wet | | | | | | | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 660 | ug/kg wet | | | | | | | |
| 2-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| 3-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| Dimethyl phthalate | ND | 3300 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 69.0 | ug/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 148 | ug/kg wet | | | | | | | |
| Dibenzofuran | ND | 219 | ug/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Diethyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| Fluorene | ND | 136 | ug/kg wet | | | | | | | |
| 4-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg wet | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg wet | | | | | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805031 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805031-BLK1)** | | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 66.0 | ug/kg wet | | | | | | | |
| Pentachlorophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 122 | ug/kg wet | | | | | | | |
| Anthracene | ND | 298 | ug/kg wet | | | | | | | |
| Carbazole | ND | 131 | ug/kg wet | | | | | | | |
| Di-n-butyl phthalate | ND | 500 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 94.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| Butyl benzyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg wet | | | | | | | |
| Chrysene | ND | 94.0 | ug/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg wet | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Di-n-octyl phthalate | ND | 860 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg wet | | | | | | | |
| *Surrogate: 2-Fluorophenol* | *17100* | | *ug/kg wet* | *15000* | | *114* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *17200* | | *ug/kg wet* | *15000* | | *114* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *13400* | | *ug/kg wet* | *15000* | | *90* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *7540* | | *ug/kg wet* | *10000* | | *75* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *8200* | | *ug/kg wet* | *10000* | | *82* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6790* | | *ug/kg wet* | *10000* | | *68* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *11700* | | *ug/kg wet* | *15000* | | *78* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *8380* | | *ug/kg wet* | *10000* | | *84* | *33-127* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805031 - EPA 3545 MS** | | | | | | | | | | |
| **LCS (G805031-BS1)** | | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| Phenol | 14100 | 660 | ug/kg wet | 15000 | | 94 | 20-125 | | | |
| 2-Chlorophenol | 12400 | 660 | ug/kg wet | 15000 | | 82 | 20-125 | | | |
| 1,4-Dichlorobenzene | 7300 | 660 | ug/kg wet | 10000 | | 73 | 20-125 | | | |
| N-Nitrosodi-n-propylamine | 9360 | 330 | ug/kg wet | 10000 | | 94 | 20-125 | | | |
| 1,2,4-Trichlorobenzene | 7420 | 660 | ug/kg wet | 10000 | | 74 | 20-125 | | | |
| 4-Chloro-3-methylphenol | 16200 | 1300 | ug/kg wet | 15000 | | 108 | 20-125 | | | |
| 2,4-Dinitrotoluene | 9170 | 107 | ug/kg wet | 10000 | | 92 | 20-125 | | | |
| Acenaphthene | 8170 | 148 | ug/kg wet | 10000 | | 82 | 20-125 | | | |
| 4-Nitrophenol | 19800 | 3300 | ug/kg wet | 15000 | | 132 | 30-140 | | | |
| Pentachlorophenol | 15900 | 3300 | ug/kg wet | 15000 | | 106 | 20-125 | | | |
| Pyrene | 9180 | 66.0 | ug/kg wet | 10000 | | 92 | 30-135 | | | |
| *Surrogate: 2-Fluorophenol* | *15000* | | *ug/kg wet* | *15000* | | *100* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *16200* | | *ug/kg wet* | *15000* | | *108* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *12100* | | *ug/kg wet* | *15000* | | *81* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *6530* | | *ug/kg wet* | *10000* | | *65* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *8730* | | *ug/kg wet* | *10000* | | *87* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6920* | | *ug/kg wet* | *10000* | | *69* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *13100* | | *ug/kg wet* | *15000* | | *87* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *7770* | | *ug/kg wet* | *10000* | | *78* | *33-127* | | | |
| **Matrix Spike (G805031-MS1)** | **Source: 8050706-19** | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| 1,4-Dichlorobenzene | 8490 | 660 | ug/kg dry | 12000 | ND | 71 | 20-125 | | | |
| N-Nitrosodi-n-propylamine | 10900 | 330 | ug/kg dry | 12000 | ND | 90 | 25-126 | | | |
| 1,2,4-Trichlorobenzene | 8630 | 660 | ug/kg dry | 12000 | ND | 72 | 30-107 | | | |
| 4-Chloro-3-methylphenol | 19000 | 1300 | ug/kg dry | 18000 | ND | 106 | 26-115 | | | |
| 2,4-Dinitrotoluene | 10400 | 107 | ug/kg dry | 12000 | ND | 86 | 28-98 | | | |
| Acenaphthene | 8990 | 148 | ug/kg dry | 12000 | ND | 75 | 31-137 | | | |
| 4-Nitrophenol | 23800 | 3300 | ug/kg dry | 18000 | ND | 132 | 30-140 | | | |
| Pentachlorophenol | 17300 | 3300 | ug/kg dry | 18000 | ND | 96 | 10-130 | | | |
| Pyrene | 10100 | 66.0 | ug/kg dry | 12000 | ND | 84 | 35-150 | | | |
| *Surrogate: 2-Fluorophenol* | *18000* | | *ug/kg dry* | *18000* | | *100* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *19100* | | *ug/kg dry* | *18000* | | *106* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *13300* | | *ug/kg dry* | *18000* | | *74* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *7330* | | *ug/kg dry* | *12000* | | *61* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *10000* | | *ug/kg dry* | *12000* | | *84* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *7750* | | *ug/kg dry* | *12000* | | *65* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *14800* | | *ug/kg dry* | *18000* | | *82* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *9040* | | *ug/kg dry* | *12000* | | *75* | *33-127* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805031 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike Dup (G805031-MSD1)** | **Source: 8050706-19** | | | Prepared: 09-May-08 Analyzed: 10-May-08 | | | | | | |
| 1,4-Dichlorobenzene | 8460 | 660 | ug/kg dry | 12000 | ND | 70 | 20-125 | 0.4 | 31 | |
| N-Nitrosodi-n-propylamine | 10900 | 330 | ug/kg dry | 12000 | ND | 91 | 25-126 | 0.1 | 38 | |
| 1,2,4-Trichlorobenzene | 9160 | 660 | ug/kg dry | 12000 | ND | 76 | 30-107 | 6 | 35 | |
| 4-Chloro-3-methylphenol | 20400 | 1300 | ug/kg dry | 18000 | ND | 113 | 26-115 | 7 | 40 | |
| 2,4-Dinitrotoluene | 10400 | 107 | ug/kg dry | 12000 | ND | 86 | 28-98 | 0.1 | 45 | |
| Acenaphthene | 9260 | 148 | ug/kg dry | 12000 | ND | 77 | 31-137 | 3 | 40 | |
| 4-Nitrophenol | 22700 | 3300 | ug/kg dry | 18000 | ND | 126 | 30-140 | 5 | 40 | |
| Pentachlorophenol | 17200 | 3300 | ug/kg dry | 18000 | ND | 96 | 10-130 | 0.5 | 47 | |
| Pyrene | 10200 | 66.0 | ug/kg dry | 12000 | ND | 85 | 35-150 | 1 | 36 | |
| *Surrogate: 2-Fluorophenol* | *18100* | | *ug/kg dry* | *18000* | | *101* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *18700* | | *ug/kg dry* | *18000* | | *104* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *13800* | | *ug/kg dry* | *18000* | | *76* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *7400* | | *ug/kg dry* | *12000* | | *62* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *11300* | | *ug/kg dry* | *12000* | | *94* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *8180* | | *ug/kg dry* | *12000* | | *68* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *14800* | | *ug/kg dry* | *18000* | | *82* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *9240* | | *ug/kg dry* | *12000* | | *77* | *33-127* | | | |
| **Batch G805066 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike (G805066-MS1)** | **Source: 8050804-18** | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| 1,4-Dichlorobenzene | 4950 | 660 | ug/kg dry | 10600 | ND | 47 | 20-125 | | | |
| N-Nitrosodi-n-propylamine | 4360 | 330 | ug/kg dry | 10600 | ND | 41 | 25-126 | | | |
| 1,2,4-Trichlorobenzene | 5200 | 660 | ug/kg dry | 10600 | ND | 49 | 30-107 | | | |
| 4-Chloro-3-methylphenol | 9000 | 1300 | ug/kg dry | 16000 | ND | 56 | 26-115 | | | |
| 2,4-Dinitrotoluene | 7520 | 660 | ug/kg dry | 10600 | ND | 71 | 28-98 | | | |
| Acenaphthene | 5980 | 660 | ug/kg dry | 10600 | ND | 56 | 31-137 | | | |
| 4-Nitrophenol | 15500 | 3300 | ug/kg dry | 16000 | ND | 97 | 30-140 | | | |
| Pentachlorophenol | 11700 | 3300 | ug/kg dry | 16000 | ND | 74 | 10-130 | | | |
| Pyrene | 9020 | 660 | ug/kg dry | 10600 | ND | 85 | 35-150 | | | |
| *Surrogate: 2-Fluorophenol* | *7010* | | *ug/kg dry* | *16000* | | *44* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *7200* | | *ug/kg dry* | *16000* | | *45* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *6700* | | *ug/kg dry* | *16000* | | *42* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *4240* | | *ug/kg dry* | *10600* | | *40* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *3780* | | *ug/kg dry* | *10600* | | *36* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *4660* | | *ug/kg dry* | *10600* | | *44* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *9230* | | *ug/kg dry* | *16000* | | *58* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *8020* | | *ug/kg dry* | *10600* | | *75* | *33-127* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805066 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike Dup (G805066-MSD1)** | **Source: 8050804-18** | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| 1,4-Dichlorobenzene | 6730 | 660 | ug/kg dry | 10600 | ND | 63 | 20-125 | 30 | 31 | |
| N-Nitrosodi-n-propylamine | 6380 | 330 | ug/kg dry | 10600 | ND | 60 | 25-126 | 38 | 38 | |
| 1,2,4-Trichlorobenzene | 7210 | 660 | ug/kg dry | 10600 | ND | 68 | 30-107 | 32 | 35 | |
| 4-Chloro-3-methylphenol | 13000 | 1300 | ug/kg dry | 16000 | ND | 81 | 26-115 | 36 | 40 | |
| 2,4-Dinitrotoluene | 10200 | 660 | ug/kg dry | 10600 | ND | 95 | 28-98 | 30 | 45 | |
| Acenaphthene | 8760 | 660 | ug/kg dry | 10600 | ND | 82 | 31-137 | 38 | 40 | |
| 4-Nitrophenol | 18800 | 3300 | ug/kg dry | 16000 | ND | 118 | 30-140 | 19 | 40 | |
| Pentachlorophenol | 17600 | 3300 | ug/kg dry | 16000 | ND | 110 | 10-130 | 40 | 47 | |
| Pyrene | 10600 | 660 | ug/kg dry | 10600 | ND | 99 | 35-150 | 16 | 36 | |
| *Surrogate: 2-Fluorophenol* | *9550* | | *ug/kg dry* | *16000* | | *60* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *10000* | | *ug/kg dry* | *16000* | | *63* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *9420* | | *ug/kg dry* | *16000* | | *59* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *5720* | | *ug/kg dry* | *10600* | | *54* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5000* | | *ug/kg dry* | *10600* | | *47* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6610* | | *ug/kg dry* | *10600* | | *62* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *11900* | | *ug/kg dry* | *16000* | | *75* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *9020* | | *ug/kg dry* | *10600* | | *85* | *33-127* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805036 - EPA 3510C_MS** | | | | | | | | | | |
| **Blank (G805036-BLK1)** | | | | Prepared: 10-May-08 Analyzed: 12-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *8.64* | | *ug/L* | *10.0* | | *86* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.19* | | *ug/L* | *10.0* | | *62* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *8.13* | | *ug/L* | *10.0* | | *81* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.01* | | *ug/L* | *10.0* | | *80* | *35-125* | | | |
| **LCS (G805036-BS1)** | | | | Prepared: 10-May-08 Analyzed: 12-May-08 | | | | | | |
| Acenaphthene | 7.65 | 2.50 | ug/L | 10.0 | | 76 | 46-128 | | | |
| Pyrene | 8.41 | 1.50 | ug/L | 10.0 | | 84 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *7.53* | | *ug/L* | *10.0* | | *75* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.14* | | *ug/L* | *10.0* | | *61* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *8.31* | | *ug/L* | *10.0* | | *83* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.14* | | *ug/L* | *10.0* | | *81* | *35-125* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805036 - EPA 3510C_MS** | | | | | | | | | | |
| **Matrix Spike (G805036-MS1)** | **Source: 8050804-22** | | | Prepared: 10-May-08 Analyzed: 12-May-08 | | | | | | |
| Acenaphthene | 6.45 | 2.50 | ug/L | 10.0 | 0.03 | 64 | 46-128 | | | |
| Pyrene | 6.53 | 1.50 | ug/L | 10.0 | 0.02 | 65 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *ND* | | *ug/L* | *10.0* | | *75* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *ND* | | *ug/L* | *10.0* | | *51* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *ND* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.58* | | *ug/L* | *10.0* | | *76* | *35-125* | | | |
| **Matrix Spike Dup (G805036-MSD1)** | **Source: 8050804-22** | | | Prepared: 10-May-08 Analyzed: 12-May-08 | | | | | | |
| Acenaphthene | 7.50 | 2.50 | ug/L | 10.0 | 0.03 | 75 | 46-128 | 15 | 31 | |
| Pyrene | 8.56 | 1.50 | ug/L | 10.0 | 0.02 | 85 | 26-127 | 27 | 31 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *ND* | | *ug/L* | *10.0* | | *74* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.56* | | *ug/L* | *10.0* | | *56* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *ND* | | *ug/L* | *10.0* | | *81* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.95* | | *ug/L* | *10.0* | | *80* | *35-125* | | | |
| **Batch G805040 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805040-BLK1)** | | | | Prepared: 12-May-08 Analyzed: 17-May-08 | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 33.0 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 33.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 83.0 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg wet | | | | | | | |
| Chrysene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1020* | | *ug/kg wet* | *1000* | | *102* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *563* | | *ug/kg wet* | *1000* | | *56* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *668* | | *ug/kg wet* | *1000* | | *67* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *820* | | *ug/kg wet* | *1000* | | *82* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805040 - EPA 3545 MS** | | | | | | | | | | |
| **LCS (G805040-BS1)** | | | | Prepared: 12-May-08 Analyzed: 17-May-08 | | | | | | |
| Acenaphthene | 825 | 50.0 | ug/kg wet | 1000 | | 82 | 31-137 | | | |
| Pyrene | 889 | 50.0 | ug/kg wet | 1000 | | 89 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1200* | | *ug/kg wet* | *1000* | | *120* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *646* | | *ug/kg wet* | *1000* | | *65* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *715* | | *ug/kg wet* | *1000* | | *72* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *837* | | *ug/kg wet* | *1000* | | *84* | *25-130* | | | |
| **Matrix Spike (G805040-MS1)** | **Source: 8050804-09** | | | Prepared: 12-May-08 Analyzed: 17-May-08 | | | | | | |
| Acenaphthene | 1110 | 50.0 | ug/kg dry | 1070 | 179 | 87 | 31-137 | | | |
| Pyrene | 3240 | 50.0 | ug/kg dry | 1070 | 2370 | 81 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1180* | | *ug/kg dry* | *1070* | | *110* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *668* | | *ug/kg dry* | *1070* | | *62* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *731* | | *ug/kg dry* | *1070* | | *68* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *785* | | *ug/kg dry* | *1070* | | *73* | *25-130* | | | |
| **Matrix Spike Dup (G805040-MSD1)** | **Source: 8050804-09** | | | Prepared: 12-May-08 Analyzed: 17-May-08 | | | | | | |
| Acenaphthene | 1100 | 50.0 | ug/kg dry | 1070 | 179 | 86 | 31-137 | 1 | 25 | |
| Pyrene | 3240 | 50.0 | ug/kg dry | 1070 | 2370 | 80 | 35-142 | 0.5 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1260* | | *ug/kg dry* | *1070* | | *117* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *713* | | *ug/kg dry* | *1070* | | *66* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *779* | | *ug/kg dry* | *1070* | | *72* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *822* | | *ug/kg dry* | *1070* | | *76* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## STAT

## D2974 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch R44585 - D2974** | | | | | | | | | | |
| **DUP (R44585-DUP18)** | | **Source: 8050804-18** | | Prepared: 13-May-08 Analyzed: 14-May-08 | | | | | | |
| Percent Moisture | 5.5 | 0.01 | wt% | 0 | | | - | | 20 | |
| **LCS (R44585-LCS1)** | | | | Prepared: 13-May-08 Analyzed: 14-May-08 | | | | | | |
| Percent Moisture | 4.4 | 0.01 | wt% | 5 | | 88 | 80-120 | | | |
| **LCS (R44585-LCS2)** | | | | Prepared: 13-May-08 Analyzed: 14-May-08 | | | | | | |
| Percent Moisture | 99.79 | 0.01 | wt% | 99.8 | | 100 | 80-120 | | | |
| **MBLK (R44585-MBLK)** | | | | Prepared: 13-May-08 Analyzed: 14-May-08 | | | | | | |
| Percent Moisture | ND | 0.01 | wt% | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## SW9012A - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35048 - SW9012A** | | | | | | | | | | |
| **LCS (35048-LCS)** | | | | Prepared & Analyzed: 10-May-08 | | | | | | |
| Cyanide | 10.03 | 0.25 | mg/Kg-dry | 10 | | 100 | 90-110 | | | |
| **MBLK (35048-MBLK)** | | | | Prepared & Analyzed: 10-May-08 | | | | | | |
| Cyanide | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| **MS (35048-MS17)** | | **Source: 8050804-17** | | Prepared & Analyzed: 10-May-08 | | | | | | |
| Cyanide | 10.15 | 0.26 | mg/Kg-dry | 10.53 | ND | 96.5 | 75-125 | | | |
| **MS (35048-MS18)** | | **Source: 8050804-18** | | Prepared & Analyzed: 10-May-08 | | | | | | |
| Cyanide | 10.46 | 0.26 | mg/Kg-dry | 10.58 | ND | 98.9 | 75-125 | | | |
| **MS (35048-MS19)** | | **Source: 8050804-19** | | Prepared & Analyzed: 10-May-08 | | | | | | |
| Cyanide | 10.06 | 0.26 | mg/Kg-dry | 10.53 | ND | 95.6 | 75-125 | | | |
| **MSD (35048-MSD17)** | | **Source: 8050804-17** | | Prepared & Analyzed: 10-May-08 | | | | | | |
| Cyanide | 10.14 | 0.26 | mg/Kg-dry | 10.53 | ND | 96.4 | 75-125 | 0.111 | 20 | |
| **MSD (35048-MSD18)** | | **Source: 8050804-18** | | Prepared & Analyzed: 10-May-08 | | | | | | |
| Cyanide | 10.48 | 0.26 | mg/Kg-dry | 10.58 | ND | 99 | 75-125 | 0.151 | 20 | |
| **MSD (35048-MSD19)** | | **Source: 8050804-19** | | Prepared & Analyzed: 10-May-08 | | | | | | |
| Cyanide | 10.5 | 0.26 | mg/Kg-dry | 10.53 | ND | 99.8 | 75-125 | 4.27 | 20 | |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: 353971.CH.ZZ/Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:19 |

## Notes and Definitions

| | |
|---|---|
| S | Spike Recovery outside accepted recovery limits |
| J | Analyte detected below quantitation limits |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

June 10, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8051201

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-U10-3-SO-0607 | 8051201-01 | Soil | 09-May-08 14:50 | 09-May-08 19:15 |
| CS-U10-2-SO-0307 | 8051201-02 | Soil | 09-May-08 14:15 | 09-May-08 19:15 |
| CS-U10-1-SO-0507 | 8051201-03 | Soil | 09-May-08 13:50 | 09-May-08 19:15 |
| CS-U11-1-SO-0608 | 8051201-04 | Soil | 09-May-08 09:43 | 09-May-08 19:15 |
| CS-U14-1-SO-0103 | 8051201-05 | Soil | 09-May-08 13:20 | 09-May-08 19:15 |
| CS-U14-1-SO-0103D | 8051201-06 | Soil | 09-May-08 13:22 | 09-May-08 19:15 |
| CS-P16-1-GW-050908MS | 8051201-07 | Water | 09-May-08 10:45 | 09-May-08 19:15 |
| CS-U11-2-GW-050908 | 8051201-08 | Water | 09-May-08 09:00 | 09-May-08 19:15 |
| CS-P16-1-GW-050908 | 8051201-09 | Water | 09-May-08 10:45 | 09-May-08 19:15 |
| Trip Blank | 8051201-10 | Water | 09-May-08 16:00 | 09-May-08 19:15 |
| CS-U14-1-GW-050908D | 8051201-11 | Water | 09-May-08 13:30 | 09-May-08 19:15 |
| CS-U14-1-GW-050908 | 8051201-12 | Water | 09-May-08 13:28 | 09-May-08 19:15 |
| CS-U10-2-GW-050908 | 8051201-13 | Water | 09-May-08 14:25 | 09-May-08 19:15 |
| CS-U11-2-SO-0002MS | 8051201-14 | Soil | 09-May-08 08:50 | 09-May-08 19:15 |
| CS-U11-2-SO-0608 | 8051201-15 | Soil | 09-May-08 08:55 | 09-May-08 19:15 |
| Trip Blank | 8051201-16 | Water | 09-May-08 16:08 | 09-May-08 19:15 |
| CS-P16-1-SO-0508MS | 8051201-17 | Soil | 09-May-08 10:40 | 09-May-08 19:15 |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U10-3-SO-0607**

**Lab Sample ID: 8051201-01 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| **Xylenes, total** | **12** | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *133 %* | *45-155* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *104 %* | *62-129* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *45-127* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Phenanthrene** | **252** | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Fluoranthene** | **204** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Pyrene** | **184** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) anthracene** | **149** | 8.50 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Chrysene** | **143** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **253** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **255** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) pyrene** | **125** | 15.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **105** | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *104 %* | *50-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *62 %* | *26-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *67 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *75 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U10-3-SO-0607**

**Lab Sample ID: 8051201-01 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **93.3** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U10-2-SO-0307**

**Lab Sample ID: 8051201-02 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| **Xylenes, total** | **8** | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *124 %* | *45-155* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *99 %* | *62-129* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *70 %* | *45-127* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Phenanthrene** | **576** | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Anthracene** | **124** | 83.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Fluoranthene** | **1060** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Pyrene** | **1100** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) anthracene** | **679** | 8.50 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Chrysene** | **647** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **767** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **267** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) pyrene** | **632** | 15.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **311** | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **378** | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *98 %* | *50-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *59 %* | *26-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *61 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *71 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U10-2-SO-0307**

**Lab Sample ID: 8051201-02 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **89.4** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U10-1-SO-0507**

**Lab Sample ID: 8051201-03 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| **Xylenes, total** | **6** | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *96 %* | *45-155* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *100 %* | *62-129* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *89 %* | *45-127* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Phenanthrene** | **292** | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Fluoranthene** | **464** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Pyrene** | **436** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) anthracene** | **251** | 8.50 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Chrysene** | **232** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **266** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **95.4** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) pyrene** | **220** | 15.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **108** | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **131** | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *97 %* | *50-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *57 %* | *26-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *59 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U10-1-SO-0507**

**Lab Sample ID: 8051201-03 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **92.2** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U11-1-SO-0608**

**Lab Sample ID: 8051201-04 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| **Xylenes, total** | **6** | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *110 %* | *45-155* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *107 %* | *62-129* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *109 %* | *45-127* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Phenanthrene** | **148** | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Fluoranthene** | **399** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Pyrene** | **384** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) anthracene** | **221** | 8.50 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Chrysene** | **211** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **246** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **87.7** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) pyrene** | **190** | 15.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **95.0** | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **115** | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *95 %* | *50-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *59 %* | *26-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *63 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U11-1-SO-0608**

**Lab Sample ID: 8051201-04 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **95.8** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-SO-0103**

**Lab Sample ID: 8051201-05 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| **Xylenes, total** | **7** | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *139 %* | *45-145* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *108 %* | *62-129* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *103 %* | *45-145* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-SO-0103**

**Lab Sample ID: 8051201-05 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Phenanthrene** | **152** | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Fluoranthene** | **387** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Pyrene** | **359** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) anthracene** | **219** | 8.50 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Chrysene** | **224** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **284** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **94.5** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) pyrene** | **215** | 15.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **133** | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *58 %* | *50-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *36 %* | *26-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *39 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *68 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **7.28** | | N/A | 1 | 14-May-08 | 20-May-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **89.9** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-SO-0103**

**Lab Sample ID: 8051201-05 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **8.7** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **6.1** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **86** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Cadmium** | **0.74** | 0.54 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **10** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Lead** | **320** | 0.54 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Selenium** | **1.3** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.7** | 0.027 | mg/Kg-dry | 1 | 14-May-08 | 15-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-SO-0103D**

**Lab Sample ID: 8051201-06 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| **Xylenes, total** | **8** | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *100 %* | *45-145* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *107 %* | *62-129* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *113 %* | *45-145* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-SO-0103D**

**Lab Sample ID: 8051201-06 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *84 %* | *50-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *51 %* | *26-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *56 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *68 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **7.54** | | N/A | 1 | 14-May-08 | 20-May-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **88.1** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-SO-0103D**

**Lab Sample ID: 8051201-06 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.4** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **6.3** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **83** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Cadmium** | **0.81** | 0.55 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **8.6** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Lead** | **320** | 0.55 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Selenium** | **1.3** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.58** | 0.029 | mg/Kg-dry | 1 | 14-May-08 | 15-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-P16-1-GW-050908MS**

**Lab Sample ID: 8051201-07 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *94 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *96 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *101 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-P16-1-GW-050908MS**

**Lab Sample ID: 8051201-07 (Water)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.009** | 0.004 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **0.037** | 0.004 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.016** | 0.004 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Lead** | **0.022** | 0.002 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Selenium** | **0.011** | 0.004 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 14-May-08 | 14-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U11-2-GW-050908**

**Lab Sample ID: 8051201-08 (Water)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *93 %* | *60-128* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *96 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *100 %* | *60-127* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *102 %* | *55-135* | | *12-May-08* | *17-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *56 %* | *40-125* | | *12-May-08* | *17-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *63 %* | *40-130* | | *12-May-08* | *17-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | *35-125* | | *12-May-08* | *17-May-08* | *8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-P16-1-GW-050908**

**Lab Sample ID: 8051201-09 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *105 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *100 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-P16-1-GW-050908**

**Lab Sample ID: 8051201-09 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 12-May-08 | 17-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *108 %* | *55-135* | | *12-May-08* | *17-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *60 %* | *40-125* | | *12-May-08* | *17-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *67 %* | *40-130* | | *12-May-08* | *17-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *81 %* | *35-125* | | *12-May-08* | *17-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.013** | 0.004 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **0.05** | 0.004 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.033** | 0.004 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Lead** | **0.042** | 0.002 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Selenium** | **0.011** | 0.004 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-P16-1-GW-050908**

**Lab Sample ID: 8051201-09 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 14-May-08 | 14-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: Trip Blank**

**Lab Sample ID: 8051201-10 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *85 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *100 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *99 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-GW-050908D**

**Lab Sample ID: 8051201-11 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *78 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *96 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-GW-050908D**

**Lab Sample ID: 8051201-11 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *108 %* | *55-135* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *60 %* | *40-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *67 %* | *40-130* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *80 %* | *35-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.015** | 0.004 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Barium** | **0.08** | 0.004 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.023** | 0.004 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Lead** | **0.06** | 0.002 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-GW-050908D**

**Lab Sample ID: 8051201-11 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 14-May-08 | 14-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-GW-050908**

**Lab Sample ID: 8051201-12 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *85 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *99 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *100 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-GW-050908**

**Lab Sample ID: 8051201-12 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *106 %* | *55-135* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *58 %* | *40-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *63 %* | *40-130* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *79 %* | *35-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.012** | 0.004 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Barium** | **0.067** | 0.004 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.014** | 0.004 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Lead** | **0.038** | 0.002 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 15-May-08 | 16-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U14-1-GW-050908**

**Lab Sample ID: 8051201-12 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 14-May-08 | 14-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U10-2-GW-050908**

**Lab Sample ID: 8051201-13 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *70 %* | *60-128* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *99 %* | *60-127* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *72 %* | *55-135* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *42 %* | *40-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *46 %* | *40-130* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *79 %* | *35-125* | | *12-May-08* | *18-May-08* | *8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U11-2-SO-0002MS**

**Lab Sample ID: 8051201-14 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| **Xylenes, total** | **8** | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *144 %* | *45-155* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *108 %* | *62-129* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *99 %* | *45-127* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **408** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Acenaphthylene** | **65.3** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Acenaphthene** | **484** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Fluorene** | **536** | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Phenanthrene** | **4650** | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Anthracene** | **1270** | 83.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Fluoranthene** | **4840** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Pyrene** | **4700** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) anthracene** | **2340** | 8.50 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Chrysene** | **2110** | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **2300** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **794** | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (a) pyrene** | **2030** | 15.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **910** | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **1040** | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *77 %* | *50-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *49 %* | *26-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *56 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *72 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U11-2-SO-0002MS**

**Lab Sample ID: 8051201-14 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **79.6** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U11-2-SO-0608**

**Lab Sample ID: 8051201-15 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| **Xylenes, total** | **7** | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *110 %* | *45-155* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *107 %* | *62-129* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *110 %* | *45-127* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-May-08 | 18-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *73 %* | *50-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *48 %* | *26-135* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *52 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *25-130* | | *18-May-08* | *18-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-U11-2-SO-0608**

**Lab Sample ID: 8051201-15 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **87.1** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: Trip Blank**

**Lab Sample ID: 8051201-16 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *64 %* | | *60-145* | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *92 %* | | *62-129* | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *96 %* | | *60-145* | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-P16-1-SO-0508MS**

**Lab Sample ID: 8051201-17 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 14-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *92 %* | *45-145* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *96 %* | *45-145* | | *14-May-08* | *17-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-P16-1-SO-0508MS**

**Lab Sample ID: 8051201-17 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **12.9** | 8.50 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **12.9** | 11.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *90 %* | *50-135* | | *18-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *59 %* | *26-135* | | *18-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *59 %* | *25-130* | | *18-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *72 %* | *25-130* | | *18-May-08* | *19-May-08* | *8270c* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.42** | | N/A | 1 | 15-May-08 | 20-May-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **85.6** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Client Sample ID: CS-P16-1-SO-0508MS**

**Lab Sample ID: 8051201-17 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.6** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **5.3** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **22** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.56 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **5.9** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Lead** | **24** | 0.56 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.087** | 0.027 | mg/Kg-dry | 1 | 20-May-08 | 20-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

**Grace Analytical Lab, Inc.**

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805041 - EPA 5035** | | | | | | | | | | |
| **Blank (G805041-BLK1)** | | | | Prepared: 14-May-08 Analyzed: 17-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Vinyl chloride | ND | 2 | ug/kg wet | | | | | | | |
| Bromomethane | ND | 5 | ug/kg wet | | | | | | | |
| Chloroethane | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Acetone | ND | 50 | ug/kg wet | | | | | | | |
| Carbon disulfide | ND | 5 | ug/kg wet | | | | | | | |
| Methylene Chloride | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Butanone | ND | 5 | ug/kg wet | | | | | | | |
| Chloroform | ND | 5 | ug/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Trichloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/kg wet | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/kg wet | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Hexanone | ND | 5 | ug/kg wet | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Chlorobenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Styrene | ND | 5 | ug/kg wet | | | | | | | |
| Bromoform | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *45.3* | | *ug/kg wet* | *50.0* | | *91* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/kg wet* | *50.0* | | *91* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *48.2* | | *ug/kg wet* | *50.0* | | *96* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *48.2* | | *ug/kg wet* | *50.0* | | *96* | *62-129* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805041 - EPA 5035** | | | | | | | | | | |
| **Blank (G805041-BLK1)** | | | | Prepared: 14-May-08 Analyzed: 17-May-08 | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *52.4* | | *ug/kg wet* | *50.0* | | *105* | *45-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *52.4* | | *ug/kg wet* | *50.0* | | *105* | *45-145* | | | |
| **LCS (G805041-BS1)** | | | | Prepared: 14-May-08 Analyzed: 17-May-08 | | | | | | |
| 1,1-Dichloroethylene | 70 | 5 | ug/kg wet | | | | 35-155 | | | |
| Benzene | 48 | 5 | ug/kg wet | | | | 35-150 | | | |
| Benzene | 48 | 5 | ug/kg wet | | | | 35-150 | | | |
| Trichloroethene | 47 | 5 | ug/kg wet | | | | 42-135 | | | |
| Toluene | 48 | 5 | ug/kg wet | | | | 40-151 | | | |
| Toluene | 48 | 5 | ug/kg wet | | | | 40-151 | | | |
| Chlorobenzene | 45 | 5 | ug/kg wet | | | | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *37.3* | | *ug/kg wet* | *50.0* | | *75* | *45-155* | | | |
| *Surrogate: Dibromofluoromethane* | *37.3* | | *ug/kg wet* | *50.0* | | *75* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *51.8* | | *ug/kg wet* | *50.0* | | *104* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.8* | | *ug/kg wet* | *50.0* | | *104* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.3* | | *ug/kg wet* | *50.0* | | *107* | *45-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.3* | | *ug/kg wet* | *50.0* | | *107* | *45-145* | | | |
| **Matrix Spike (G805041-MS1)** | **Source: 8051201-14** | | | Prepared: 14-May-08 Analyzed: 17-May-08 | | | | | | |
| 1,1-Dichloroethylene | 91 | 5 | ug/kg dry | 62.8 | ND | 146 | 35-155 | | | |
| Benzene | 80 | 5 | ug/kg dry | 62.8 | ND | 127 | 35-150 | | | |
| Benzene | 80 | 5 | ug/kg dry | 62.8 | ND | 127 | 45-150 | | | |
| Trichloroethene | 60 | 5 | ug/kg dry | 62.8 | 5 | 88 | 42-166 | | | |
| Toluene | 67 | 5 | ug/kg dry | 62.8 | 0.8 | 105 | 40-151 | | | |
| Toluene | 67 | 5 | ug/kg dry | 62.8 | 0.8 | 105 | 40-151 | | | |
| Chlorobenzene | 61 | 5 | ug/kg dry | 62.8 | ND | 97 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *81.9* | | *ug/kg dry* | *62.8* | | *130* | *45-155* | | | |
| *Surrogate: Dibromofluoromethane* | *81.9* | | *ug/kg dry* | *62.8* | | *130* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *68.6* | | *ug/kg dry* | *62.8* | | *109* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *68.6* | | *ug/kg dry* | *62.8* | | *109* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *74.8* | | *ug/kg dry* | *62.8* | | *119* | *45-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *74.8* | | *ug/kg dry* | *62.8* | | *119* | *45-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805041 - EPA 5035** | | | | | | | | | | |
| **Matrix Spike (G805041-MS2)** | **Source: 8051201-17** | | | Prepared: 14-May-08 Analyzed: 17-May-08 | | | | | | |
| 1,1-Dichloroethylene | 58 | 5 | ug/kg dry | 58.4 | ND | 99 | 35-155 | | | |
| Benzene | 53 | 5 | ug/kg dry | 58.4 | | 91 | 45-150 | | | |
| Benzene | 53 | 5 | ug/kg dry | 58.4 | ND | 91 | 35-150 | | | |
| Trichloroethene | 43 | 5 | ug/kg dry | 58.4 | 1 | 72 | 42-166 | | | |
| Toluene | 45 | 5 | ug/kg dry | 58.4 | 0.7 | 75 | 40-151 | | | |
| Toluene | 45 | 5 | ug/kg dry | 58.4 | | 76 | 40-151 | | | |
| Chlorobenzene | 35 | 5 | ug/kg dry | 58.4 | ND | 59 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *54.7* | | *ug/kg dry* | *58.4* | | *94* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *54.7* | | *ug/kg dry* | *58.4* | | *94* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *59.8* | | *ug/kg dry* | *58.4* | | *102* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *59.8* | | *ug/kg dry* | *58.4* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *57.3* | | *ug/kg dry* | *58.4* | | *98* | *45-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *57.3* | | *ug/kg dry* | *58.4* | | *98* | *45-127* | | | |
| **Matrix Spike Dup (G805041-MSD1)** | **Source: 8051201-14** | | | Prepared: 14-May-08 Analyzed: 17-May-08 | | | | | | |
| 1,1-Dichloroethylene | 92 | 5 | ug/kg dry | 62.8 | ND | 147 | 35-155 | 0.6 | 30 | |
| Benzene | 60 | 5 | ug/kg dry | 62.8 | ND | 95 | 35-150 | 29 | 30 | |
| Benzene | 60 | 5 | ug/kg dry | 62.8 | ND | 95 | 45-150 | 29 | 30 | |
| Trichloroethene | 53 | 5 | ug/kg dry | 62.8 | 5 | 78 | 42-166 | 13 | 30 | |
| Toluene | 58 | 5 | ug/kg dry | 62.8 | 0.8 | 92 | 40-151 | 13 | 30 | |
| Toluene | 58 | 5 | ug/kg dry | 62.8 | 0.8 | 92 | 40-151 | 13 | 30 | |
| Chlorobenzene | 55 | 5 | ug/kg dry | 62.8 | ND | 87 | 34-158 | 11 | 30 | |
| *Surrogate: Dibromofluoromethane* | *56.5* | | *ug/kg dry* | *62.8* | | *90* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *56.5* | | *ug/kg dry* | *62.8* | | *90* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *64.8* | | *ug/kg dry* | *62.8* | | *103* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *64.8* | | *ug/kg dry* | *62.8* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *65.7* | | *ug/kg dry* | *62.8* | | *105* | *45-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *65.7* | | *ug/kg dry* | *62.8* | | *105* | *45-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805041 - EPA 5035** | | | | | | | | | | |
| **Matrix Spike Dup (G805041-MSD2)** | **Source: 8051201-17** | | | Prepared: 14-May-08 Analyzed: 17-May-08 | | | | | | |
| 1,1-Dichloroethylene | 50 | 5 | ug/kg dry | 58.4 | ND | 86 | 35-155 | 15 | 30 | |
| Benzene | 57 | 5 | ug/kg dry | 58.4 | | 98 | 45-150 | 8 | 30 | |
| Benzene | 57 | 5 | ug/kg dry | 58.4 | ND | 98 | 35-150 | 8 | 30 | |
| Trichloroethene | 47 | 5 | ug/kg dry | 58.4 | 1 | 78 | 42-166 | 7 | 30 | |
| Toluene | 49 | 5 | ug/kg dry | 58.4 | | 84 | 40-151 | 9 | 30 | |
| Toluene | 49 | 5 | ug/kg dry | 58.4 | 0.7 | 82 | 40-151 | 10 | 30 | |
| Chlorobenzene | 43 | 5 | ug/kg dry | 58.4 | ND | 73 | 34-158 | 22 | 30 | |
| *Surrogate: Dibromofluoromethane* | *55.3* | | *ug/kg dry* | *58.4* | | *95* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *55.3* | | *ug/kg dry* | *58.4* | | *95* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *58.7* | | *ug/kg dry* | *58.4* | | *101* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *58.7* | | *ug/kg dry* | *58.4* | | *101* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *54.8* | | *ug/kg dry* | *58.4* | | *94* | *45-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *54.8* | | *ug/kg dry* | *58.4* | | *94* | *45-145* | | | |
| **Batch G805051 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805051-BLK1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805051 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805051-BLK1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *52.2* | | *ug/L* | *50.0* | | *104* | *60-128* | | | |
| *Surrogate: Dibromofluoromethane* | *52.2* | | *ug/L* | *50.0* | | *104* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *49.4* | | *ug/L* | *50.0* | | *99* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *49.4* | | *ug/L* | *50.0* | | *99* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *47.7* | | *ug/L* | *50.0* | | *95* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *47.7* | | *ug/L* | *50.0* | | *95* | *60-127* | | | |
| **LCS (G805051-BS1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 34 | 5 | ug/L | 50.0 | | 67 | 56-135 | | | |
| Benzene | 43 | 5 | ug/L | 50.0 | | 85 | 71-137 | | | |
| Benzene | 43 | 5 | ug/L | 50.0 | | 85 | 60-140 | | | |
| Trichloroethene | 55 | 5 | ug/L | 50.0 | | 110 | 70-138 | | | |
| Toluene | 47 | 5 | ug/L | 50.0 | | 95 | 71-145 | | | |
| Toluene | 47 | 5 | ug/L | 50.0 | | 95 | 60-145 | | | |
| Chlorobenzene | 48 | 5 | ug/L | 50.0 | | 96 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *40.4* | | *ug/L* | *50.0* | | *81* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *40.4* | | *ug/L* | *50.0* | | *81* | *60-128* | | | |
| *Surrogate: Toluene-d8* | *49.0* | | *ug/L* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *49.0* | | *ug/L* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.4* | | *ug/L* | *50.0* | | *97* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.4* | | *ug/L* | *50.0* | | *97* | *60-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805051 - EPA 5030B** | | | | | | | | | | |
| **Matrix Spike (G805051-MS1)** | **Source: 8051201-12** | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 37 | 5 | ug/L | 50.0 | ND | 74 | 56-150 | | | |
| Benzene | 52 | 5 | ug/L | 50.0 | ND | 104 | 71-137 | | | |
| Benzene | 52 | 5 | ug/L | 50.0 | ND | 104 | 71-165 | | | |
| Trichloroethene | 53 | 5 | ug/L | 50.0 | ND | 107 | 70-138 | | | |
| Toluene | 51 | 5 | ug/L | 50.0 | ND | 102 | 71-145 | | | |
| Toluene | 51 | 5 | ug/L | 50.0 | ND | 102 | 71-145 | | | |
| Chlorobenzene | 48 | 5 | ug/L | 50.0 | ND | 97 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *47.1* | | *ug/L* | *50.0* | | *94* | *60-128* | | | |
| *Surrogate: Dibromofluoromethane* | *47.1* | | *ug/L* | *50.0* | | *94* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *51.3* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.3* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.4* | | *ug/L* | *50.0* | | *107* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.4* | | *ug/L* | *50.0* | | *107* | *60-127* | | | |
| **Matrix Spike Dup (G805051-MSD1)** | **Source: 8051201-12** | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 35 | 5 | ug/L | 50.0 | ND | 70 | 56-150 | 5 | 20 | |
| Benzene | 48 | 5 | ug/L | 50.0 | ND | 96 | 71-165 | 8 | 20 | |
| Benzene | 48 | 5 | ug/L | 50.0 | ND | 96 | 71-137 | 8 | 20 | |
| Trichloroethene | 52 | 5 | ug/L | 50.0 | ND | 105 | 70-138 | 2 | 20 | |
| Toluene | 49 | 5 | ug/L | 50.0 | ND | 98 | 71-145 | 4 | 20 | |
| Toluene | 49 | 5 | ug/L | 50.0 | ND | 98 | 71-145 | 4 | 20 | |
| Chlorobenzene | 47 | 5 | ug/L | 50.0 | ND | 94 | 72-143 | 2 | 20 | |
| *Surrogate: Dibromofluoromethane* | *43.5* | | *ug/L* | *50.0* | | *87* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *43.5* | | *ug/L* | *50.0* | | *87* | *60-128* | | | |
| *Surrogate: Toluene-d8* | *50.6* | | *ug/L* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *50.6* | | *ug/L* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.4* | | *ug/L* | *50.0* | | *107* | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.4* | | *ug/L* | *50.0* | | *107* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **Blank (G805055-BLK1)** | | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.1* | | *ug/L* | *10.0* | | *101* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.53* | | *ug/L* | *10.0* | | *55* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.26* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.94* | | *ug/L* | *10.0* | | *79* | *35-125* | | | |
| **Blank (G805055-BLK2)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.90* | | *ug/L* | *10.0* | | *99* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.58* | | *ug/L* | *10.0* | | *56* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.00* | | *ug/L* | *10.0* | | *60* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.00* | | *ug/L* | *10.0* | | *80* | *35-125* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **LCS (G805055-BS1)** | | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Acenaphthene | 8.14 | 2.50 | ug/L | 10.0 | | 81 | 46-128 | | | |
| Pyrene | 9.04 | 1.50 | ug/L | 10.0 | | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.9* | | *ug/L* | *10.0* | | *109* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.02* | | *ug/L* | *10.0* | | *60* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.72* | | *ug/L* | *10.0* | | *67* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.11* | | *ug/L* | *10.0* | | *81* | *35-125* | | | |
| **LCS (G805055-BS2)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.56 | 2.50 | ug/L | 10.0 | | 76 | 46-128 | | | |
| Pyrene | 9.02 | 1.50 | ug/L | 10.0 | | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.1* | | *ug/L* | *10.0* | | *101* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.66* | | *ug/L* | *10.0* | | *57* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.02* | | *ug/L* | *10.0* | | *60* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.45* | | *ug/L* | *10.0* | | *84* | *35-125* | | | |
| **Matrix Spike (G805055-MS1)** | **Source: 8051201-09** | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Acenaphthene | 8.03 | 2.50 | ug/L | 10.0 | 0.04 | 80 | 46-128 | | | |
| Pyrene | 9.03 | 1.50 | ug/L | 10.0 | 0.05 | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.18* | | *ug/L* | *10.0* | | *92* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.36* | | *ug/L* | *10.0* | | *54* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.19* | | *ug/L* | *10.0* | | *62* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.07* | | *ug/L* | *10.0* | | *81* | *35-125* | | | |
| **Matrix Spike (G805055-MS2)** | **Source: 8051301-18** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.83 | 2.50 | ug/L | 10.0 | 0.01 | 78 | 46-128 | | | |
| Pyrene | 8.80 | 1.50 | ug/L | 10.0 | 0.02 | 88 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.91* | | *ug/L* | *10.0* | | *99* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.76* | | *ug/L* | *10.0* | | *58* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.27* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.88* | | *ug/L* | *10.0* | | *79* | *35-125* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **Matrix Spike Dup (G805055-MSD1)** | **Source: 8051201-09** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 8.82 | 2.50 | ug/L | 10.0 | 0.04 | 88 | 46-128 | 9 | 31 | |
| Pyrene | 9.51 | 1.50 | ug/L | 10.0 | 0.05 | 95 | 26-127 | 5 | 31 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *11.3* | | *ug/L* | *10.0* | | *113* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.18* | | *ug/L* | *10.0* | | *62* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.95* | | *ug/L* | *10.0* | | *70* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.34* | | *ug/L* | *10.0* | | *83* | *35-125* | | | |
| **Matrix Spike Dup (G805055-MSD2)** | **Source: 8051301-18** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.97 | 2.50 | ug/L | 10.0 | 0.01 | 80 | 46-128 | 2 | 31 | |
| Pyrene | 8.70 | 1.50 | ug/L | 10.0 | 0.02 | 87 | 26-127 | 1 | 31 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.5* | | *ug/L* | *10.0* | | *105* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.98* | | *ug/L* | *10.0* | | *60* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.34* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.69* | | *ug/L* | *10.0* | | *77* | *35-125* | | | |
| **Batch G805057 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805057-BLK1)** | | | | Prepared & Analyzed: 18-May-08 | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 33.0 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 33.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 83.0 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg wet | | | | | | | |
| Chrysene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1040* | | *ug/kg wet* | *1000* | | *104* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *614* | | *ug/kg wet* | *1000* | | *61* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *689* | | *ug/kg wet* | *1000* | | *69* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *853* | | *ug/kg wet* | *1000* | | *85* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805057 - EPA 3545 MS** | | | | | | | | | | |
| **LCS (G805057-BS1)** | | | | Prepared & Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 842 | 50.0 | ug/kg wet | 1000 | | 84 | 31-137 | | | |
| Pyrene | 945 | 50.0 | ug/kg wet | 1000 | | 94 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1080* | | *ug/kg wet* | *1000* | | *108* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *624* | | *ug/kg wet* | *1000* | | *62* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *663* | | *ug/kg wet* | *1000* | | *66* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *808* | | *ug/kg wet* | *1000* | | *81* | *25-130* | | | |
| **Matrix Spike (G805057-MS1)** | **Source: 8051201-14** | | | Prepared & Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 1220 | 50.0 | ug/kg dry | 1260 | 484 | 59 | 31-137 | | | |
| Pyrene | 6540 | 50.0 | ug/kg dry | 1260 | 4700 | 146 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *698* | | *ug/kg dry* | *1260* | | *56* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *455* | | *ug/kg dry* | *1260* | | *36* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *503* | | *ug/kg dry* | *1260* | | *40* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *814* | | *ug/kg dry* | *1260* | | *65* | *25-130* | | | |
| **Matrix Spike (G805057-MS2)** | **Source: 8051201-17** | | | Prepared: 18-May-08 Analyzed: 19-May-08 | | | | | | |
| Acenaphthene | 1060 | 50.0 | ug/kg dry | 1170 | 2.34 | 91 | 31-137 | | | |
| Pyrene | 1180 | 50.0 | ug/kg dry | 1170 | 22.2 | 99 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1330* | | *ug/kg dry* | *1170* | | *114* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *834* | | *ug/kg dry* | *1170* | | *71* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *819* | | *ug/kg dry* | *1170* | | *70* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *908* | | *ug/kg dry* | *1170* | | *78* | *25-130* | | | |
| **Matrix Spike Dup (G805057-MSD1)** | **Source: 8051201-14** | | | Prepared & Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 2270 | 50.0 | ug/kg dry | 1260 | 484 | 142 | 31-137 | 83 | 25 | |
| Pyrene | 11600 | 50.0 | ug/kg dry | 1260 | 4700 | 551 | 35-142 | 116 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1150* | | *ug/kg dry* | *1260* | | *91* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *732* | | *ug/kg dry* | *1260* | | *58* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *711* | | *ug/kg dry* | *1260* | | *57* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *849* | | *ug/kg dry* | *1260* | | *68* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805057 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike Dup (G805057-MSD2)** | **Source: 8051201-17** | | | Prepared: 18-May-08 Analyzed: 19-May-08 | | | | | | |
| Acenaphthene | 1040 | 50.0 | ug/kg dry | 1170 | 2.34 | 89 | 31-137 | 2 | 25 | |
| Pyrene | 1160 | 50.0 | ug/kg dry | 1170 | 22.2 | 98 | 35-142 | 2 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1260* | | *ug/kg dry* | *1170* | | *108* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *766* | | *ug/kg dry* | *1170* | | *66* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *754* | | *ug/kg dry* | *1170* | | *65* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *804* | | *ug/kg dry* | *1170* | | *69* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:26 |

## Notes and Definitions

| | |
|---|---|
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

June 10, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8051301

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-P5-2-SO-0506 | 8051301-01 | Soil | 12-May-08 13:55 | 12-May-08 21:30 |
| CS-P5-4-SO-1012 | 8051301-02 | Soil | 12-May-08 13:15 | 12-May-08 21:30 |
| CS-P5-4-SO-1012D | 8051301-03 | Soil | 12-May-08 13:17 | 12-May-08 21:30 |
| CS-P5-3-SO-0103 | 8051301-04 | Soil | 12-May-08 12:00 | 12-May-08 21:30 |
| CS-U5-2-SO-0204 | 8051301-05 | Soil | 12-May-08 11:20 | 12-May-08 21:30 |
| CS-U5-2-GW-051208 | 8051301-06 | Water | 12-May-08 11:30 | 12-May-08 21:30 |
| CS-U8-1-SO-0507 | 8051301-07 | Soil | 12-May-08 08:13 | 12-May-08 21:30 |
| CS-U13-1-SO-0103 | 8051301-08 | Soil | 12-May-08 09:30 | 12-May-08 21:30 |
| CS-U8-2-SO-0002 | 8051301-09 | Soil | 12-May-08 08:36 | 12-May-08 21:30 |
| Trip Blank BL5 | 8051301-10 | Water | 12-May-08 18:00 | 12-May-08 21:30 |
| CS-U8-1-SO-0103D | 8051301-11 | Soil | 12-May-08 08:13 | 12-May-08 21:30 |
| CS-U8-1-SO-0103 | 8051301-12 | Soil | 12-May-08 08:07 | 12-May-08 21:30 |
| CS-U5-2-SO-0506 | 8051301-13 | Soil | 12-May-08 11:30 | 12-May-08 21:30 |
| CS-U5-3-SO-0204 | 8051301-14 | Soil | 12-May-08 10:56 | 12-May-08 21:30 |
| CS-U8-1-GW-051208 | 8051301-15 | Water | 12-May-08 09:00 | 12-May-08 21:30 |
| CS-P5-1-GW-051208 | 8051301-16 | Water | 12-May-08 15:06 | 12-May-08 21:30 |
| CS-P5-4-GW-051208 | 8051301-17 | Water | 12-May-08 14:20 | 12-May-08 21:30 |
| CS-P5-3-GW-051208MS | 8051301-18 | Water | 12-May-08 12:35 | 12-May-08 21:30 |
| CS-P5-4-GW-051208D | 8051301-19 | Water | 12-May-08 14:20 | 12-May-08 21:30 |
| CS-P5-1-SO-0507 | 8051301-20 | Soil | 12-May-08 15:00 | 12-May-08 21:30 |
| CS-P5-1-SO-0103 | 8051301-21 | Soil | 12-May-08 14:55 | 12-May-08 21:30 |
| Trip Blank BL4 | 8051301-22 | Water | 12-May-08 18:00 | 12-May-08 21:30 |

The lowest Detection Limits reached for 2,6-Dinitrotoluene and 2,4-Dinitrotoluene are 112 ug/kg and 103 ug/kg respectively.

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-2-SO-0506**

**Lab Sample ID: 8051301-01 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| **Tetrachloroethene** | **21** | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| **Xylenes, total** | **19** | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *135 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *92 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-2-SO-0506**

**Lab Sample ID: 8051301-01 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **107** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Phenanthrene** | **271** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluoranthene** | **149** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **126** | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Chrysene** | **129** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **112** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **31.8** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) pyrene** | **86.6** | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **34.4** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **45.9** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *98 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *61 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *63 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *74 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Arsenic | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Barium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Cadmium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Chromium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Lead | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Mercury | ND | 0.05 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Selenium | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Silver | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


ACCREDITED IN ACCORDANCE WITH nelac

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-2-SO-0506**

**Lab Sample ID: 8051301-01 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **10.2** | | N/A | 1 | 14-May-08 | 14-May-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **78.5** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **26.5** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **66** | 0.64 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Arsenic** | **6.3** | 1.3 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **73** | 1.3 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.64 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **9.9** | 1.3 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.3 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.3 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.18** | 0.034 | mg/Kg-dry | 1 | 14-May-08 | 15-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-SO-1012**

**Lab Sample ID: 8051301-02 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| **Xylenes, total** | **7** | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *94 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *104 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *92 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-SO-1012**

**Lab Sample ID: 8051301-02 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Phenanthrene** | **282** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluoranthene** | **364** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Pyrene** | **334** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **226** | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Chrysene** | **207** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **233** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **79.1** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) pyrene** | **180** | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **88.6** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *103 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *63 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *67 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *74 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Arsenic | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Barium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Cadmium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Chromium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Lead | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Mercury | ND | 0.05 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Selenium | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Silver | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


ACCREDITED IN ACCORDANCE WITH nelac

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-SO-1012**

**Lab Sample ID: 8051301-02 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.35** | | N/A | 1 | 14-May-08 | 14-May-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **63.2** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **13.7** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **47** | 0.56 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Arsenic** | **5.3** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **50** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.56 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **5.1** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.27** | 0.028 | mg/Kg-dry | 1 | 14-May-08 | 15-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-SO-1012D**

**Lab Sample ID: 8051301-03 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| **Trichloroethene** | **9** | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| **Tetrachloroethene** | **9** | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| **Xylenes, total** | **10** | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *112 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *106 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *111 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-SO-1012D**

**Lab Sample ID: 8051301-03 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Phenanthrene** | **137** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluoranthene** | **235** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Pyrene** | **214** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **193** | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Chrysene** | **152** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **189** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **71.2** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) pyrene** | **154** | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **68.4** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **71.2** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *92 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *42 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *59 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *69 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Arsenic | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Barium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Cadmium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Chromium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Lead | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Mercury | ND | 0.05 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Selenium | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Silver | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-SO-1012D**

**Lab Sample ID: 8051301-03 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.26** | | N/A | 1 | 14-May-08 | 14-May-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **71.6** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **26.0** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **94** | 0.66 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Arsenic** | **7.3** | 1.3 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **100** | 1.3 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Cadmium** | **1.5** | 0.66 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **7.6** | 1.3 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.3 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.3 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.78** | 0.034 | mg/Kg-dry | 1 | 14-May-08 | 15-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-3-SO-0103**

**Lab Sample ID: 8051301-04 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| **Xylenes, total** | **15** | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *132 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *103 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *77 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-3-SO-0103**

**Lab Sample ID: 8051301-04 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **283** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Acenaphthylene** | **164** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Acenaphthene** | **454** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluorene** | **522** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Phenanthrene** | **6730** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Anthracene** | **1440** | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluoranthene** | **9290** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Pyrene** | **8260** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **4780** | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Chrysene** | **4640** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **4640** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **4690** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) pyrene** | **3810** | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **1710** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **1870** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *89 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *56 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *54 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Arsenic | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Barium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Cadmium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Chromium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Lead | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Mercury | ND | 0.05 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Selenium | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Silver | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-3-SO-0103**

**Lab Sample ID: 8051301-04 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.54** | | N/A | 1 | 14-May-08 | 14-May-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **81.3** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **16.6** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **90** | 0.59 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Arsenic** | **6.1** | 1.2 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **67** | 1.2 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.59 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **9.3** | 1.2 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Selenium** | **2** | 1.2 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.46** | 0.028 | mg/Kg-dry | 1 | 14-May-08 | 15-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U5-2-SO-0204**

**Lab Sample ID: 8051301-05 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| **Ethylbenzene** | **6** | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| **Xylenes, total** | **38** | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *141 %* | *45-155* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *90 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *43 %* | *45-127* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **469** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Acenaphthylene** | **106** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Acenaphthene** | **109** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluorene** | **112** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Phenanthrene** | **1730** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Anthracene** | **412** | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluoranthene** | **2790** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **1600** | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Chrysene** | **1460** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **1550** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **549** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) pyrene** | **1290** | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **589** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **638** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *77 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *50 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *51 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *74 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U5-2-SO-0204**

**Lab Sample ID: 8051301-05 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **81.3** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U5-2-GW-051208**

**Lab Sample ID: 8051301-06 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *89 %* | *60-128* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *104 %* | *60-127* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *88 %* | *55-135* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *50 %* | *40-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *56 %* | *40-130* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *72 %* | *35-125* | | *12-May-08* | *18-May-08* | *8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U8-1-SO-0507**

**Lab Sample ID: 8051301-07 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *95 %* | *45-155* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *104 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *100 %* | *45-127* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *85 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *54 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *57 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *72 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U8-1-SO-0507**

**Lab Sample ID: 8051301-07 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **94.7** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U13-1-SO-0103**

**Lab Sample ID: 8051301-08 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluorene** | **34.0** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Phenanthrene** | **406** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Anthracene** | **106** | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluoranthene** | **753** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Pyrene** | **688** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **425** | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Chrysene** | **387** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **451** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **154** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) pyrene** | **372** | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **201** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *79 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *49 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *54 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *67 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Lead | ND | 0.200 | mg/kg | 1 | | 19-May-08 | EPA 6010B | |
| **BTEX and MTBE by EPA 8260B** | | | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | 8260B | |
| Benzene | ND | 5.00 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | 8260B | |
| Toluene | ND | 5.00 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | 8260B | |
| Ethylbenzene | ND | 5.00 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | 8260B | |
| Xylenes, total | ND | 5.00 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | 8260B | |
| *Surrogate: Dibromofluoromethane* | | *116 %* | *45-155* | | *17-May-08* | *18-May-08* | *8260B* | |
| *Surrogate: Toluene-d8* | | *113 %* | *62-129* | | *17-May-08* | *18-May-08* | *8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *45-127* | | *17-May-08* | *18-May-08* | *8260B* | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U13-1-SO-0103**

**Lab Sample ID: 8051301-08 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **91.2** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **18.4** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **28** | 1.2 | mg/Kg-dry | 10 | 14-May-08 | 19-May-08 | Metals by ICP/MS | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U8-2-SO-0002**

**Lab Sample ID: 8051301-09 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *97 %* | *45-155* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *111 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *108 %* | *45-127* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **57.5** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Acenaphthylene** | **97.2** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Acenaphthene** | **101** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluorene** | **107** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Phenanthrene** | **1410** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Anthracene** | **337** | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluoranthene** | **2590** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Pyrene** | **2330** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **1370** | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Chrysene** | **1260** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **71000** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **24200** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) pyrene** | **59400** | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **28700** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **32300** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *108 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *68 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *72 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *80 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U8-2-SO-0002**

**Lab Sample ID: 8051301-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **90.5** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: Trip Blank BL5**

**Lab Sample ID: 8051301-10 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *93 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *100 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *102 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U8-1-SO-0103D**

**Lab Sample ID: 8051301-11 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *108 %* | *45-155* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *108 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *109 %* | *45-127* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **410** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Acenaphthylene** | **314** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Acenaphthene** | **534** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluorene** | **599** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Phenanthrene** | **8680** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Anthracene** | **1720** | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluoranthene** | **12300** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Pyrene** | **12600** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **6190** | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Chrysene** | **5720** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **6120** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **1800** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) pyrene** | **5490** | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **2520** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **2890** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *106 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *66 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *79 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U8-1-SO-0103D**

**Lab Sample ID: 8051301-11 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **86.3** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U8-1-SO-0103**

**Lab Sample ID: 8051301-12 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *98 %* | *45-155* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *110 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *114 %* | *45-127* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Phenanthrene** | **127** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluoranthene** | **261** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Pyrene** | **231** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **179** | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Chrysene** | **164** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **216** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **67.2** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) pyrene** | **157** | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **92.1** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *75 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *49 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *54 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U8-1-SO-0103**

**Lab Sample ID: 8051301-12 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **92.3** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U5-2-SO-0506**

**Lab Sample ID: 8051301-13 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *145 %* | *45-155* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *108 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *100 %* | *45-127* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Phenanthrene** | **149** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluoranthene** | **207** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Pyrene** | **181** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **130** | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Chrysene** | **108** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **113** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **40.8** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) pyrene** | **94.1** | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **43.1** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *108 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *70 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *72 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *80 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U5-2-SO-0506**

**Lab Sample ID: 8051301-13 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **88.2** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U5-3-SO-0204**

**Lab Sample ID: 8051301-14 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *138 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *108 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *105 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U5-3-SO-0204**

**Lab Sample ID: 8051301-14 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Phenanthrene** | **225** | 33.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Fluoranthene** | **387** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Pyrene** | **329** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) anthracene** | **153** | 8.50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Chrysene** | **168** | 50.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **186** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **74.5** | 11.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (a) pyrene** | **138** | 15.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **86.5** | 25.0 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *107 %* | *50-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *69 %* | *26-135* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *72 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *82 %* | *25-130* | | *19-May-08* | *19-May-08* | *8270c* | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Arsenic | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Barium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Cadmium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Chromium | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Lead | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Mercury | ND | 0.05 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Selenium | ND | 0.2 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |
| Silver | ND | 0.1 | mg/kg dry | 1 | | 19-May-08 | 6010B/7470 A | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U5-3-SO-0204**

**Lab Sample ID: 8051301-14 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.30** | | N/A | 1 | 14-May-08 | 14-May-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **91.3** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **8.46** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **7.6** | 0.54 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Arsenic** | **3.1** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **8.3** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.54 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **4.1** | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 15-May-08 | 15-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.027 | mg/Kg-dry | 1 | 14-May-08 | 15-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-U8-1-GW-051208**

**Lab Sample ID: 8051301-15 (Water)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *95 %* | *60-128* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *100 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *102 %* | *60-127* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *94 %* | *55-135* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *52 %* | *40-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *59 %* | *40-130* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *72 %* | *35-125* | | *12-May-08* | *18-May-08* | *8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-GW-051208**

**Lab Sample ID: 8051301-16 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *104 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *99 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *104 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-GW-051208**

**Lab Sample ID: 8051301-16 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *91 %* | *55-135* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *52 %* | *40-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *58 %* | *40-130* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *77 %* | *35-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.073** | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Barium** | **0.39** | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.4** | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Lead** | **0.24** | 0.002 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Selenium** | **0.012** | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-GW-051208**

**Lab Sample ID: 8051301-16 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **SW7470A** | | | | | | | | |
| **Mercury** | **0.00078** | 0.00025 | mg/L | 1 | 14-May-08 | 14-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-GW-051208**

**Lab Sample ID: 8051301-17 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *87 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *102 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-GW-051208**

**Lab Sample ID: 8051301-17 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *98 %* | *55-135* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *43 %* | *40-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *62 %* | *40-130* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *77 %* | *35-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Barium** | **0.043** | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| Chromium | ND | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Lead** | **0.0039** | 0.002 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Selenium** | **0.0079** | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-GW-051208**

**Lab Sample ID: 8051301-17 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 14-May-08 | 14-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-3-GW-051208MS**

**Lab Sample ID: 8051301-18 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *101 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *105 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-3-GW-051208MS**

**Lab Sample ID: 8051301-18 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *95 %* | *55-135* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *53 %* | *40-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *59 %* | *40-130* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *35-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.0087** | 0.004 | mg/L | 2 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Barium** | **0.024** | 0.004 | mg/L | 2 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.0077** | 0.004 | mg/L | 2 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Lead** | **0.032** | 0.002 | mg/L | 2 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-3-GW-051208MS**

**Lab Sample ID: 8051301-18 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 21-May-08 | 21-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-GW-051208D**

**Lab Sample ID: 8051301-19 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *97 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *106 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-GW-051208D**

**Lab Sample ID: 8051301-19 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 12-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *72 %* | *55-135* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *43 %* | *40-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *46 %* | *40-130* | | *12-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *35-125* | | *12-May-08* | *18-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Barium** | **0.047** | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.0048** | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Lead** | **0.0064** | 0.002 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| **Selenium** | **0.0085** | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 14-May-08 | 14-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-4-GW-051208D**

**Lab Sample ID: 8051301-19 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 14-May-08 | 14-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0507**

**Lab Sample ID: 8051301-20 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *46 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *107 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| **Carbon disulfide** | **55** | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0507**

**Lab Sample ID: 8051301-20 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *133 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *112 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *106 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0507**

**Lab Sample ID: 8051301-20 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Naphthalene | ND | 86.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 116 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Acenaphthylene | ND | 69.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Acenaphthene | ND | 148 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Phenanthrene | ND | 122 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Anthracene | ND | 298 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Carbazole | ND | 131 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Pyrene** | **89.3** | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Chrysene | ND | 94.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0507**

**Lab Sample ID: 8051301-20 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *48 %* | *21-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *51 %* | *25-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *47 %* | *33-130* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *42 %* | *30-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *38 %* | *30-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *51 %* | *43-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *51 %* | *30-123* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *56 %* | *33-127* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Thallium | ND | 20.0 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Zinc | ND | 1.50 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Calcium | ND | 7.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Sodium | ND | 0.300 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Silver | ND | 1.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Selenium | ND | 15.0 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Potassium | ND | 0.200 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Nickel | ND | 1.20 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Mercury | ND | 0.0200 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Manganese | ND | 3.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Magnesium | ND | 6.80 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Lead | ND | 3.70 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0507**

**Lab Sample ID: 8051301-20 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Iron | ND | 250 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Copper | ND | 5.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Chromium | ND | 3.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Cadmium | ND | 0.800 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Beryllium | ND | 0.400 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Barium | ND | 2.90 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Arsenic | ND | 10.0 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Antimony | ND | 5.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Aluminum | ND | 150 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Vanadium | ND | 12.0 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Cobalt | ND | 2.50 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **87.3** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **8.5** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **2100** | 21 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Lead** | **6.4** | 0.51 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Arsenic** | **2** | 1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **12** | 1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.51 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0507**

**Lab Sample ID: 8051301-20 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Cadmium | ND | 0.51 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Calcium** | **6300** | 61 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **4.5** | 1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Cobalt** | **2.5** | 1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Copper** | **5.4** | 2.5 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Iron** | **3800** | 31 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Magnesium** | **3700** | 31 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Manganese** | **51** | 1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Nickel** | **4.2** | 1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Potassium** | **340** | 31 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Sodium** | **750** | 61 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Vanadium** | **8.9** | 1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Zinc** | **21** | 5.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.03** | 0.026 | mg/Kg-dry | 1 | 14-May-08 | 15-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.27 | mg/Kg-dry | 1 | 14-May-08 | 14-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **7.7** | 0 | pH Units | 1 | 14-May-08 | 14-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0103**

**Lab Sample ID: 8051301-21 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *70 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *107 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0103**

**Lab Sample ID: 8051301-21 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 17-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *100 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *103 %* | *62-129* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *96 %* | *45-145* | | *17-May-08* | *18-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0103**

**Lab Sample ID: 8051301-21 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Naphthalene | ND | 86.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 116 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Acenaphthylene** | **88.5** | 69.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Acenaphthene | ND | 148 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Phenanthrene** | **1580** | 122 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Anthracene** | **393** | 298 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Carbazole | ND | 131 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Pyrene** | **1720** | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **990** | 68.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Chrysene** | **970** | 94.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0103**

**Lab Sample ID: 8051301-21 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (b) fluoranthene** | **434** | 230 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (k) fluoranthene** | **150** | 122 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **381** | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **210** | 205 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *46 %* | *21-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *48 %* | *25-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *46 %* | *33-130* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *41 %* | *30-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *37 %* | *30-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *46 %* | *43-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *63 %* | *30-123* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *74 %* | *33-127* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Chromium | ND | 3.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Calcium | ND | 7.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Cadmium | ND | 0.800 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Beryllium | ND | 0.400 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Barium | ND | 2.90 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Arsenic | ND | 10.0 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Antimony | ND | 5.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Aluminum | ND | 150 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Iron | ND | 250 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Sodium | ND | 0.300 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Zinc | ND | 1.50 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Cobalt | ND | 2.50 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0103**

**Lab Sample ID: 8051301-21 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Thallium | ND | 20.0 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Copper | ND | 5.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Silver | ND | 1.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Selenium | ND | 15.0 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Potassium | ND | 0.200 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Nickel | ND | 1.20 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Mercury | ND | 0.0200 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Manganese | ND | 3.00 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Magnesium | ND | 6.80 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Lead | ND | 3.70 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| Vanadium | ND | 12.0 | % by Volume | 1 | | 20-May-08 | EPA6000/7000 | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **91.5** | | % by Weight | 1 | 19-May-08 | 19-May-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **9.2** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **83** | 0.53 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Aluminum** | **2200** | 21 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Arsenic** | **3.4** | 1.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Barium** | **22** | 1.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.53 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: CS-P5-1-SO-0103**

**Lab Sample ID: 8051301-21 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Cadmium | ND | 0.53 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Calcium** | **5800** | 64 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Chromium** | **5.5** | 1.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Cobalt** | **2.9** | 1.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Copper** | **14** | 2.6 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Iron** | **5600** | 32 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Magnesium** | **3300** | 32 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Manganese** | **51** | 1.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Nickel** | **6.2** | 1.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Potassium** | **310** | 32 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Sodium** | **420** | 64 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Vanadium** | **7.7** | 1.1 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **Zinc** | **69** | 5.3 | mg/Kg-dry | 10 | 14-May-08 | 15-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.076** | 0.026 | mg/Kg-dry | 1 | 14-May-08 | 15-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.28 | mg/Kg-dry | 1 | 14-May-08 | 14-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.7** | 0 | pH Units | 1 | 14-May-08 | 14-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**Client Sample ID: Trip Blank BL4**

**Lab Sample ID: 8051301-22 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 16-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *93 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *105 %* | *60-145* | | *16-May-08* | *16-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Grace Analytical Lab, Inc.

## Organochlorine Pesticides by EPA Method 8081A - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805073 - EPA 3545** | | | | | | | | | | |
| **Blank (G805073-BLK1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg wet | | | | | | | |
| beta-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| Heptachlor | ND | 8.00 | ug/kg wet | | | | | | | |
| delta-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| Aldrin | ND | 8.00 | ug/kg wet | | | | | | | |
| Heptachlor epoxide | ND | 8.00 | ug/kg wet | | | | | | | |
| Endosulfan I | ND | 8.00 | ug/kg wet | | | | | | | |
| 4,4´-DDE | ND | 16.0 | ug/kg wet | | | | | | | |
| Dieldrin | ND | 16.0 | ug/kg wet | | | | | | | |
| Endrin | ND | 16.0 | ug/kg wet | | | | | | | |
| 4,4´-DDD | ND | 16.0 | ug/kg wet | | | | | | | |
| Endosulfan II | ND | 16.0 | ug/kg wet | | | | | | | |
| 4,4´-DDT | ND | 16.0 | ug/kg wet | | | | | | | |
| Endrin aldehyde | ND | 16.0 | ug/kg wet | | | | | | | |
| Endosulfan sulfate | ND | 16.0 | ug/kg wet | | | | | | | |
| Methoxychlor | ND | 80.0 | ug/kg wet | | | | | | | |
| Endrin ketone | ND | 16.0 | ug/kg wet | | | | | | | |
| Chlordane | ND | 80.0 | ug/kg wet | | | | | | | |
| Toxaphene | ND | 160 | ug/kg wet | | | | | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *ND* | | *ug/kg wet* | *100* | | *73* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *105* | | *ug/kg wet* | *100* | | *105* | *30-170* | | | |
| **LCS (G805073-BS1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| gamma-BHC (Lindane) | 21.6 | 8.00 | ug/kg wet | 25.0 | | 86 | 30-150 | | | |
| Heptachlor | 21.8 | 8.00 | ug/kg wet | 25.0 | | 87 | 30-150 | | | |
| Aldrin | 22.9 | 8.00 | ug/kg wet | 25.0 | | 92 | 30-150 | | | |
| Dieldrin | 59.9 | 16.0 | ug/kg wet | 50.0 | | 120 | 30-150 | | | |
| Endrin | 65.9 | 16.0 | ug/kg wet | 50.0 | | 132 | 30-150 | | | |
| 4,4´-DDT | 58.6 | 16.0 | ug/kg wet | 50.0 | | 117 | 30-150 | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *72.0* | | *ug/kg wet* | *100* | | *72* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *108* | | *ug/kg wet* | *100* | | *108* | *30-170* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805052 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805052-BLK1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *50.2* | | *ug/L* | *50.0* | | *100* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/L* | *50.0* | | | *60-128* | | | |
| *Surrogate: Toluene-d8* | *48.0* | | *ug/L* | *50.0* | | *96* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *ND* | | *ug/L* | *50.0* | | | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *50.6* | | *ug/L* | *50.0* | | *101* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805052 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805052-BLK1)** | | | | Prepared: 16-May-08 Analyzed: 23-May-08 | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *ND* | | *ug/L* | *50.0* | | | *60-127* | | | |
| **LCS (G805052-BS1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 35 | 5 | ug/L | 50.0 | | 71 | 56-135 | | | |
| Benzene | 47 | 5 | ug/L | 50.0 | | 95 | 71-137 | | | |
| Benzene | ND | 5 | ug/L | 50.0 | | | 60-140 | | | |
| Trichloroethene | 50 | 5 | ug/L | 50.0 | | 99 | 70-138 | | | |
| Toluene | 47 | 5 | ug/L | 50.0 | | 94 | 71-145 | | | |
| Toluene | ND | 5 | ug/L | 50.0 | | | 60-145 | | | |
| Chlorobenzene | 46 | 5 | ug/L | 50.0 | | 91 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *42.8* | | *ug/L* | *50.0* | | *86* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/L* | *50.0* | | | *60-128* | | | |
| *Surrogate: Toluene-d8* | *ND* | | *ug/L* | *50.0* | | | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.6* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *52.7* | | *ug/L* | *50.0* | | *105* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *ND* | | *ug/L* | *50.0* | | | *60-127* | | | |
| **Matrix Spike (G805052-MS1)** | **Source: 8051301-18** | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 40 | 5 | ug/L | 50.0 | ND | 81 | 56-150 | | | |
| Benzene | ND | 5 | ug/L | 50.0 | 0.3 | NR | 71-137 | | | |
| Benzene | 54 | 5 | ug/L | 50.0 | 0.3 | 107 | 71-165 | | | |
| Trichloroethene | 51 | 5 | ug/L | 50.0 | ND | 102 | 70-138 | | | |
| Toluene | ND | 5 | ug/L | 50.0 | 0.4 | NR | 71-145 | | | |
| Toluene | 50 | 5 | ug/L | 50.0 | 0.4 | 100 | 71-145 | | | |
| Chlorobenzene | 48 | 5 | ug/L | 50.0 | ND | 95 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/L* | *50.0* | | | *60-128* | | | |
| *Surrogate: Dibromofluoromethane* | *50.8* | | *ug/L* | *50.0* | | *102* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *ND* | | *ug/L* | *50.0* | | | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.1* | | *ug/L* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.9* | | *ug/L* | *50.0* | | *108* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *ND* | | *ug/L* | *50.0* | | | *60-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805052 - EPA 5030B** | | | | | | | | | | |
| **Matrix Spike Dup (G805052-MSD1)** | **Source: 8051301-18** | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 38 | 5 | ug/L | 50.0 | ND | 76 | 56-150 | 6 | 20 | |
| Benzene | 51 | 5 | ug/L | 50.0 | 0.3 | 102 | 71-165 | 5 | 20 | |
| Benzene | ND | 5 | ug/L | 50.0 | 0.3 | NR | 71-137 | | 20 | |
| Trichloroethene | 50 | 5 | ug/L | 50.0 | ND | 99 | 70-138 | 3 | 20 | |
| Toluene | ND | 5 | ug/L | 50.0 | 0.4 | NR | 71-145 | | 20 | |
| Toluene | 48 | 5 | ug/L | 50.0 | 0.4 | 95 | 71-145 | 5 | 20 | |
| Chlorobenzene | 46 | 5 | ug/L | 50.0 | ND | 92 | 72-143 | 4 | 20 | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/L* | *50.0* | | | *60-128* | | | |
| *Surrogate: Dibromofluoromethane* | *50.6* | | *ug/L* | *50.0* | | *101* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *ND* | | *ug/L* | *50.0* | | | *62-129* | | | |
| *Surrogate: Toluene-d8* | *50.0* | | *ug/L* | *50.0* | | *100* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *54.0* | | *ug/L* | *50.0* | | *108* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *ND* | | *ug/L* | *50.0* | | | *60-127* | | | |
| **Batch G805056 - EPA 5035** | | | | | | | | | | |
| **Blank (G805056-BLK1)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Vinyl chloride | ND | 2 | ug/kg wet | | | | | | | |
| Bromomethane | ND | 5 | ug/kg wet | | | | | | | |
| Chloroethane | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Acetone | ND | 50 | ug/kg wet | | | | | | | |
| Carbon disulfide | ND | 5 | ug/kg wet | | | | | | | |
| Methylene Chloride | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Butanone | ND | 5 | ug/kg wet | | | | | | | |
| Chloroform | ND | 5 | ug/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Trichloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/kg wet | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/kg wet | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805056 - EPA 5035** | | | | | | | | | | |
| **Blank (G805056-BLK1)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Tetrachloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Hexanone | ND | 5 | ug/kg wet | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Chlorobenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Styrene | ND | 5 | ug/kg wet | | | | | | | |
| Bromoform | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *38.8* | | *ug/kg wet* | *50.0* | | *78* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *38.8* | | *ug/kg wet* | *50.0* | | *78* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *51.4* | | *ug/kg wet* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.4* | | *ug/kg wet* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *52.3* | | *ug/kg wet* | *50.0* | | *105* | *45-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *52.3* | | *ug/kg wet* | *50.0* | | *105* | *45-145* | | | |
| **LCS (G805056-BS1)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| 1,1-Dichloroethylene | 52 | 5 | ug/kg wet | 50.0 | | 105 | 35-155 | | | |
| Benzene | 51 | 5 | ug/kg wet | 50.0 | | 102 | 35-150 | | | |
| Benzene | 51 | 5 | ug/kg wet | 50.0 | | 102 | 35-150 | | | |
| Trichloroethene | 47 | 5 | ug/kg wet | 50.0 | | 94 | 42-135 | | | |
| Toluene | 48 | 5 | ug/kg wet | 50.0 | | 96 | 40-151 | | | |
| Toluene | 48 | 5 | ug/kg wet | 50.0 | | 96 | 40-151 | | | |
| Chlorobenzene | 45 | 5 | ug/kg wet | 50.0 | | 90 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *44.9* | | *ug/kg wet* | *50.0* | | *90* | *45-155* | | | |
| *Surrogate: Dibromofluoromethane* | *44.9* | | *ug/kg wet* | *50.0* | | *90* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *51.4* | | *ug/kg wet* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.4* | | *ug/kg wet* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.7* | | *ug/kg wet* | *50.0* | | *107* | *45-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.7* | | *ug/kg wet* | *50.0* | | *107* | *45-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805056 - EPA 5035** | | | | | | | | | | |
| **Matrix Spike (G805056-MS1)** | **Source: 8051301-21** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| 1,1-Dichloroethylene | 61 | 5 | ug/kg dry | 54.6 | ND | 112 | 35-155 | | | |
| Benzene | 59 | 5 | ug/kg dry | 54.6 | ND | 108 | 35-150 | | | |
| Benzene | 59 | 5 | ug/kg dry | 54.6 | ND | 108 | 45-150 | | | |
| Trichloroethene | 50 | 5 | ug/kg dry | 54.6 | ND | 92 | 42-166 | | | |
| Toluene | 56 | 5 | ug/kg dry | 54.6 | ND | 102 | 40-151 | | | |
| Toluene | 56 | 5 | ug/kg dry | 54.6 | ND | 102 | 40-151 | | | |
| Chlorobenzene | 51 | 5 | ug/kg dry | 54.6 | ND | 94 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *50.8* | | *ug/kg dry* | *54.6* | | *93* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *50.8* | | *ug/kg dry* | *54.6* | | *93* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *57.6* | | *ug/kg dry* | *54.6* | | *105* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *57.6* | | *ug/kg dry* | *54.6* | | *105* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *57.8* | | *ug/kg dry* | *54.6* | | *106* | *45-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *57.8* | | *ug/kg dry* | *54.6* | | *106* | *45-127* | | | |
| **Matrix Spike Dup (G805056-MSD1)** | **Source: 8051301-21** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| 1,1-Dichloroethylene | 59 | 5 | ug/kg dry | 54.6 | ND | 108 | 35-155 | 3 | 30 | |
| Benzene | 58 | 5 | ug/kg dry | 54.6 | ND | 105 | 35-150 | 2 | 30 | |
| Benzene | 58 | 5 | ug/kg dry | 54.6 | ND | 105 | 45-150 | 2 | 30 | |
| Trichloroethene | 51 | 5 | ug/kg dry | 54.6 | ND | 94 | 42-166 | 2 | 30 | |
| Toluene | 56 | 5 | ug/kg dry | 54.6 | ND | 103 | 40-151 | 0.9 | 30 | |
| Toluene | 56 | 5 | ug/kg dry | 54.6 | ND | 103 | 40-151 | 0.9 | 30 | |
| Chlorobenzene | 53 | 5 | ug/kg dry | 54.6 | ND | 96 | 34-158 | 2 | 30 | |
| *Surrogate: Dibromofluoromethane* | *49.7* | | *ug/kg dry* | *54.6* | | *91* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *49.7* | | *ug/kg dry* | *54.6* | | *91* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *57.2* | | *ug/kg dry* | *54.6* | | *105* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *57.2* | | *ug/kg dry* | *54.6* | | *105* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *56.9* | | *ug/kg dry* | *54.6* | | *104* | *45-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *56.9* | | *ug/kg dry* | *54.6* | | *104* | *45-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805065 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805065-BLK1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg wet | | | | | | | |
| Phenol | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Benzyl alcohol | ND | 1300 | ug/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| 2-Methylphenol | ND | 660 | ug/kg wet | | | | | | | |
| Hexachloroethane | ND | 132 | ug/kg wet | | | | | | | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg wet | | | | | | | |
| Nitrobenzene | ND | 232 | ug/kg wet | | | | | | | |
| Isophorone | ND | 660 | ug/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Naphthalene | ND | 86.0 | ug/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 1300 | ug/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 660 | ug/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 116 | ug/kg wet | | | | | | | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg wet | | | | | | | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 660 | ug/kg wet | | | | | | | |
| 2-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| 3-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| Dimethyl phthalate | ND | 3300 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 69.0 | ug/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 148 | ug/kg wet | | | | | | | |
| Dibenzofuran | ND | 219 | ug/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Diethyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| Fluorene | ND | 136 | ug/kg wet | | | | | | | |
| 4-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg wet | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg wet | | | | | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805065 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805065-BLK1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 66.0 | ug/kg wet | | | | | | | |
| Pentachlorophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 122 | ug/kg wet | | | | | | | |
| Anthracene | ND | 298 | ug/kg wet | | | | | | | |
| Carbazole | ND | 131 | ug/kg wet | | | | | | | |
| Di-n-butyl phthalate | ND | 500 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 94.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| Butyl benzyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg wet | | | | | | | |
| Chrysene | ND | 94.0 | ug/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg wet | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Di-n-octyl phthalate | ND | 860 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg wet | | | | | | | |
| *Surrogate: 2-Fluorophenol* | *10200* | | *ug/kg wet* | *15000* | | *68* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *9970* | | *ug/kg wet* | *15000* | | *66* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *9760* | | *ug/kg wet* | *15000* | | *65* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *6060* | | *ug/kg wet* | *10000* | | *61* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5200* | | *ug/kg wet* | *10000* | | *52* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6460* | | *ug/kg wet* | *10000* | | *65* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *10400* | | *ug/kg wet* | *15000* | | *69* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *7700* | | *ug/kg wet* | *10000* | | *77* | *33-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805065 - EPA 3545 MS** | | | | | | | | | | |
| **LCS (G805065-BS1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| Phenol | 11500 | 660 | ug/kg wet | 15000 | | 76 | 20-125 | | | |
| 2-Chlorophenol | 12000 | 660 | ug/kg wet | 15000 | | 80 | 20-125 | | | |
| 1,4-Dichlorobenzene | 6540 | 660 | ug/kg wet | 10000 | | 65 | 20-125 | | | |
| N-Nitrosodi-n-propylamine | 5740 | 330 | ug/kg wet | 10000 | | 57 | 20-125 | | | |
| 1,2,4-Trichlorobenzene | 6950 | 660 | ug/kg wet | 10000 | | 69 | 20-125 | | | |
| 4-Chloro-3-methylphenol | 10700 | 1300 | ug/kg wet | 15000 | | 71 | 20-125 | | | |
| 2,4-Dinitrotoluene | 8150 | 107 | ug/kg wet | 10000 | | 82 | 20-125 | | | |
| Acenaphthene | 7350 | 148 | ug/kg wet | 10000 | | 74 | 20-125 | | | |
| 4-Nitrophenol | 14800 | 3300 | ug/kg wet | 15000 | | 99 | 30-140 | | | |
| Pentachlorophenol | 15400 | 3300 | ug/kg wet | 15000 | | 102 | 20-125 | | | |
| Pyrene | 8580 | 66.0 | ug/kg wet | 10000 | | 86 | 30-135 | | | |
| *Surrogate: 2-Fluorophenol* | *9230* | | *ug/kg wet* | *15000* | | *62* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *9140* | | *ug/kg wet* | *15000* | | *61* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *8990* | | *ug/kg wet* | *15000* | | *60* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *5430* | | *ug/kg wet* | *10000* | | *54* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *4730* | | *ug/kg wet* | *10000* | | *47* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *5880* | | *ug/kg wet* | *10000* | | *59* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *8990* | | *ug/kg wet* | *15000* | | *60* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *6780* | | *ug/kg wet* | *10000* | | *68* | *33-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **Blank (G805055-BLK1)** | | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.1* | | *ug/L* | *10.0* | | *101* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.53* | | *ug/L* | *10.0* | | *55* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.26* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.94* | | *ug/L* | *10.0* | | *79* | *35-125* | | | |
| **Blank (G805055-BLK2)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.90* | | *ug/L* | *10.0* | | *99* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.58* | | *ug/L* | *10.0* | | *56* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.00* | | *ug/L* | *10.0* | | *60* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.00* | | *ug/L* | *10.0* | | *80* | *35-125* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **LCS (G805055-BS1)** | | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Acenaphthene | 8.14 | 2.50 | ug/L | 10.0 | | 81 | 46-128 | | | |
| Pyrene | 9.04 | 1.50 | ug/L | 10.0 | | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.9* | | *ug/L* | *10.0* | | *109* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.02* | | *ug/L* | *10.0* | | *60* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.72* | | *ug/L* | *10.0* | | *67* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.11* | | *ug/L* | *10.0* | | *81* | *35-125* | | | |
| **LCS (G805055-BS2)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.56 | 2.50 | ug/L | 10.0 | | 76 | 46-128 | | | |
| Pyrene | 9.02 | 1.50 | ug/L | 10.0 | | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.1* | | *ug/L* | *10.0* | | *101* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.66* | | *ug/L* | *10.0* | | *57* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.02* | | *ug/L* | *10.0* | | *60* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.45* | | *ug/L* | *10.0* | | *84* | *35-125* | | | |
| **Matrix Spike (G805055-MS1)** | **Source: 8051201-09** | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Acenaphthene | 8.03 | 2.50 | ug/L | 10.0 | 0.04 | 80 | 46-128 | | | |
| Pyrene | 9.03 | 1.50 | ug/L | 10.0 | 0.05 | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.18* | | *ug/L* | *10.0* | | *92* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.36* | | *ug/L* | *10.0* | | *54* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.19* | | *ug/L* | *10.0* | | *62* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.07* | | *ug/L* | *10.0* | | *81* | *35-125* | | | |
| **Matrix Spike (G805055-MS2)** | **Source: 8051301-18** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.83 | 2.50 | ug/L | 10.0 | 0.01 | 78 | 46-128 | | | |
| Pyrene | 8.80 | 1.50 | ug/L | 10.0 | 0.02 | 88 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.91* | | *ug/L* | *10.0* | | *99* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.76* | | *ug/L* | *10.0* | | *58* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.27* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.88* | | *ug/L* | *10.0* | | *79* | *35-125* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **Matrix Spike Dup (G805055-MSD1)** | **Source: 8051201-09** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 8.82 | 2.50 | ug/L | 10.0 | 0.04 | 88 | 46-128 | 9 | 31 | |
| Pyrene | 9.51 | 1.50 | ug/L | 10.0 | 0.05 | 95 | 26-127 | 5 | 31 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *11.3* | | *ug/L* | *10.0* | | *113* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.18* | | *ug/L* | *10.0* | | *62* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.95* | | *ug/L* | *10.0* | | *70* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.34* | | *ug/L* | *10.0* | | *83* | *35-125* | | | |
| **Matrix Spike Dup (G805055-MSD2)** | **Source: 8051301-18** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.97 | 2.50 | ug/L | 10.0 | 0.01 | 80 | 46-128 | 2 | 31 | |
| Pyrene | 8.70 | 1.50 | ug/L | 10.0 | 0.02 | 87 | 26-127 | 1 | 31 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.5* | | *ug/L* | *10.0* | | *105* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.98* | | *ug/L* | *10.0* | | *60* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.34* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.69* | | *ug/L* | *10.0* | | *77* | *35-125* | | | |
| **Batch G805059 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805059-BLK1)** | | | | Prepared & Analyzed: 19-May-08 | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 33.0 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 33.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 83.0 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg wet | | | | | | | |
| Chrysene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *905* | | *ug/kg wet* | *1000* | | *90* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *557* | | *ug/kg wet* | *1000* | | *56* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *629* | | *ug/kg wet* | *1000* | | *63* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *831* | | *ug/kg wet* | *1000* | | *83* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805059 - EPA 3545 MS** | | | | | | | | | | |
| **LCS (G805059-BS1)** | | | | Prepared & Analyzed: 19-May-08 | | | | | | |
| Acenaphthene | 739 | 50.0 | ug/kg wet | 1000 | | 74 | 31-137 | | | |
| Pyrene | 927 | 50.0 | ug/kg wet | 1000 | | 93 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1300* | | *ug/kg wet* | *1000* | | *130* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *784* | | *ug/kg wet* | *1000* | | *78* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *817* | | *ug/kg wet* | *1000* | | *82* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *1180* | | *ug/kg wet* | *1000* | | *118* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## BTEX and MTBE by EPA 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805056 - EPA 5035** | | | | | | | | | | |
| **Blank (G805056-BLK1)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/kg wet | | | | | | | |
| Benzene | ND | 5.00 | ug/kg wet | | | | | | | |
| Toluene | ND | 5.00 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5.00 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5.00 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *38.8* | | *ug/kg wet* | *50.0* | | *78* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *51.4* | | *ug/kg wet* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *52.3* | | *ug/kg wet* | *50.0* | | *105* | *45-127* | | | |
| **LCS (G805056-BS1)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Benzene | 51.1 | 5.00 | ug/kg wet | 50.0 | | 102 | 35-150 | | | |
| Toluene | 47.8 | 5.00 | ug/kg wet | 50.0 | | 96 | 40-151 | | | |
| *Surrogate: Dibromofluoromethane* | *44.9* | | *ug/kg wet* | *50.0* | | *90* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *51.4* | | *ug/kg wet* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.7* | | *ug/kg wet* | *50.0* | | *107* | *45-127* | | | |
| **Matrix Spike (G805056-MS1)** | | **Source: 8051301-21** | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Benzene | 59.1 | 5.00 | ug/kg dry | 54.6 | ND | 108 | 45-150 | | | |
| Toluene | 56.0 | 5.00 | ug/kg dry | 54.6 | ND | 102 | 40-151 | | | |
| *Surrogate: Dibromofluoromethane* | *50.8* | | *ug/kg dry* | *54.6* | | *93* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *57.6* | | *ug/kg dry* | *54.6* | | *105* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *57.8* | | *ug/kg dry* | *54.6* | | *106* | *45-127* | | | |
| **Matrix Spike Dup (G805056-MSD1)** | | **Source: 8051301-21** | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Benzene | 57.6 | 5.00 | ug/kg dry | 54.6 | ND | 105 | 45-150 | 2 | 30 | |
| Toluene | 56.5 | 5.00 | ug/kg dry | 54.6 | ND | 103 | 40-151 | 0.9 | 30 | |
| *Surrogate: Dibromofluoromethane* | *49.7* | | *ug/kg dry* | *54.6* | | *91* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *57.2* | | *ug/kg dry* | *54.6* | | *105* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *56.9* | | *ug/kg dry* | *54.6* | | *104* | *45-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

**STAT**

## D2974 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch R44678 - D2974** | | | | | | | | | | |
| **DUP (R44678-DUP14)** | | **Source: 8051301-14** | | Prepared: 15-May-08 Analyzed: 16-May-08 | | | | | | |
| Percent Moisture | 9.16 | 0.01 | wt% | 0 | 8.46 | 0 | 0-0 | 7.95 | 20 | |
| **LCS (R44678-LCS1)** | | | | Prepared: 15-May-08 Analyzed: 16-May-08 | | | | | | |
| Percent Moisture | 4.93 | 0.01 | wt% | 5 | | 98.6 | 80-120 | 0 | | |
| **LCS (R44678-LCS2)** | | | | Prepared: 15-May-08 Analyzed: 16-May-08 | | | | | | |
| Percent Moisture | 99.79 | 0.01 | wt% | 99.8 | | 100 | 80-120 | 0 | | |
| **MBLK (R44678-MBLK)** | | | | Prepared: 15-May-08 Analyzed: 16-May-08 | | | | | | |
| Percent Moisture | ND | 0.01 | wt% | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## SW9012A - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35088 - SW9012A** | | | | | | | | | | |
| **LCS (35088-LCS)** | | | | Prepared & Analyzed: 13-May-08 | | | | | | |
| Cyanide | 10.16 | 0.25 | mg/Kg-dry | 10 | | 102 | 90-110 | 0 | | |
| **MBLK (35088-MBLK)** | | | | Prepared & Analyzed: 13-May-08 | | | | | | |
| Cyanide | ND | 0.25 | mg/Kg-dry | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## SW9045C - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch R44613 - SW9045C** | | | | | | | | | | |
| **DUP (R44613-DUP20)** | **Source: 8051301-20** | | | Prepared & Analyzed: 14-May-08 | | | | | | |
| pH | 7.85 | 0 | pH Units | 0 | 7.7 | 0 | 0-0 | 2.45 | 20 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 20:55 |

## Notes and Definitions

| | |
|---|---|
| S | Spike Recovery outside accepted recovery limits |
| J | Analyte detected below quantitation limits |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

June 10, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8051303

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-I5-1-6W-051308 | 8051303-01 | Water | 13-May-08 15:05 | 13-May-08 21:30 |
| CS-I5-1-SO-0103 | 8051303-02 | Soil | 13-May-08 14:55 | 13-May-08 21:30 |
| CS-U12-1-SO-0507MS | 8051303-03 | Soil | 13-May-08 13:28 | 13-May-08 21:30 |
| CS-U12-1-GW-051308 | 8051303-04 | Water | 13-May-08 13:41 | 13-May-08 21:30 |
| CS-U13-2-SO-0507MS | 8051303-05 | Soil | 13-May-08 12:56 | 13-May-08 21:30 |
| CS-U3-3-SO-0203 | 8051303-06 | Soil | 13-May-08 09:05 | 13-May-08 21:30 |
| CS-U3-3-SO-0507 | 8051303-07 | Soil | 13-May-08 09:10 | 13-May-08 21:30 |
| CS-U13-2-GW-051308 | 8051303-08 | Water | 13-May-08 13:11 | 13-May-08 21:30 |
| CS-P22-2-SO-0001 | 8051303-09 | Soil | 13-May-08 09:45 | 13-May-08 21:30 |
| CS-U3-2-SO-0708 | 8051303-10 | Soil | 13-May-08 08:45 | 13-May-08 21:30 |
| Trip Blank BL3 | 8051303-11 | Water | 09-May-08 18:00 | 13-May-08 21:30 |
| CS-P2-1-SO-0003 | 8051303-12 | Soil | 13-May-08 10:15 | 13-May-08 21:30 |
| CS-P2-1-SO-0003D | 8051303-13 | Soil | 13-May-08 10:18 | 13-May-08 21:30 |
| CS-P2-1-SO-0708 | 8051303-14 | Soil | 13-May-08 10:28 | 13-May-08 21:30 |
| CS-U3-4-SO-0103 | 8051303-15 | Soil | 13-May-08 08:24 | 13-May-08 21:30 |
| CS-P1-1-SO-0607 | 8051303-16 | Soil | 13-May-08 11:05 | 13-May-08 21:30 |
| CS-P1-1-SO-0002 | 8051303-17 | Soil | 13-May-08 10:58 | 13-May-08 21:30 |
| CS-U3-3-GW-051308 | 8051303-18 | Water | 13-May-08 09:15 | 13-May-08 21:30 |
| Trip Blank BL6 | 8051303-19 | Water | 09-May-08 18:00 | 13-May-08 21:30 |

TCLP Lead analysis on the sample ID, CS-P2-1-SO-0003D was requested on 5/29/08 at 4:46pm per David Klatt.

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-I5-1-6W-051308**

**Lab Sample ID: 8051303-01 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| **Chloroform** | **6** | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *74 %* | | *60-145* | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | | *62-129* | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *103 %* | | *60-145* | *16-May-08* | *17-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-I5-1-6W-051308**

**Lab Sample ID: 8051303-01 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *106 %* | *55-135* | | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *56 %* | *40-125* | | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *64 %* | *40-130* | | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | *35-125* | | *14-May-08* | *18-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Barium** | **0.013** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Chromium | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Lead** | **0.0054** | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-I5-1-6W-051308**

**Lab Sample ID: 8051303-01 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 15-May-08 | 15-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-I5-1-SO-0103**

**Lab Sample ID: 8051303-02 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *87 %* | *45-145* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *114 %* | *45-145* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-I5-1-SO-0103**

**Lab Sample ID: 8051303-02 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Phenanthrene** | **252** | 33.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Fluoranthene** | **665** | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Pyrene** | **559** | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Benzo (a) anthracene** | **456** | 8.50 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Chrysene** | **406** | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **427** | 11.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **143** | 11.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Benzo (a) pyrene** | **359** | 15.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **197** | 25.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *96 %* | *50-135* | | *20-May-08* | *22-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *64 %* | *26-135* | | *20-May-08* | *22-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *60 %* | *25-130* | | *20-May-08* | *22-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *25-130* | | *20-May-08* | *22-May-08* | *8270c* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **7.3** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **26** | 0.48 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| **Arsenic** | **2.4** | 0.96 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| **Barium** | **13** | 0.96 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.48 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| **Calcium** | **30000** | 58 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| **Chromium** | **4.4** | 0.96 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.96 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.96 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-I5-1-SO-0103**

**Lab Sample ID: 8051303-02 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.074** | 0.027 | mg/Kg-dry | 1 | 15-May-08 | 16-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U12-1-SO-0507MS**

**Lab Sample ID: 8051303-03 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Phenanthrene** | **49.1** | 33.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Fluoranthene** | **89.7** | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Pyrene** | **84.4** | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Benzo (a) anthracene** | **50.2** | 8.50 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **57.7** | 11.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **18.2** | 11.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **25.6** | 25.0 | ug/kg dry | 1 | 20-May-08 | 22-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *91 %* | *50-135* | | *20-May-08* | *22-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *61 %* | *26-135* | | *20-May-08* | *22-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *56 %* | *25-130* | | *20-May-08* | *22-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *25-130* | | *20-May-08* | *22-May-08* | *8270c* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **9.0** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **11** | 0.52 | mg/Kg-dry | 10 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U12-1-GW-051308**

**Lab Sample ID: 8051303-04 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/L | 1 | 16-May-08 | 17-May-08 | 8260B | |
| Benzene | ND | 5.00 | ug/L | 1 | 16-May-08 | 17-May-08 | 8260B | |
| Toluene | ND | 5.00 | ug/L | 1 | 16-May-08 | 17-May-08 | 8260B | |
| Ethylbenzene | ND | 5.00 | ug/L | 1 | 16-May-08 | 17-May-08 | 8260B | |
| Xylenes, total | ND | 5.00 | ug/L | 1 | 16-May-08 | 17-May-08 | 8260B | |
| *Surrogate: Dibromofluoromethane* | | *103 %* | | *60-129* | *16-May-08* | *17-May-08* | *8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | | *62-129* | *16-May-08* | *17-May-08* | *8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *105 %* | | *60-127* | *16-May-08* | *17-May-08* | *8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *110 %* | | *55-135* | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *57 %* | | *40-125* | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *64 %* | | *40-130* | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | | *35-125* | *14-May-08* | *18-May-08* | *8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U12-1-GW-051308**

**Lab Sample ID: 8051303-04 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **SW6020** | | | | | | | | |
| **Lead** | **0.026** | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U13-2-SO-0507MS**

**Lab Sample ID: 8051303-05 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *88 %* | *45-145* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *96 %* | *45-145* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U13-2-SO-0507MS**

**Lab Sample ID: 8051303-05 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *79 %* | *50-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *51 %* | *26-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *56 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *83 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **5.0** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **3.3** | 0.51 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| **Arsenic** | **1.1** | 1 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| **Barium** | **3.6** | 1 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.51 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| **Chromium** | **3.3** | 1 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U13-2-SO-0507MS**

**Lab Sample ID: 8051303-05 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.025 | mg/Kg-dry | 1 | 15-May-08 | 16-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U3-3-SO-0203**

**Lab Sample ID: 8051303-06 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *90 %* | *45-155* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *103 %* | *62-129* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *100 %* | *45-127* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluorene** | **62.4** | 33.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Phenanthrene** | **784** | 33.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Anthracene** | **186** | 83.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluoranthene** | **1730** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Pyrene** | **1520** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) anthracene** | **908** | 8.50 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Chrysene** | **862** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **1010** | 11.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **542** | 11.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) pyrene** | **824** | 15.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **386** | 25.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *88 %* | *50-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *54 %* | *26-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *60 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *79 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U3-3-SO-0507**

**Lab Sample ID: 8051303-07 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 15-May-08 | 18-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *92 %* | *45-155* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *95 %* | *45-127* | | *15-May-08* | *18-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **259** | 50.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Acenaphthylene** | **647** | 50.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Acenaphthene** | **1120** | 50.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluorene** | **1590** | 33.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Phenanthrene** | **22000** | 33.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Anthracene** | **7740** | 83.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluoranthene** | **38000** | 50.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Pyrene** | **171** | 50.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) anthracene** | **21300** | 8.50 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Chrysene** | **17200** | 50.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **16000** | 11.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **6240** | 11.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) pyrene** | **14800** | 15.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **4540** | 25.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **4290** | 25.0 | ug/kg dry | 2 | 20-May-08 | 21-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *87 %* | *50-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *52 %* | *26-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *58 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U13-2-GW-051308**

**Lab Sample ID: 8051303-08 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *103 %* | *60-145* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *106 %* | *60-145* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U13-2-GW-051308**

**Lab Sample ID: 8051303-08 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *104 %* | *55-135* | | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *56 %* | *40-125* | | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *64 %* | *40-130* | | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *80 %* | *35-125* | | *14-May-08* | *18-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.004** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Barium** | **0.078** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.019** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Lead** | **0.015** | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U13-2-GW-051308**

**Lab Sample ID: 8051303-08 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 15-May-08 | 15-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P22-2-SO-0001**

**Lab Sample ID: 8051303-09 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *91 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *90 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P22-2-SO-0001**

**Lab Sample ID: 8051303-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **412** | 50.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Acenaphthylene** | **753** | 50.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Acenaphthene** | **3600** | 50.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluorene** | **5410** | 33.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Phenanthrene** | **89000** | 33.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Anthracene** | **24900** | 83.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluoranthene** | **82300** | 50.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Pyrene** | **121000** | 50.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) anthracene** | **56200** | 8.50 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Chrysene** | **51400** | 50.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **31200** | 11.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **10200** | 11.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) pyrene** | **34200** | 15.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **288** | 25.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **11300** | 25.0 | ug/kg dry | 5 | 20-May-08 | 21-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *122 %* | *50-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *70 %* | *26-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *76 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *87 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **10.4** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **170** | 0.55 | mg/Kg-dry | 10 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Arsenic** | **7.3** | 1.1 | mg/Kg-dry | 10 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Barium** | **54** | 1.1 | mg/Kg-dry | 10 | 16-May-08 | 17-May-08 | Metals by ICP/MS | |
| **Cadmium** | **0.65** | 0.55 | mg/Kg-dry | 10 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Chromium** | **11** | 1.1 | mg/Kg-dry | 10 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Selenium** | **1.7** | 1.1 | mg/Kg-dry | 10 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P22-2-SO-0001**

**Lab Sample ID: 8051303-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT** | | | | | | | | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.36** | 0.027 | mg/Kg-dry | 1 | 15-May-08 | 16-May-08 | Mercury | |

**GRACE ANALYTICAL LAB, INC.**
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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U3-2-SO-0708**

**Lab Sample ID: 8051303-10 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *92 %* | *45-155* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *81 %* | *45-127* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **482** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Acenaphthylene** | **1050** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Acenaphthene** | **2070** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluorene** | **1440** | 33.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Phenanthrene** | **22900** | 33.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Anthracene** | **6180** | 83.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluoranthene** | **16000** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Pyrene** | **27600** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) anthracene** | **18200** | 8.50 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Chrysene** | **19200** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **11100** | 11.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **4590** | 11.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) pyrene** | **13300** | 15.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **3820** | 25.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **10000** | 25.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *119 %* | *50-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *65 %* | *26-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *73 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *88 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: Trip Blank BL3**

**Lab Sample ID: 8051303-11 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *102 %* | | *60-145* | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | | *62-129* | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *106 %* | | *60-145* | *16-May-08* | *17-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0003**

**Lab Sample ID: 8051303-12 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *75 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *35 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| **2-Butanone** | **526** | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0003**

**Lab Sample ID: 8051303-12 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| **Trichloroethene** | **9** | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *122 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *110 %* | *62-129* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *89 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 4150 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Phenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 6500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 660 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 1650 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 1160 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Isophorone | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0003**

**Lab Sample ID: 8051303-12 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Naphthalene** | **1210** | 430 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 6500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **2-Methylnaphthalene** | **1040** | 580 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 6500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 5500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 750 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 5500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Acenaphthylene** | **394** | 345 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 560 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 535 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Acenaphthene** | **4930** | 740 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Dibenzofuran** | **2760** | 1100 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluorene | ND | 680 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 3350 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 330 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Phenanthrene** | **63400** | 610 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Anthracene** | **14800** | 1490 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Carbazole** | **4590** | 655 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 2500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluoranthene | ND | 470 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Pyrene** | **63300** | 330 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **31500** | 340 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Chrysene** | **37000** | 470 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0003**

**Lab Sample ID: 8051303-12 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 530 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 4300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (b) fluoranthene** | **32300** | 1150 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (k) fluoranthene** | **10200** | 610 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **23600** | 330 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **13300** | 890 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Dibenz (a,h) anthracene** | **4650** | 870 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **14300** | 1020 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *55 %* | *21-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *60 %* | *25-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *54 %* | *33-130* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *49 %* | *30-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *42 %* | *30-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *60 %* | *43-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *64 %* | *30-123* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *71 %* | *33-127* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **10.0** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **190** | 0.54 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Aluminum** | **3400** | 21 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Antimony | ND | 3.2 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Arsenic** | **8** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Barium** | **62** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Beryllium** | **0.55** | 0.54 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.54 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Calcium** | **86000** | 640 | mg/Kg-dry | 100 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Chromium** | **6.3** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Cobalt** | **3.1** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0003**

**Lab Sample ID: 8051303-12 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Copper** | **23** | 2.7 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Iron** | **11000** | 32 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Magnesium** | **42000** | 32 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Manganese** | **210** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Nickel** | **8.6** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Potassium** | **690** | 32 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Sodium** | **470** | 64 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Vanadium** | **10** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Zinc** | **85** | 5.4 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.026 | mg/Kg-dry | 1 | 15-May-08 | 16-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.28 | mg/Kg-dry | 1 | 17-May-08 | 17-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.7** | 0 | pH Units | 1 | 15-May-08 | 15-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0003D**

**Lab Sample ID: 8051303-13 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **TCLP Metals by 6000/7000 Series Methods** | | | | | | | | |
| **Lead** | **0.232** | 0.00500 | mg/L | 1 | 03-Jun-08 | 03-Jun-08 | 1311/ 7421 | |
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *76 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *91 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0003D**

**Lab Sample ID: 8051303-13 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| **Trichloroethene** | **10** | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *89 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *100 %* | *62-129* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *81 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0003D**

**Lab Sample ID: 8051303-13 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Naphthalene** | **88.0** | 86.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 116 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Acenaphthylene** | **103** | 69.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Acenaphthene** | **288** | 148 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0003D**

**Lab Sample ID: 8051303-13 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Fluorene | ND | 136 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Phenanthrene** | **4780** | 122 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Anthracene** | **1200** | 298 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Carbazole** | **332** | 131 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Pyrene** | **7550** | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **4020** | 68.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Chrysene** | **4670** | 94.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (b) fluoranthene** | **4480** | 230 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (k) fluoranthene** | **1290** | 122 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **942** | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **1970** | 178 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Dibenz (a,h) anthracene** | **656** | 174 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **2290** | 205 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *43 %* | *21-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *46 %* | *25-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *43 %* | *33-130* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *37 %* | *30-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *35 %* | *30-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *47 %* | *43-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *71 %* | *30-123* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *71 %* | *33-127* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0003D**

**Lab Sample ID: 8051303-13 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **13.0** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **660** | 0.56 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Aluminum** | **3700** | 23 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Antimony | ND | 3.4 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Arsenic** | **27** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Barium** | **89** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Beryllium** | **0.79** | 0.56 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Cadmium** | **1.1** | 0.56 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Calcium** | **77000** | 680 | mg/Kg-dry | 100 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Chromium** | **9.1** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Cobalt** | **3.6** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Copper** | **47** | 2.8 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Iron** | **15000** | 34 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Magnesium** | **33000** | 34 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Manganese** | **280** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Nickel** | **12** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Potassium** | **680** | 34 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Sodium** | **460** | 68 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Vanadium** | **14** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Zinc** | **160** | 5.6 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0003D**

**Lab Sample ID: 8051303-13 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.32** | 0.028 | mg/Kg-dry | 1 | 15-May-08 | 16-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.29 | mg/Kg-dry | 1 | 17-May-08 | 17-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **7.8** | 0 | pH Units | 1 | 15-May-08 | 15-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0708**

**Lab Sample ID: 8051303-14 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *110 %* | | *30-170* | *19-May-08* | *20-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *61 %* | | *30-170* | *19-May-08* | *20-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| **Carbon disulfide** | **180** | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0708**

**Lab Sample ID: 8051303-14 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| **Benzene** | **9** | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| **Toluene** | **47** | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| **Ethylbenzene** | **10** | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| **Xylenes, total** | **19** | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *89 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *76 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 4150 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Phenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 6500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 660 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 1650 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 1160 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Isophorone | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0708**

**Lab Sample ID: 8051303-14 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Naphthalene** | **1270** | 430 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 6500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 580 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 6500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 5500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 750 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 5500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Acenaphthylene** | **653** | 345 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 560 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 535 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Acenaphthene | ND | 740 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 1100 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluorene | ND | 680 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 3350 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 330 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 16500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Phenanthrene** | **4400** | 610 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Anthracene | ND | 1490 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Carbazole | ND | 655 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Di-n-butyl phthalate** | **3930** | 2500 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluoranthene | ND | 470 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Pyrene** | **3130** | 330 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **1830** | 340 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Chrysene** | **1700** | 470 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0708**

**Lab Sample ID: 8051303-14 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 530 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Bis(2-ethylhexyl)phthalate** | **4720** | 3300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 4300 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 1150 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 610 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **785** | 330 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 890 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 870 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 1020 | ug/kg dry | 5 | 16-May-08 | 20-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *61 %* | | *21-135* | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *70 %* | | *25-135* | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *62 %* | | *33-130* | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *47 %* | | *30-135* | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *51 %* | | *30-125* | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *68 %* | | *43-125* | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *71 %* | | *30-123* | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *71 %* | | *33-127* | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **26.4** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **2000** | 26 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Lead** | **440** | 0.65 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Antimony | ND | 3.9 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Arsenic** | **5.7** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Barium** | **34** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Beryllium | ND | 0.65 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.65 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Calcium** | **28000** | 780 | mg/Kg-dry | 100 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Chromium** | **3.9** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Cobalt** | **2.5** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P2-1-SO-0708**

**Lab Sample ID: 8051303-14 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Copper** | **23** | 3.2 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Iron** | **10000** | 39 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Magnesium** | **12000** | 39 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Manganese** | **140** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Nickel** | **7** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Potassium** | **260** | 39 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Sodium** | **170** | 78 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Vanadium** | **13** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Zinc** | **110** | 6.5 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.43** | 0.034 | mg/Kg-dry | 1 | 15-May-08 | 16-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.34 | mg/Kg-dry | 1 | 17-May-08 | 17-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.0** | 0 | pH Units | 1 | 15-May-08 | 15-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U3-4-SO-0103**

**Lab Sample ID: 8051303-15 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *92 %* | *45-155* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *103 %* | *62-129* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *96 %* | *45-127* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluorene** | **39.5** | 33.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Phenanthrene** | **409** | 33.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Anthracene** | **138** | 83.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluoranthene** | **808** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Pyrene** | **722** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) anthracene** | **524** | 8.50 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Chrysene** | **428** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **438** | 11.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **175** | 11.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) pyrene** | **392** | 15.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **145** | 25.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *68 %* | *50-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *47 %* | *26-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *55 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *84 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P1-1-SO-0607**

**Lab Sample ID: 8051303-16 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *58 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *69 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| **Carbon disulfide** | **33** | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P1-1-SO-0607**

**Lab Sample ID: 8051303-16 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *132 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *114 %* | *62-129* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *109 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P1-1-SO-0607**

**Lab Sample ID: 8051303-16 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Naphthalene** | **131** | 86.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **2-Methylnaphthalene** | **133** | 116 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Acenaphthylene** | **140** | 69.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Acenaphthene** | **291** | 148 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Phenanthrene** | **4010** | 122 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Anthracene** | **957** | 298 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Carbazole** | **215** | 131 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Pyrene** | **6180** | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **3430** | 68.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Chrysene** | **3930** | 94.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P1-1-SO-0607**

**Lab Sample ID: 8051303-16 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (b) fluoranthene** | **1550** | 230 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (k) fluoranthene** | **491** | 122 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **1440** | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **662** | 178 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Dibenz (a,h) anthracene** | **245** | 174 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **781** | 205 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *50 %* | *21-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *55 %* | *25-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *50 %* | *33-130* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *46 %* | *30-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *43 %* | *30-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *56 %* | *43-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *56 %* | *30-123* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *59 %* | *33-127* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **11.8** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **260** | 0.53 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Aluminum** | **4900** | 21 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Antimony | ND | 3.2 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Arsenic** | **6.9** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Barium** | **86** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Beryllium** | **0.65** | 0.53 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Cadmium** | **0.87** | 0.53 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Calcium** | **42000** | 630 | mg/Kg-dry | 100 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Chromium** | **8.2** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Cobalt** | **3.9** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P1-1-SO-0607**

**Lab Sample ID: 8051303-16 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Copper** | **100** | 2.6 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Iron** | **14000** | 32 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Magnesium** | **13000** | 32 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Manganese** | **480** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Nickel** | **13** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Potassium** | **520** | 32 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Sodium** | **720** | 63 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Vanadium** | **13** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Zinc** | **380** | 5.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.35** | 0.028 | mg/Kg-dry | 1 | 15-May-08 | 16-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.28 | mg/Kg-dry | 1 | 17-May-08 | 17-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **9.0** | 0 | pH Units | 1 | 15-May-08 | 15-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P1-1-SO-0002**

**Lab Sample ID: 8051303-17 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *71 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *123 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P1-1-SO-0002**

**Lab Sample ID: 8051303-17 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 15-May-08 | 19-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *97 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *101 %* | *62-129* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *78 %* | *45-145* | | *15-May-08* | *19-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Phenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 132 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 232 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Isophorone | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P1-1-SO-0002**

**Lab Sample ID: 8051303-17 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Naphthalene** | **158** | 86.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **2-Methylnaphthalene** | **145** | 116 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Acenaphthylene** | **153** | 69.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Acenaphthene** | **222** | 148 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 219 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluorene | ND | 136 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 3300 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Phenanthrene** | **3480** | 122 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Anthracene** | **859** | 298 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Carbazole** | **301** | 131 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 500 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluoranthene | ND | 94.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Pyrene** | **5900** | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **3470** | 68.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Chrysene** | **3760** | 94.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P1-1-SO-0002**

**Lab Sample ID: 8051303-17 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 860 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (b) fluoranthene** | **1940** | 230 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (k) fluoranthene** | **643** | 122 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **1590** | 66.0 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **837** | 178 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Dibenz (a,h) anthracene** | **183** | 174 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **507** | 205 | ug/kg dry | 1 | 16-May-08 | 20-May-08 | EPA 8270C | |
| *Surrogate: 2-Fluorophenol* | | *44 %* | *21-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *50 %* | *25-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *46 %* | *33-130* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *45 %* | *30-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *42 %* | *30-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *54 %* | *43-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *63 %* | *30-123* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *74 %* | *33-127* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **10.6** | 0.01 | wt% | 1 | 15-May-08 | 16-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Lead** | **240** | 0.55 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Aluminum** | **4200** | 22 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Antimony | ND | 3.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Arsenic** | **8.4** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Barium** | **75** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Beryllium** | **0.71** | 0.55 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Cadmium** | **0.67** | 0.55 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Calcium** | **49000** | 660 | mg/Kg-dry | 100 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Chromium** | **8.4** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Cobalt** | **3.2** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-P1-1-SO-0002**

**Lab Sample ID: 8051303-17 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Copper** | **28** | 2.7 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Iron** | **11000** | 33 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Magnesium** | **20000** | 33 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Manganese** | **230** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Nickel** | **10** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Potassium** | **590** | 33 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Sodium** | **930** | 66 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Vanadium** | **17** | 1.1 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Zinc** | **170** | 5.5 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.47** | 0.028 | mg/Kg-dry | 1 | 15-May-08 | 16-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.28 | mg/Kg-dry | 1 | 17-May-08 | 17-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **9.4** | 0 | pH Units | 1 | 15-May-08 | 15-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: CS-U3-3-GW-051308**

**Lab Sample ID: 8051303-18 (Water)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 23-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 23-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 23-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 23-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *%* | *60-128* | | *16-May-08* | *23-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *%* | *62-129* | | *16-May-08* | *23-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *%* | *60-127* | | *16-May-08* | *23-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 14-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *103 %* | *55-135* | | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *54 %* | *40-125* | | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *62 %* | *40-130* | | *14-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *77 %* | *35-125* | | *14-May-08* | *18-May-08* | *8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

**Client Sample ID: Trip Blank BL6**

**Lab Sample ID: 8051303-19 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *106 %* | *60-145* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *96 %* | *62-129* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *60-145* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Grace Analytical Lab, Inc.

## TCLP Metals by 6000/7000 Series Methods - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806007 - EPA 3010A** | | | | | | | | | | |
| **Blank (G806007-BLK1)** | | | | Prepared & Analyzed: 03-Jun-08 | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | | | | |
| **LCS (G806007-BS1)** | | | | Prepared & Analyzed: 03-Jun-08 | | | | | | |
| Lead | 0.838 | 0.100 | mg/L | 0.800 | | 105 | 80-120 | | | |
| **Matrix Spike (G806007-MS1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | 75-125 | | | |
| **Matrix Spike Dup (G806007-MSD1)** | | | | Prepared: 03-Jun-08 Analyzed: 06-Jun-08 | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | 75-125 | | 20 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Organochlorine Pesticides by EPA Method 8081A - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805073 - EPA 3545** | | | | | | | | | | |
| **Blank (G805073-BLK1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg wet | | | | | | | |
| beta-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| Heptachlor | ND | 8.00 | ug/kg wet | | | | | | | |
| delta-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| Aldrin | ND | 8.00 | ug/kg wet | | | | | | | |
| Heptachlor epoxide | ND | 8.00 | ug/kg wet | | | | | | | |
| Endosulfan I | ND | 8.00 | ug/kg wet | | | | | | | |
| 4,4´-DDE | ND | 16.0 | ug/kg wet | | | | | | | |
| Dieldrin | ND | 16.0 | ug/kg wet | | | | | | | |
| Endrin | ND | 16.0 | ug/kg wet | | | | | | | |
| 4,4´-DDD | ND | 16.0 | ug/kg wet | | | | | | | |
| Endosulfan II | ND | 16.0 | ug/kg wet | | | | | | | |
| 4,4´-DDT | ND | 16.0 | ug/kg wet | | | | | | | |
| Endrin aldehyde | ND | 16.0 | ug/kg wet | | | | | | | |
| Endosulfan sulfate | ND | 16.0 | ug/kg wet | | | | | | | |
| Methoxychlor | ND | 80.0 | ug/kg wet | | | | | | | |
| Endrin ketone | ND | 16.0 | ug/kg wet | | | | | | | |
| Chlordane | ND | 80.0 | ug/kg wet | | | | | | | |
| Toxaphene | ND | 160 | ug/kg wet | | | | | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *73.2* | | *ug/kg wet* | *100* | | *73* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *105* | | *ug/kg wet* | *100* | | *105* | *30-170* | | | |
| **LCS (G805073-BS1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| gamma-BHC (Lindane) | 21.6 | 8.00 | ug/kg wet | 25.0 | | 86 | 30-150 | | | |
| Heptachlor | 21.8 | 8.00 | ug/kg wet | 25.0 | | 87 | 30-150 | | | |
| Aldrin | 22.9 | 8.00 | ug/kg wet | 25.0 | | 92 | 30-150 | | | |
| Dieldrin | 59.9 | 16.0 | ug/kg wet | 50.0 | | 120 | 30-150 | | | |
| Endrin | 65.9 | 16.0 | ug/kg wet | 50.0 | | 132 | 30-150 | | | |
| 4,4´-DDT | 58.6 | 16.0 | ug/kg wet | 50.0 | | 117 | 30-150 | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *72.0* | | *ug/kg wet* | *100* | | *72* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *108* | | *ug/kg wet* | *100* | | *108* | *30-170* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805047 - EPA 5035** | | | | | | | | | | |
| **Blank (G805047-BLK1)** | | | | Prepared: 15-May-08 Analyzed: 18-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Vinyl chloride | ND | 2 | ug/kg wet | | | | | | | |
| Bromomethane | ND | 5 | ug/kg wet | | | | | | | |
| Chloroethane | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Acetone | ND | 50 | ug/kg wet | | | | | | | |
| Carbon disulfide | ND | 5 | ug/kg wet | | | | | | | |
| Methylene Chloride | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Butanone | ND | 5 | ug/kg wet | | | | | | | |
| Chloroform | ND | 5 | ug/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Trichloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/kg wet | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/kg wet | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Hexanone | ND | 5 | ug/kg wet | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Chlorobenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Styrene | ND | 5 | ug/kg wet | | | | | | | |
| Bromoform | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *38.7* | | *ug/kg wet* | *50.0* | | *77* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *51.2* | | *ug/kg wet* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *51.1* | | *ug/kg wet* | *50.0* | | *102* | *45-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805047 - EPA 5035** | | | | | | | | | | |
| **LCS (G805047-BS1)** | | | | Prepared: 15-May-08 Analyzed: 18-May-08 | | | | | | |
| 1,1-Dichloroethylene | 47 | 5 | ug/kg wet | 50.0 | | 95 | 35-155 | | | |
| Benzene | 58 | 5 | ug/kg wet | 50.0 | | 116 | 35-150 | | | |
| Trichloroethene | 56 | 5 | ug/kg wet | 50.0 | | 113 | 42-135 | | | |
| Toluene | 55 | 5 | ug/kg wet | 50.0 | | 110 | 40-151 | | | |
| Chlorobenzene | 53 | 5 | ug/kg wet | 50.0 | | 106 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *43.3* | | *ug/kg wet* | *50.0* | | *87* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *50.6* | | *ug/kg wet* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *51.6* | | *ug/kg wet* | *50.0* | | *103* | *45-145* | | | |
| **Matrix Spike (G805047-MS1)** | **Source: 8051303-03** | | | Prepared: 15-May-08 Analyzed: 18-May-08 | | | | | | |
| 1,1-Dichloroethylene | 69 | 5 | ug/kg dry | 53.4 | ND | 129 | 35-155 | | | |
| Benzene | 72 | 5 | ug/kg dry | 53.4 | ND | 134 | 35-150 | | | |
| Trichloroethene | 66 | 5 | ug/kg dry | 53.4 | 0.9 | 122 | 42-166 | | | |
| Toluene | 70 | 5 | ug/kg dry | 53.4 | ND | 132 | 40-151 | | | |
| Chlorobenzene | 66 | 5 | ug/kg dry | 53.4 | ND | 124 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *46.5* | | *ug/kg dry* | *53.4* | | *87* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *54.3* | | *ug/kg dry* | *53.4* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.5* | | *ug/kg dry* | *53.4* | | *100* | *45-145* | | | |
| **Matrix Spike Dup (G805047-MSD1)** | **Source: 8051303-03** | | | Prepared: 15-May-08 Analyzed: 18-May-08 | | | | | | |
| 1,1-Dichloroethylene | 66 | 5 | ug/kg dry | 53.4 | ND | 124 | 35-155 | 4 | 30 | |
| Benzene | 66 | 5 | ug/kg dry | 53.4 | ND | 124 | 35-150 | 8 | 30 | |
| Trichloroethene | 58 | 5 | ug/kg dry | 53.4 | 0.9 | 106 | 42-166 | 14 | 30 | |
| Toluene | 64 | 5 | ug/kg dry | 53.4 | ND | 120 | 40-151 | 9 | 30 | |
| Chlorobenzene | 60 | 5 | ug/kg dry | 53.4 | ND | 112 | 34-158 | 10 | 30 | |
| *Surrogate: Dibromofluoromethane* | *47.3* | | *ug/kg dry* | *53.4* | | *89* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *54.8* | | *ug/kg dry* | *53.4* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.2* | | *ug/kg dry* | *53.4* | | *100* | *45-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805052 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805052-BLK1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5.00 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5.00 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5.00 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5.00 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805052 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805052-BLK1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| *Surrogate: Dibromofluoromethane* | *50.2* | | *ug/L* | *50.0* | | *100* | *60-129* | | | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/L* | *50.0* | | | *60-128* | | | |
| *Surrogate: Dibromofluoromethane* | *50.2* | | *ug/L* | *50.0* | | *100* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *48.0* | | *ug/L* | *50.0* | | *96* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *ND* | | *ug/L* | *50.0* | | | *62-129* | | | |
| *Surrogate: Toluene-d8* | *48.0* | | *ug/L* | *50.0* | | *96* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *50.6* | | *ug/L* | *50.0* | | *101* | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *50.6* | | *ug/L* | *50.0* | | *101* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *ND* | | *ug/L* | *50.0* | | | *60-127* | | | |
| **LCS (G805052-BS1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 35 | 5 | ug/L | 50.0 | | 71 | 56-135 | | | |
| Benzene | ND | 5 | ug/L | 50.0 | | | 60-140 | | | |
| Benzene | 47.4 | 5.00 | ug/L | 50.0 | | 95 | 71-137 | | | |
| Benzene | 47 | 5 | ug/L | 50.0 | | 95 | 71-137 | | | |
| Trichloroethene | 50 | 5 | ug/L | 50.0 | | 99 | 70-138 | | | |
| Toluene | ND | 5 | ug/L | 50.0 | | | 60-145 | | | |
| Toluene | 47 | 5 | ug/L | 50.0 | | 94 | 71-145 | | | |
| Toluene | 47.2 | 5.00 | ug/L | 50.0 | | 94 | 71-145 | | | |
| Chlorobenzene | 46 | 5 | ug/L | 50.0 | | 91 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/L* | *50.0* | | | *60-128* | | | |
| *Surrogate: Dibromofluoromethane* | *42.8* | | *ug/L* | *50.0* | | *86* | *60-129* | | | |
| *Surrogate: Dibromofluoromethane* | *42.8* | | *ug/L* | *50.0* | | *86* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *51.6* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *ND* | | *ug/L* | *50.0* | | | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.6* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *52.7* | | *ug/L* | *50.0* | | *105* | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *ND* | | *ug/L* | *50.0* | | | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *52.7* | | *ug/L* | *50.0* | | *105* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805052 - EPA 5030B** | | | | | | | | | | |
| **Matrix Spike (G805052-MS1)** | **Source: 8051301-18** | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 40 | 5 | ug/L | 50.0 | ND | 81 | 56-150 | | | |
| Benzene | 54.0 | 5.00 | ug/L | 50.0 | 0.290 | 107 | 71-140 | | | |
| Benzene | 54 | 5 | ug/L | 50.0 | 0.3 | 107 | 71-165 | | | |
| Benzene | ND | 5 | ug/L | 50.0 | 0.3 | NR | 71-137 | | | |
| Trichloroethene | 51 | 5 | ug/L | 50.0 | ND | 102 | 70-138 | | | |
| Toluene | 50 | 5 | ug/L | 50.0 | 0.4 | 100 | 71-145 | | | |
| Toluene | 50.3 | 5.00 | ug/L | 50.0 | 0.400 | 100 | 71-145 | | | |
| Toluene | ND | 5 | ug/L | 50.0 | 0.4 | NR | 71-145 | | | |
| Chlorobenzene | 48 | 5 | ug/L | 50.0 | ND | 95 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *50.8* | | *ug/L* | *50.0* | | *102* | *60-129* | | | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/L* | *50.0* | | | *60-128* | | | |
| *Surrogate: Dibromofluoromethane* | *50.8* | | *ug/L* | *50.0* | | *102* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *51.1* | | *ug/L* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.1* | | *ug/L* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *ND* | | *ug/L* | *50.0* | | | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.9* | | *ug/L* | *50.0* | | *108* | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.9* | | *ug/L* | *50.0* | | *108* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *ND* | | *ug/L* | *50.0* | | | *60-127* | | | |
| **Matrix Spike Dup (G805052-MSD1)** | **Source: 8051301-18** | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 38 | 5 | ug/L | 50.0 | ND | 76 | 56-150 | 6 | 20 | |
| Benzene | ND | 5 | ug/L | 50.0 | 0.3 | NR | 71-137 | | 20 | |
| Benzene | 51 | 5 | ug/L | 50.0 | 0.3 | 102 | 71-165 | 5 | 20 | |
| Benzene | 51.1 | 5.00 | ug/L | 50.0 | 0.290 | 102 | 71-140 | 5 | 20 | |
| Trichloroethene | 50 | 5 | ug/L | 50.0 | ND | 99 | 70-138 | 3 | 20 | |
| Toluene | ND | 5 | ug/L | 50.0 | 0.4 | NR | 71-145 | | 20 | |
| Toluene | 48 | 5 | ug/L | 50.0 | 0.4 | 95 | 71-145 | 5 | 20 | |
| Toluene | 47.7 | 5.00 | ug/L | 50.0 | 0.400 | 95 | 71-145 | 5 | 20 | |
| Chlorobenzene | 46 | 5 | ug/L | 50.0 | ND | 92 | 72-143 | 4 | 20 | |
| *Surrogate: Dibromofluoromethane* | *ND* | | *ug/L* | *50.0* | | | *60-128* | | | |
| *Surrogate: Dibromofluoromethane* | *50.6* | | *ug/L* | *50.0* | | *101* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *50.6* | | *ug/L* | *50.0* | | *101* | *60-129* | | | |
| *Surrogate: Toluene-d8* | *ND* | | *ug/L* | *50.0* | | | *62-129* | | | |
| *Surrogate: Toluene-d8* | *50.0* | | *ug/L* | *50.0* | | *100* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *50.0* | | *ug/L* | *50.0* | | *100* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *ND* | | *ug/L* | *50.0* | | | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *54.0* | | *ug/L* | *50.0* | | *108* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *54.0* | | *ug/L* | *50.0* | | *108* | *60-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805065 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805065-BLK1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg wet | | | | | | | |
| Phenol | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Benzyl alcohol | ND | 1300 | ug/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| 2-Methylphenol | ND | 660 | ug/kg wet | | | | | | | |
| Hexachloroethane | ND | 132 | ug/kg wet | | | | | | | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg wet | | | | | | | |
| Nitrobenzene | ND | 232 | ug/kg wet | | | | | | | |
| Isophorone | ND | 660 | ug/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| Naphthalene | ND | 86.0 | ug/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 1300 | ug/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 660 | ug/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 116 | ug/kg wet | | | | | | | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg wet | | | | | | | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 660 | ug/kg wet | | | | | | | |
| 2-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| 3-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| Dimethyl phthalate | ND | 3300 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 69.0 | ug/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 148 | ug/kg wet | | | | | | | |
| Dibenzofuran | ND | 219 | ug/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Diethyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| Fluorene | ND | 136 | ug/kg wet | | | | | | | |
| 4-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg wet | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg wet | | | | | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805065 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805065-BLK1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 66.0 | ug/kg wet | | | | | | | |
| Pentachlorophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 122 | ug/kg wet | | | | | | | |
| Anthracene | ND | 298 | ug/kg wet | | | | | | | |
| Carbazole | ND | 131 | ug/kg wet | | | | | | | |
| Di-n-butyl phthalate | ND | 500 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 94.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| Butyl benzyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg wet | | | | | | | |
| Chrysene | ND | 94.0 | ug/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg wet | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Di-n-octyl phthalate | ND | 860 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg wet | | | | | | | |
| *Surrogate: 2-Fluorophenol* | *10200* | | *ug/kg wet* | *15000* | | *68* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *9970* | | *ug/kg wet* | *15000* | | *66* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *9760* | | *ug/kg wet* | *15000* | | *65* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *6060* | | *ug/kg wet* | *10000* | | *61* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5200* | | *ug/kg wet* | *10000* | | *52* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6460* | | *ug/kg wet* | *10000* | | *65* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *10400* | | *ug/kg wet* | *15000* | | *69* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *7700* | | *ug/kg wet* | *10000* | | *77* | *33-127* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805065 - EPA 3545 MS** | | | | | | | | | | |
| **LCS (G805065-BS1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| Phenol | 11500 | 660 | ug/kg wet | 15000 | | 76 | 20-125 | | | |
| 2-Chlorophenol | 12000 | 660 | ug/kg wet | 15000 | | 80 | 20-125 | | | |
| 1,4-Dichlorobenzene | 6540 | 660 | ug/kg wet | 10000 | | 65 | 20-125 | | | |
| N-Nitrosodi-n-propylamine | 5740 | 330 | ug/kg wet | 10000 | | 57 | 20-125 | | | |
| 1,2,4-Trichlorobenzene | 6950 | 660 | ug/kg wet | 10000 | | 69 | 20-125 | | | |
| 4-Chloro-3-methylphenol | 10700 | 1300 | ug/kg wet | 15000 | | 71 | 20-125 | | | |
| 2,4-Dinitrotoluene | 8150 | 107 | ug/kg wet | 10000 | | 82 | 20-125 | | | |
| Acenaphthene | 7350 | 148 | ug/kg wet | 10000 | | 74 | 20-125 | | | |
| 4-Nitrophenol | 14800 | 3300 | ug/kg wet | 15000 | | 99 | 30-140 | | | |
| Pentachlorophenol | 15400 | 3300 | ug/kg wet | 15000 | | 102 | 20-125 | | | |
| Pyrene | 8580 | 66.0 | ug/kg wet | 10000 | | 86 | 30-135 | | | |
| *Surrogate: 2-Fluorophenol* | *9230* | | *ug/kg wet* | *15000* | | *62* | *21-135* | | | |
| *Surrogate: Phenol-d5* | *9140* | | *ug/kg wet* | *15000* | | *61* | *25-135* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *8990* | | *ug/kg wet* | *15000* | | *60* | *33-130* | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *5430* | | *ug/kg wet* | *10000* | | *54* | *30-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *4730* | | *ug/kg wet* | *10000* | | *47* | *30-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *5880* | | *ug/kg wet* | *10000* | | *59* | *43-125* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *8990* | | *ug/kg wet* | *15000* | | *60* | *30-123* | | | |
| *Surrogate: Terphenyl-d14* | *6780* | | *ug/kg wet* | *10000* | | *68* | *33-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **Blank (G805055-BLK1)** | | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.1* | | *ug/L* | *10.0* | | *101* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.53* | | *ug/L* | *10.0* | | *55* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.26* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.94* | | *ug/L* | *10.0* | | *79* | *35-125* | | | |
| **Blank (G805055-BLK2)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.90* | | *ug/L* | *10.0* | | *99* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.58* | | *ug/L* | *10.0* | | *56* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.00* | | *ug/L* | *10.0* | | *60* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.00* | | *ug/L* | *10.0* | | *80* | *35-125* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **LCS (G805055-BS1)** | | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Acenaphthene | 8.14 | 2.50 | ug/L | 10.0 | | 81 | 46-128 | | | |
| Pyrene | 9.04 | 1.50 | ug/L | 10.0 | | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.9* | | *ug/L* | *10.0* | | *109* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.02* | | *ug/L* | *10.0* | | *60* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.72* | | *ug/L* | *10.0* | | *67* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.11* | | *ug/L* | *10.0* | | *81* | *35-125* | | | |
| **LCS (G805055-BS2)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.56 | 2.50 | ug/L | 10.0 | | 76 | 46-128 | | | |
| Pyrene | 9.02 | 1.50 | ug/L | 10.0 | | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.1* | | *ug/L* | *10.0* | | *101* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.66* | | *ug/L* | *10.0* | | *57* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.02* | | *ug/L* | *10.0* | | *60* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.45* | | *ug/L* | *10.0* | | *84* | *35-125* | | | |
| **Matrix Spike (G805055-MS1)** | **Source: 8051201-09** | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Acenaphthene | 8.03 | 2.50 | ug/L | 10.0 | 0.04 | 80 | 46-128 | | | |
| Pyrene | 9.03 | 1.50 | ug/L | 10.0 | 0.05 | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.18* | | *ug/L* | *10.0* | | *92* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.36* | | *ug/L* | *10.0* | | *54* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.19* | | *ug/L* | *10.0* | | *62* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.07* | | *ug/L* | *10.0* | | *81* | *35-125* | | | |
| **Matrix Spike (G805055-MS2)** | **Source: 8051301-18** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.83 | 2.50 | ug/L | 10.0 | 0.01 | 78 | 46-128 | | | |
| Pyrene | 8.80 | 1.50 | ug/L | 10.0 | 0.02 | 88 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.91* | | *ug/L* | *10.0* | | *99* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.76* | | *ug/L* | *10.0* | | *58* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.27* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.88* | | *ug/L* | *10.0* | | *79* | *35-125* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **Matrix Spike Dup (G805055-MSD1)** | **Source: 8051201-09** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 8.82 | 2.50 | ug/L | 10.0 | 0.04 | 88 | 46-128 | 9 | 31 | |
| Pyrene | 9.51 | 1.50 | ug/L | 10.0 | 0.05 | 95 | 26-127 | 5 | 31 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *11.3* | | *ug/L* | *10.0* | | *113* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.18* | | *ug/L* | *10.0* | | *62* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.95* | | *ug/L* | *10.0* | | *70* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.34* | | *ug/L* | *10.0* | | *83* | *35-125* | | | |
| **Matrix Spike Dup (G805055-MSD2)** | **Source: 8051301-18** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.97 | 2.50 | ug/L | 10.0 | 0.01 | 80 | 46-128 | 2 | 31 | |
| Pyrene | 8.70 | 1.50 | ug/L | 10.0 | 0.02 | 87 | 26-127 | 1 | 31 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.5* | | *ug/L* | *10.0* | | *105* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.98* | | *ug/L* | *10.0* | | *60* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.34* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.69* | | *ug/L* | *10.0* | | *77* | *35-125* | | | |
| **Batch G805076 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805076-BLK1)** | | | | Prepared & Analyzed: 20-May-08 | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 33.0 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 33.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 83.0 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg wet | | | | | | | |
| Chrysene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1190* | | *ug/kg wet* | *1000* | | *119* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *725* | | *ug/kg wet* | *1000* | | *72* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *769* | | *ug/kg wet* | *1000* | | *77* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *950* | | *ug/kg wet* | *1000* | | *95* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805076 - EPA 3545 MS** | | | | | | | | | | |
| **LCS (G805076-BS1)** | | | | Prepared & Analyzed: 20-May-08 | | | | | | |
| Acenaphthene | 793 | 50.0 | ug/kg wet | 1000 | | 79 | 31-137 | | | |
| Pyrene | 1040 | 50.0 | ug/kg wet | 1000 | | 104 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *998* | | *ug/kg wet* | *1000* | | *100* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *595* | | *ug/kg wet* | *1000* | | *60* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *640* | | *ug/kg wet* | *1000* | | *64* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *913* | | *ug/kg wet* | *1000* | | *91* | *25-130* | | | |
| **Matrix Spike (G805076-MS1)** | **Source: 8051303-03** | | | Prepared: 20-May-08 Analyzed: 21-May-08 | | | | | | |
| Acenaphthene | 704 | 50.0 | ug/kg dry | 1070 | 4.27 | 66 | 31-137 | | | |
| Pyrene | 1120 | 50.0 | ug/kg dry | 1070 | 84.4 | 97 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *846* | | *ug/kg dry* | *1070* | | *79* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *533* | | *ug/kg dry* | *1070* | | *50* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *571* | | *ug/kg dry* | *1070* | | *53* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *879* | | *ug/kg dry* | *1070* | | *82* | *25-130* | | | |
| **Matrix Spike (G805076-MS2)** | **Source: 8051303-05** | | | Prepared: 20-May-08 Analyzed: 21-May-08 | | | | | | |
| Acenaphthene | 636 | 50.0 | ug/kg dry | 1060 | 1.06 | 60 | 31-137 | | | |
| Pyrene | 1100 | 50.0 | ug/kg dry | 1060 | 4.26 | 103 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *735* | | *ug/kg dry* | *1060* | | *69* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *460* | | *ug/kg dry* | *1060* | | *43* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *516* | | *ug/kg dry* | *1060* | | *48* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *915* | | *ug/kg dry* | *1060* | | *86* | *25-130* | | | |
| **Matrix Spike Dup (G805076-MSD1)** | **Source: 8051303-03** | | | Prepared: 20-May-08 Analyzed: 21-May-08 | | | | | | |
| Acenaphthene | 652 | 50.0 | ug/kg dry | 1070 | 4.27 | 61 | 31-137 | 8 | 25 | |
| Pyrene | 962 | 50.0 | ug/kg dry | 1070 | 84.4 | 82 | 35-142 | 17 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *817* | | *ug/kg dry* | *1070* | | *77* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *489* | | *ug/kg dry* | *1070* | | *46* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *546* | | *ug/kg dry* | *1070* | | *51* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *741* | | *ug/kg dry* | *1070* | | *69* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805076 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike Dup (G805076-MSD2)** | **Source: 8051303-05** | | | Prepared: 20-May-08 Analyzed: 21-May-08 | | | | | | |
| Acenaphthene | 550 | 50.0 | ug/kg dry | 1060 | 1.06 | 52 | 31-137 | 15 | 25 | |
| Pyrene | 821 | 50.0 | ug/kg dry | 1060 | 4.26 | 77 | 35-142 | 29 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *619* | | *ug/kg dry* | *1060* | | *58* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *377* | | *ug/kg dry* | *1060* | | *35* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *430* | | *ug/kg dry* | *1060* | | *40* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *680* | | *ug/kg dry* | *1060* | | *64* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 10-Jun-08 21:04 |

## Notes and Definitions

| | |
|---|---|
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

June 12, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8051501

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


ACCREDITED IN ACCORDANCE WITH nelac

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-P17-1-SO-0103 | 8051501-01 | Soil | 14-May-08 08:04 | 14-May-08 21:00 |
| CS-MW-D-GW-051408 | 8051501-02 | Water | 14-May-08 12:20 | 14-May-08 21:00 |
| CS-TS20-2C-SS-0001D | 8051501-03 | Soil | 14-May-08 12:37 | 14-May-08 21:00 |
| CS-TS20-2C-SS-0001MS | 8051501-04 | Soil | 14-May-08 12:35 | 14-May-08 21:00 |
| CS-U2-2-GW-051408 | 8051501-05 | Water | 14-May-08 10:30 | 14-May-08 21:00 |
| CS-P17-1-GW-051408 | 8051501-06 | Water | 14-May-08 08:18 | 14-May-08 21:00 |
| CS-U1-2-SO-0607 | 8051501-07 | Soil | 14-May-08 09:06 | 14-May-08 21:00 |
| CS-U2-3-SO-0407 | 8051501-08 | Soil | 14-May-08 10:10 | 14-May-08 21:00 |
| Trip Blank BL2 | 8051501-09 | Water | 09-May-08 18:00 | 14-May-08 21:00 |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-P17-1-SO-0103**

**Lab Sample ID: 8051501-01 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *123 %* | *45-145* | | *19-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *109 %* | *62-129* | | *19-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *45-145* | | *19-May-08* | *19-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-P17-1-SO-0103**

**Lab Sample ID: 8051501-01 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **127** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Acenaphthylene** | **331** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Acenaphthene** | **162** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluorene** | **214** | 33.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Phenanthrene** | **3490** | 33.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Anthracene** | **1090** | 83.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluoranthene** | **7740** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Pyrene** | **7030** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) anthracene** | **4820** | 8.50 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Chrysene** | **4100** | 50.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **4750** | 11.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **2040** | 11.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) pyrene** | **3630** | 15.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **1530** | 25.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **1530** | 25.0 | ug/kg dry | 1 | 20-May-08 | 21-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *65 %* | *50-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *43 %* | *26-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *50 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *79 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **26.3** | 0.01 | wt% | 1 | 16-May-08 | 19-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **9.5** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | Metals by ICP/MS | |
| **Barium** | **71** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | Metals by ICP/MS | |
| **Cadmium** | **0.77** | 0.65 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | Metals by ICP/MS | |
| **Chromium** | **7.1** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | Metals by ICP/MS | |
| **Lead** | **88** | 0.65 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | Metals by ICP/MS | |
| Selenium | ND | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | Metals by ICP/MS | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


ACCREDITED IN ACCORDANCE WITH nelac

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-P17-1-SO-0103**

**Lab Sample ID: 8051501-01 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.54** | 0.031 | mg/Kg-dry | 1 | 20-May-08 | 20-May-08 | Mercury | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **26.3** | 0.01 | wt% | 1 | 16-May-08 | 19-May-08 | Percent Moisture | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| **Mercury** | **0.54** | 0.031 | mg/Kg-dry | 1 | 20-May-08 | 20-May-08 | Mercury | |
| **Arsenic** | **9.5** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | RCRA METALS | |
| **Barium** | **71** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | RCRA METALS | |
| **Cadmium** | **0.77** | 0.65 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | RCRA METALS | |
| **Chromium** | **7.1** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | RCRA METALS | |
| **Lead** | **88** | 0.65 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | RCRA METALS | |
| Selenium | ND | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | RCRA METALS | |
| Silver | ND | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 19-May-08 | RCRA METALS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-MW-D-GW-051408**

**Lab Sample ID: 8051501-02 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/L | 1 | 16-May-08 | 17-May-08 | 8260B | |
| *Surrogate: Dibromofluoromethane* | | *107 %* | *60-129* | | *16-May-08* | *17-May-08* | *8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *16-May-08* | *17-May-08* | *8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *60-127* | | *16-May-08* | *17-May-08* | *8260B* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Barium** | **0.12** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.0094** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Lead** | **0.02** | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 23-May-08 | 23-May-08 | Mercury | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Barium** | **0.12** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.0094** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Lead** | **0.02** | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-MW-D-GW-051408**

**Lab Sample ID: 8051501-02 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT Analysis Corp** | | | | | | | | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 23-May-08 | 23-May-08 | Mercury | |

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5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-TS20-2C-SS-0001D**

**Lab Sample ID: 8051501-03 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polychlorinated Biphenyls by EPA Method 8082** | | | | | | | | |
| Aroclor-1016 | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1221 | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1232 | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1242 | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1248 | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1254 | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1260 | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| *Surrogate: Tetrachloro-meta-xylene* | | *78.2 %* | | *30-170* | *19-May-08* | *20-May-08* | *8082* | |
| *Surrogate: Decachlorobiphenyl* | | *126 %* | | *30-170* | *19-May-08* | *20-May-08* | *8082* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-TS20-2C-SS-0001MS**

**Lab Sample ID: 8051501-04 (Soil)**

**Grace Analytical Lab, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1221 | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1232 | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1242 | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1248 | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1254 | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| Aroclor-1260 | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8082 | |
| *Surrogate: Tetrachloro-meta-xylene* | | *75.6 %* | *30-170* | | *19-May-08* | *20-May-08* | *8082* | |
| *Surrogate: Decachlorobiphenyl* | | *124 %* | *30-170* | | *19-May-08* | *20-May-08* | *8082* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-U2-2-GW-051408**

**Lab Sample ID: 8051501-05 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/L | 1 | 16-May-08 | 17-May-08 | 8260B | |
| *Surrogate: Dibromofluoromethane* | | *103 %* | *60-129* | | *16-May-08* | *17-May-08* | *8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *16-May-08* | *17-May-08* | *8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *60-127* | | *16-May-08* | *17-May-08* | *8260B* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| **Lead** | **0.9** | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **SW6020** | | | | | | | | |
| **Lead** | **0.9** | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-P17-1-GW-051408**

**Lab Sample ID: 8051501-06 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *97 %* | *60-145* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *104 %* | *60-145* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-P17-1-GW-051408**

**Lab Sample ID: 8051501-06 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 15-May-08 | 18-May-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *116 %* | *55-135* | | *15-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *63 %* | *40-125* | | *15-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *71 %* | *40-130* | | *15-May-08* | *18-May-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *83 %* | *35-125* | | *15-May-08* | *18-May-08* | *8270C* | |
| **STAT** | | | | | | | | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Barium** | **0.034** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.0089** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Lead** | **0.018** | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-P17-1-GW-051408**

**Lab Sample ID: 8051501-06 (Water)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 19-May-08 | 20-May-08 | Mercury | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Barium** | **0.034** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Chromium** | **0.0089** | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **Lead** | **0.018** | 0.002 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Selenium | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| Silver | ND | 0.004 | mg/L | 2 | 16-May-08 | 16-May-08 | Metals by ICP/MS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 19-May-08 | 20-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-U1-2-SO-0607**

**Lab Sample ID: 8051501-07 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *90 %* | *45-155* | | *19-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *102 %* | *62-129* | | *19-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *95 %* | *45-127* | | *19-May-08* | *19-May-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **1020** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Acenaphthylene** | **254** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Acenaphthene** | **872** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluorene** | **817** | 33.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Phenanthrene** | **8610** | 33.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Anthracene** | **2520** | 83.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Fluoranthene** | **12200** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Pyrene** | **10700** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) anthracene** | **6090** | 8.50 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Chrysene** | **5640** | 50.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (b) fluoranthene** | **6210** | 11.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (k) fluoranthene** | **2040** | 11.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (a) pyrene** | **4970** | 15.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **55.2** | 25.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| **Benzo (g,h,i) perylene** | **2490** | 25.0 | ug/kg dry | 10 | 20-May-08 | 21-May-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *113 %* | *50-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *64 %* | *26-135* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *73 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *84 %* | *25-130* | | *20-May-08* | *21-May-08* | *8270c* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-U2-3-SO-0407**

**Lab Sample ID: 8051501-08 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Organochlorine Pesticides by EPA Method 8081A** | | | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| beta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| delta-BHC | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Aldrin | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Heptachlor epoxide | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan I | ND | 8.00 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDE | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Dieldrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDD | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan II | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| 4,4´-DDT | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin aldehyde | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endosulfan sulfate | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Methoxychlor | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Endrin ketone | ND | 16.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Chlordane | ND | 80.0 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| Toxaphene | ND | 160 | ug/kg dry | 1 | 19-May-08 | 20-May-08 | 8081A | |
| *Surrogate: Tetrachloro-meta-xylene* | | *76 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| *Surrogate: Decachlorobiphenyl* | | *96 %* | *30-170* | | *19-May-08* | *20-May-08* | *8081A* | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-U2-3-SO-0407**

**Lab Sample ID: 8051501-08 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Benzene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 19-May-08 | 19-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *91 %* | *45-145* | | *19-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *100 %* | *62-129* | | *19-May-08* | *19-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *90 %* | *45-145* | | *19-May-08* | *19-May-08* | *EPA 8260B* | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| 3/4-Methylphenol | ND | 8300 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2,4-Trichlorobenzene | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,2-Dichlorobenzene | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,3-Dichlorobenzene | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 1,4-Dichlorobenzene | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,5-Trichlorophenol | ND | 11000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4,6-Trichlorophenol | ND | 1500 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dichlorophenol | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dimethylphenol | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrophenol | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 1070 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2,6-Dinitrotoluene | ND | 1120 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chloronaphthalene | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Chlorophenol | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylnaphthalene | ND | 1160 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Methylphenol | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-U2-3-SO-0407**

**Lab Sample ID: 8051501-08 (Soil)**

**Grace Analytical Lab, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| 2-Nitroaniline | ND | 33000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 2-Nitrophenol | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 3,3´-Dichlorobenzidine | ND | 1060 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 3-Nitroaniline | ND | 33000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4,6-Dinitro-2-methylphenol | ND | 33000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Bromophenyl phenyl ether | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloro-3-methylphenol | ND | 13000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chloroaniline | ND | 13000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Chlorophenyl phenyl ether | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitroaniline | ND | 33000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| 4-Nitrophenol | ND | 33000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Acenaphthene | ND | 1480 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Acenaphthylene** | **1510** | 690 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Anthracene | ND | 2980 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) anthracene** | **20300** | 680 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (a) pyrene** | **8270** | 660 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (b) fluoranthene** | **11500** | 2300 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (g,h,i) perylene** | **4550** | 2050 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Benzo (k) fluoranthene** | **3460** | 1220 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Benzyl alcohol | ND | 13000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroethoxy)methane | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroethyl)ether | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-chloroisopropyl)ether | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Bis(2-ethylhexyl)phthalate | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Butyl benzyl phthalate | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Carbazole | ND | 1310 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Chrysene** | **20100** | 940 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 1740 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dibenzofuran | ND | 2190 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Diethyl phthalate | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Dimethyl phthalate | ND | 33000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-butyl phthalate | ND | 5000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Di-n-octyl phthalate | ND | 8600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluoranthene | ND | 940 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Fluorene | ND | 1360 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobenzene | ND | 660 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorobutadiene | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachlorocyclopentadiene | ND | 11000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Hexachloroethane | ND | 1320 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **4520** | 1780 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-U2-3-SO-0407**

**Lab Sample ID: 8051501-08 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Semivolatile Organic Compounds by EPA Method 8270C** | | | | | | | | |
| Isophorone | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Naphthalene | ND | 860 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Nitrobenzene | ND | 2320 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodi-n-propylamine | ND | 3300 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| N-Nitrosodiphenylamine | ND | 6700 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Pentachlorophenol | ND | 33000 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Phenanthrene** | **8220** | 1220 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| Phenol | ND | 6600 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| **Pyrene** | **26000** | 660 | ug/kg dry | 10 | 16-May-08 | 20-May-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *55 %* | *30-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2,4,6-Tribromophenol* | | *62 %* | *30-123* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Chlorophenol-d4* | | *55 %* | *33-130* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *64 %* | *43-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorophenol* | | *54 %* | *21-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *45 %* | *30-125* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Phenol-d5* | | *59 %* | *25-135* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *33-127* | | *16-May-08* | *20-May-08* | *EPA 8270C* | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Magnesium | ND | 6.80 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Vanadium | ND | 12.0 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Arsenic | ND | 10.0 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Antimony | ND | 5.00 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Barium | ND | 2.90 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Beryllium | ND | 0.400 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Cadmium | ND | 0.800 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Calcium | ND | 7.00 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Chromium | ND | 3.00 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Cobalt | ND | 2.50 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Copper | ND | 5.00 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Iron | ND | 250 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-U2-3-SO-0407**

**Lab Sample ID: 8051501-08 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Metals by EPA 6000/7000 Series Methods** | | | | | | | | |
| Lead | ND | 3.70 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Aluminum | ND | 150 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Thallium | ND | 20.0 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Sodium | ND | 0.300 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Silver | ND | 1.00 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Selenium | ND | 15.0 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Potassium | ND | 0.200 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Nickel | ND | 1.20 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Mercury | ND | 0.0200 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Manganese | ND | 3.00 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| Zinc | ND | 1.50 | % by Volume | 1 | | 19-May-08 | EPA6000/7000 | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **23.4** | 0.01 | wt% | 1 | 16-May-08 | 19-May-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Aluminum** | **3200** | 25 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.5 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Arsenic** | **8.4** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Barium** | **67** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Beryllium** | **0.66** | 0.63 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.63 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Calcium** | **36000** | 76 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Chromium** | **5.8** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-U2-3-SO-0407**

**Lab Sample ID: 8051501-08 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Cobalt** | **3.3** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Copper** | **150** | 3.2 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Iron** | **7900** | 38 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Lead** | **300** | 0.63 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Magnesium** | **20000** | 38 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Manganese** | **140** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Nickel** | **13** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Potassium** | **550** | 38 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Selenium** | **3.6** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Sodium** | **170** | 76 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Vanadium** | **14** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Zinc** | **110** | 6.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **1.7** | 0.12 | mg/Kg-dry | 4 | 20-May-08 | 20-May-08 | Mercury | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.33 | mg/Kg-dry | 1 | 17-May-08 | 17-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.0** | | pH Units | 1 | 16-May-08 | 16-May-08 | pH (25 °C) | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **23.4** | 0.01 | wt% | 1 | 16-May-08 | 19-May-08 | Percent Moisture | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-U2-3-SO-0407**

**Lab Sample ID: 8051501-08 (Soil)**

**STAT Analysis Corp**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Aluminum** | **3200** | 25 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Antimony | ND | 2.5 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Arsenic** | **8.4** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Barium** | **67** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Beryllium** | **0.66** | 0.63 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Cadmium | ND | 0.63 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Calcium** | **36000** | 76 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Chromium** | **5.8** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Cobalt** | **3.3** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Copper** | **150** | 3.2 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Iron** | **7900** | 38 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Lead** | **300** | 0.63 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Magnesium** | **20000** | 38 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Manganese** | **140** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Nickel** | **13** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Potassium** | **550** | 38 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Selenium** | **3.6** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Silver | ND | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Sodium** | **170** | 76 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| Thallium | ND | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Vanadium** | **14** | 1.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **Zinc** | **110** | 6.3 | mg/Kg-dry | 10 | 19-May-08 | 20-May-08 | Metals by ICP/MS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **1.7** | 0.12 | mg/Kg-dry | 4 | 20-May-08 | 20-May-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: CS-U2-3-SO-0407**

**Lab Sample ID: 8051501-08 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **STAT Analysis Corp** | | | | | | | | |
| **SW9012A** | | | | | | | | |
| Cyanide | ND | 0.33 | mg/Kg-dry | 1 | 17-May-08 | 17-May-08 | Cyanide, Total | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.0** | 0 | pH Units | 1 | 16-May-08 | 16-May-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

**Client Sample ID: Trip Blank BL2**

**Lab Sample ID: 8051501-09 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-May-08 | 17-May-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *102 %* | *60-145* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *107 %* | *60-145* | | *16-May-08* | *17-May-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Grace Analytical Lab, Inc.

## Organochlorine Pesticides by EPA Method 8081A - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805073 - EPA 3545** | | | | | | | | | | |
| **Blank (G805073-BLK1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| alpha-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 8.00 | ug/kg wet | | | | | | | |
| beta-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| Heptachlor | ND | 8.00 | ug/kg wet | | | | | | | |
| delta-BHC | ND | 8.00 | ug/kg wet | | | | | | | |
| Aldrin | ND | 8.00 | ug/kg wet | | | | | | | |
| Heptachlor epoxide | ND | 8.00 | ug/kg wet | | | | | | | |
| Endosulfan I | ND | 8.00 | ug/kg wet | | | | | | | |
| 4,4´-DDE | ND | 16.0 | ug/kg wet | | | | | | | |
| Dieldrin | ND | 16.0 | ug/kg wet | | | | | | | |
| Endrin | ND | 16.0 | ug/kg wet | | | | | | | |
| 4,4´-DDD | ND | 16.0 | ug/kg wet | | | | | | | |
| Endosulfan II | ND | 16.0 | ug/kg wet | | | | | | | |
| 4,4´-DDT | ND | 16.0 | ug/kg wet | | | | | | | |
| Endrin aldehyde | ND | 16.0 | ug/kg wet | | | | | | | |
| Endosulfan sulfate | ND | 16.0 | ug/kg wet | | | | | | | |
| Methoxychlor | ND | 80.0 | ug/kg wet | | | | | | | |
| Endrin ketone | ND | 16.0 | ug/kg wet | | | | | | | |
| Chlordane | ND | 80.0 | ug/kg wet | | | | | | | |
| Toxaphene | ND | 160 | ug/kg wet | | | | | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *ND* | | *ug/kg wet* | *100* | | *73* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *105* | | *ug/kg wet* | *100* | | *105* | *30-170* | | | |
| **LCS (G805073-BS1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| gamma-BHC (Lindane) | 21.6 | 8.00 | ug/kg wet | 25.0 | | 86 | 30-150 | | | |
| Heptachlor | 21.8 | 8.00 | ug/kg wet | 25.0 | | 87 | 30-150 | | | |
| Aldrin | 22.9 | 8.00 | ug/kg wet | 25.0 | | 92 | 30-150 | | | |
| Dieldrin | 59.9 | 16.0 | ug/kg wet | 50.0 | | 120 | 30-150 | | | |
| Endrin | 65.9 | 16.0 | ug/kg wet | 50.0 | | 132 | 30-150 | | | |
| 4,4´-DDT | 58.6 | 16.0 | ug/kg wet | 50.0 | | 117 | 30-150 | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *72.0* | | *ug/kg wet* | *100* | | *72* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *108* | | *ug/kg wet* | *100* | | *108* | *30-170* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805074 - EPA 3545** | | | | | | | | | | |
| **Blank (G805074-BLK1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| Aroclor-1016 | ND | 80.0 | ug/kg wet | | | | | | | |
| Aroclor-1221 | ND | 80.0 | ug/kg wet | | | | | | | |
| Aroclor-1232 | ND | 80.0 | ug/kg wet | | | | | | | |
| Aroclor-1242 | ND | 80.0 | ug/kg wet | | | | | | | |
| Aroclor-1248 | ND | 80.0 | ug/kg wet | | | | | | | |
| Aroclor-1254 | ND | 160 | ug/kg wet | | | | | | | |
| Aroclor-1260 | ND | 160 | ug/kg wet | | | | | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *ND* | | *ug/kg wet* | *100* | | *72.4* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *ND* | | *ug/kg wet* | *100* | | *86.2* | *30-170* | | | |
| **LCS (G805074-BS1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| gamma-BHC (Lindane) | 22.2 | 8.00 | ug/kg wet | 25.0 | | 88.7 | 30-150 | | | |
| Heptachlor | 19.4 | 8.00 | ug/kg wet | 25.0 | | 77.7 | 30-150 | | | |
| Aldrin | 21.2 | 8.00 | ug/kg wet | 25.0 | | 84.7 | 30-150 | | | |
| Dieldrin | 40.3 | 16.0 | ug/kg wet | 50.0 | | 80.6 | 30-150 | | | |
| Endrin | 52.3 | 16.0 | ug/kg wet | 50.0 | | 105 | 30-150 | | | |
| 4,4´-DDT | 36.4 | 16.0 | ug/kg wet | 50.0 | | 72.7 | 30-150 | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *73.1* | | *ug/kg wet* | *100* | | *73.1* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *82.4* | | *ug/kg wet* | *100* | | *82.4* | *30-170* | | | |
| **Matrix Spike (G805074-MS1)** | **Source: 8051501-04** | | | Prepared: 19-May-08 Analyzed: 21-May-08 | | | | | | |
| gamma-BHC (Lindane) | 33.6 | 8.00 | ug/kg dry | 31.2 | ND | 108 | 30-150 | | | |
| Heptachlor | 30.7 | 8.00 | ug/kg dry | 31.2 | ND | 98.6 | 30-150 | | | |
| Aldrin | 30.9 | 8.00 | ug/kg dry | 31.2 | ND | 99.1 | 30-150 | | | |
| Dieldrin | 56.6 | 16.0 | ug/kg dry | 62.3 | ND | 90.7 | 30-150 | | | |
| Endrin | 80.1 | 16.0 | ug/kg dry | 62.3 | ND | 128 | 30-150 | | | |
| 4,4´-DDT | 75.8 | 16.0 | ug/kg dry | 62.3 | ND | 122 | 30-150 | | | |
| *Surrogate: Tetrachloro-meta-xylene* | *93.4* | | *ug/kg dry* | *125* | | *74.9* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *114* | | *ug/kg dry* | *125* | | *91.2* | *30-170* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805074 - EPA 3545** | | | | | | | | | | |
| **Matrix Spike Dup (G805074-MSD1)** | **Source: 8051501-04** | | | Prepared: 19-May-08 Analyzed: 21-May-08 | | | | | | |
| gamma-BHC (Lindane) | 29.9 | 8.00 | ug/kg dry | 31.2 | ND | 95.8 | 30-150 | 11.7 | 20 | |
| Heptachlor | 29.4 | 8.00 | ug/kg dry | 31.2 | ND | 94.4 | 30-150 | 4.39 | 20 | |
| Aldrin | 32.5 | 8.00 | ug/kg dry | 31.2 | ND | 104 | 30-150 | 5.06 | 20 | |
| Dieldrin | 50.9 | 16.0 | ug/kg dry | 62.3 | ND | 81.7 | 30-150 | 10.5 | 20 | |
| Endrin | 75.6 | 16.0 | ug/kg dry | 62.3 | ND | 121 | 30-150 | 5.73 | 20 | |
| 4,4´-DDT | 68.4 | 16.0 | ug/kg dry | 62.3 | ND | 110 | 30-150 | 10.3 | 20 | |
| *Surrogate: Tetrachloro-meta-xylene* | *92.3* | | *ug/kg dry* | *125* | | *74.0* | *30-170* | | | |
| *Surrogate: Decachlorobiphenyl* | *127* | | *ug/kg dry* | *125* | | *102* | *30-170* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805052 - EPA 5030B** | | | | | | | | | | |
| **Blank (G805052-BLK1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-butyl ether | ND | 5.00 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *50.2* | | *ug/L* | *50.0* | | *100* | *60-129* | | | |
| *Surrogate: Dibromofluoromethane* | *50.2* | | *ug/L* | *50.0* | | *100* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *48.0* | | *ug/L* | *50.0* | | *96* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *48.0* | | *ug/L* | *50.0* | | *96* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *50.6* | | *ug/L* | *50.0* | | *101* | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *50.6* | | *ug/L* | *50.0* | | *101* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805052 - EPA 5030B** | | | | | | | | | | |
| **LCS (G805052-BS1)** | | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 35 | 5 | ug/L | 50.0 | | 71 | 56-135 | | | |
| Benzene | 47 | 5 | ug/L | 50.0 | | 95 | 71-137 | | | |
| Trichloroethene | 50 | 5 | ug/L | 50.0 | | 99 | 70-138 | | | |
| Toluene | 47 | 5 | ug/L | 50.0 | | 94 | 71-145 | | | |
| Chlorobenzene | 46 | 5 | ug/L | 50.0 | | 91 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *42.8* | | *ug/L* | *50.0* | | *86* | *60-129* | | | |
| *Surrogate: Dibromofluoromethane* | *42.8* | | *ug/L* | *50.0* | | *86* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *51.6* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.6* | | *ug/L* | *50.0* | | *103* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *52.7* | | *ug/L* | *50.0* | | *105* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *52.7* | | *ug/L* | *50.0* | | *105* | *60-127* | | | |
| **Matrix Spike (G805052-MS1)** | **Source: 8051301-18** | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 40 | 5 | ug/L | 50.0 | ND | 81 | 56-150 | | | |
| Benzene | 54 | 5 | ug/L | 50.0 | 0.3 | 107 | 71-165 | | | |
| Trichloroethene | 51 | 5 | ug/L | 50.0 | ND | 102 | 70-138 | | | |
| Toluene | 50 | 5 | ug/L | 50.0 | 0.4 | 100 | 71-145 | | | |
| Chlorobenzene | 48 | 5 | ug/L | 50.0 | ND | 95 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *50.8* | | *ug/L* | *50.0* | | *102* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *50.8* | | *ug/L* | *50.0* | | *102* | *60-129* | | | |
| *Surrogate: Toluene-d8* | *51.1* | | *ug/L* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *51.1* | | *ug/L* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.9* | | *ug/L* | *50.0* | | *108* | *60-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53.9* | | *ug/L* | *50.0* | | *108* | *60-127* | | | |
| **Matrix Spike Dup (G805052-MSD1)** | **Source: 8051301-18** | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| 1,1-Dichloroethylene | 38 | 5 | ug/L | 50.0 | ND | 76 | 56-150 | 6 | 20 | |
| Benzene | 51 | 5 | ug/L | 50.0 | 0.3 | 102 | 71-165 | 5 | 20 | |
| Trichloroethene | 50 | 5 | ug/L | 50.0 | ND | 99 | 70-138 | 3 | 20 | |
| Toluene | 48 | 5 | ug/L | 50.0 | 0.4 | 95 | 71-145 | 5 | 20 | |
| Chlorobenzene | 46 | 5 | ug/L | 50.0 | ND | 92 | 72-143 | 4 | 20 | |
| *Surrogate: Dibromofluoromethane* | *50.6* | | *ug/L* | *50.0* | | *101* | *60-145* | | | |
| *Surrogate: Dibromofluoromethane* | *50.6* | | *ug/L* | *50.0* | | *101* | *60-129* | | | |
| *Surrogate: Toluene-d8* | *50.0* | | *ug/L* | *50.0* | | *100* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *50.0* | | *ug/L* | *50.0* | | *100* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *54.0* | | *ug/L* | *50.0* | | *108* | *60-127* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *54.0* | | *ug/L* | *50.0* | | *108* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805060 - EPA 5035** | | | | | | | | | | |
| **Blank (G805060-BLK1)** | | | | Prepared & Analyzed: 19-May-08 | | | | | | |
| Chloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Vinyl chloride | ND | 2 | ug/kg wet | | | | | | | |
| Bromomethane | ND | 5 | ug/kg wet | | | | | | | |
| Chloroethane | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Acetone | ND | 50 | ug/kg wet | | | | | | | |
| Carbon disulfide | ND | 5 | ug/kg wet | | | | | | | |
| Methylene Chloride | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Butanone | ND | 5 | ug/kg wet | | | | | | | |
| Chloroform | ND | 5 | ug/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Trichloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/kg wet | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/kg wet | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Hexanone | ND | 5 | ug/kg wet | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Chlorobenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Styrene | ND | 5 | ug/kg wet | | | | | | | |
| Bromoform | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *47.6* | | *ug/kg wet* | *50.0* | | *95* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *47.6* | | *ug/kg wet* | *50.0* | | *95* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *50.5* | | *ug/kg wet* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *50.5* | | *ug/kg wet* | *50.0* | | *101* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *50.8* | | *ug/kg wet* | *50.0* | | *102* | *45-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805060 - EPA 5035** | | | | | | | | | | |
| **Blank (G805060-BLK1)** | | | | Prepared & Analyzed: 19-May-08 | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *50.8* | | *ug/kg wet* | *50.0* | | *102* | *45-145* | | | |
| **LCS (G805060-BS1)** | | | | Prepared & Analyzed: 19-May-08 | | | | | | |
| 1,1-Dichloroethylene | 61 | 5 | ug/kg wet | 50.0 | | 123 | 35-155 | | | |
| Benzene | 52 | 5 | ug/kg wet | 50.0 | | 104 | 35-150 | | | |
| Benzene | 52 | 5 | ug/kg wet | 50.0 | | 104 | 35-150 | | | |
| Trichloroethene | 61 | 5 | ug/kg wet | 50.0 | | 121 | 42-135 | | | |
| Toluene | 58 | 5 | ug/kg wet | 50.0 | | 116 | 40-151 | | | |
| Toluene | 58 | 5 | ug/kg wet | 50.0 | | 116 | 40-151 | | | |
| Chlorobenzene | 56 | 5 | ug/kg wet | 50.0 | | 112 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *32.3* | | *ug/kg wet* | *50.0* | | *65* | *45-145* | | | |
| *Surrogate: Dibromofluoromethane* | *32.3* | | *ug/kg wet* | *50.0* | | *65* | *45-155* | | | |
| *Surrogate: Toluene-d8* | *50.8* | | *ug/kg wet* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: Toluene-d8* | *50.8* | | *ug/kg wet* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *51.1* | | *ug/kg wet* | *50.0* | | *102* | *45-145* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *51.1* | | *ug/kg wet* | *50.0* | | *102* | *45-127* | | | |
| **Matrix Spike (G805060-MS1)** | **Source: 8051101-16** | | | Prepared & Analyzed: 19-May-08 | | | | | | |
| 1,1-Dichloroethylene | 66 | 5 | ug/kg dry | 60.8 | ND | 109 | 35-155 | | | |
| Benzene | 44 | 5 | ug/kg dry | 60.8 | ND | 72 | 35-150 | | | |
| Trichloroethene | 38 | 5 | ug/kg dry | 60.8 | 2 | 60 | 42-166 | | | |
| Toluene | 37 | 5 | ug/kg dry | 60.8 | ND | 61 | 40-151 | | | |
| Chlorobenzene | 27 | 5 | ug/kg dry | 60.8 | ND | 45 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *56.5* | | *ug/kg dry* | *60.8* | | *93* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *63.4* | | *ug/kg dry* | *60.8* | | *104* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *62.6* | | *ug/kg dry* | *60.8* | | *103* | *45-145* | | | |
| **Matrix Spike Dup (G805060-MSD1)** | **Source: 8051101-16** | | | Prepared & Analyzed: 19-May-08 | | | | | | |
| 1,1-Dichloroethylene | 75 | 5 | ug/kg dry | 60.8 | ND | 124 | 35-155 | 13 | 30 | |
| Benzene | 47 | 5 | ug/kg dry | 60.8 | ND | 78 | 35-150 | 8 | 30 | |
| Trichloroethene | 43 | 5 | ug/kg dry | 60.8 | 2 | 67 | 42-166 | 12 | 30 | |
| Toluene | 41 | 5 | ug/kg dry | 60.8 | ND | 68 | 40-151 | 10 | 30 | |
| Chlorobenzene | 30 | 5 | ug/kg dry | 60.8 | ND | 49 | 34-158 | 9 | 30 | |
| *Surrogate: Dibromofluoromethane* | *55.7* | | *ug/kg dry* | *60.8* | | *92* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *63.8* | | *ug/kg dry* | *60.8* | | *105* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *62.3* | | *ug/kg dry* | *60.8* | | *102* | *45-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805065 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805065-BLK1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| 3/4-Methylphenol | ND | 830 | ug/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 660 | ug/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 1100 | ug/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 150 | ug/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 107 | ug/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 112 | ug/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 660 | ug/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 660 | ug/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 116 | ug/kg wet | | | | | | | |
| 2-Methylphenol | ND | 660 | ug/kg wet | | | | | | | |
| 2-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 660 | ug/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 106 | ug/kg wet | | | | | | | |
| 3-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | 3300 | ug/kg wet | | | | | | | |
| 4-Bromophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| 4-Chloro-3-methylphenol | ND | 1300 | ug/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 1300 | ug/kg wet | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | 660 | ug/kg wet | | | | | | | |
| 4-Nitroaniline | ND | 3300 | ug/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 148 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 69.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 298 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 68.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 230 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 205 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 122 | ug/kg wet | | | | | | | |
| Benzyl alcohol | ND | 1300 | ug/kg wet | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroethyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | 660 | ug/kg wet | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Butyl benzyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Carbazole | ND | 131 | ug/kg wet | | | | | | | |
| Chrysene | ND | 94.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 174 | ug/kg wet | | | | | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805065 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805065-BLK1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| Dibenzofuran | ND | 219 | ug/kg wet | | | | | | | |
| Diethyl phthalate | ND | 660 | ug/kg wet | | | | | | | |
| Dimethyl phthalate | ND | 3300 | ug/kg wet | | | | | | | |
| Di-n-butyl phthalate | ND | 500 | ug/kg wet | | | | | | | |
| Di-n-octyl phthalate | ND | 860 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 94.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 136 | ug/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 66.0 | ug/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 660 | ug/kg wet | | | | | | | |
| Hexachlorocyclopentadiene | ND | 1100 | ug/kg wet | | | | | | | |
| Hexachloroethane | ND | 132 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 178 | ug/kg wet | | | | | | | |
| Isophorone | ND | 660 | ug/kg wet | | | | | | | |
| Naphthalene | ND | 86.0 | ug/kg wet | | | | | | | |
| Nitrobenzene | ND | 232 | ug/kg wet | | | | | | | |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg wet | | | | | | | |
| N-Nitrosodiphenylamine | ND | 670 | ug/kg wet | | | | | | | |
| Pentachlorophenol | ND | 3300 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 122 | ug/kg wet | | | | | | | |
| Phenol | ND | 660 | ug/kg wet | | | | | | | |
| Pyrene | ND | 66.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *6060* | | *ug/kg wet* | *10000* | | *61* | *30-135* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *10400* | | *ug/kg wet* | *15000* | | *69* | *30-123* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *9760* | | *ug/kg wet* | *15000* | | *65* | *33-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6460* | | *ug/kg wet* | *10000* | | *65* | *43-125* | | | |
| *Surrogate: 2-Fluorophenol* | *10200* | | *ug/kg wet* | *15000* | | *68* | *21-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5200* | | *ug/kg wet* | *10000* | | *52* | *30-125* | | | |
| *Surrogate: Phenol-d5* | *9970* | | *ug/kg wet* | *15000* | | *66* | *25-135* | | | |
| *Surrogate: Terphenyl-d14* | *7700* | | *ug/kg wet* | *10000* | | *77* | *33-127* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805065 - EPA 3545 MS** | | | | | | | | | | |
| **LCS (G805065-BS1)** | | | | Prepared: 19-May-08 Analyzed: 20-May-08 | | | | | | |
| 1,2,4-Trichlorobenzene | 6950 | 660 | ug/kg wet | 10000 | | 69 | 20-125 | | | |
| 1,4-Dichlorobenzene | 6540 | 660 | ug/kg wet | 10000 | | 65 | 20-125 | | | |
| 2,4-Dinitrotoluene | 8150 | 107 | ug/kg wet | 10000 | | 82 | 20-125 | | | |
| 2-Chlorophenol | 12000 | 660 | ug/kg wet | 15000 | | 80 | 20-125 | | | |
| 4-Chloro-3-methylphenol | 10700 | 1300 | ug/kg wet | 15000 | | 71 | 20-125 | | | |
| 4-Nitrophenol | 14800 | 3300 | ug/kg wet | 15000 | | 99 | 30-140 | | | |
| Acenaphthene | 7350 | 148 | ug/kg wet | 10000 | | 74 | 20-125 | | | |
| N-Nitrosodi-n-propylamine | 5740 | 330 | ug/kg wet | 10000 | | 57 | 20-125 | | | |
| Pentachlorophenol | 15400 | 3300 | ug/kg wet | 15000 | | 102 | 20-125 | | | |
| Phenol | 11500 | 660 | ug/kg wet | 15000 | | 76 | 20-125 | | | |
| Pyrene | 8580 | 66.0 | ug/kg wet | 10000 | | 86 | 30-135 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *5430* | | *ug/kg wet* | *10000* | | *54* | *30-135* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *8990* | | *ug/kg wet* | *15000* | | *60* | *30-123* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *8990* | | *ug/kg wet* | *15000* | | *60* | *33-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *5880* | | *ug/kg wet* | *10000* | | *59* | *43-125* | | | |
| *Surrogate: 2-Fluorophenol* | *9230* | | *ug/kg wet* | *15000* | | *62* | *21-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *4730* | | *ug/kg wet* | *10000* | | *47* | *30-125* | | | |
| *Surrogate: Phenol-d5* | *9140* | | *ug/kg wet* | *15000* | | *61* | *25-135* | | | |
| *Surrogate: Terphenyl-d14* | *6780* | | *ug/kg wet* | *10000* | | *68* | *33-127* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **Blank (G805055-BLK1)** | | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.1* | | *ug/L* | *10.0* | | *101* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.53* | | *ug/L* | *10.0* | | *55* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.26* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.94* | | *ug/L* | *10.0* | | *79* | *35-125* | | | |
| **Blank (G805055-BLK2)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.90* | | *ug/L* | *10.0* | | *99* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.58* | | *ug/L* | *10.0* | | *56* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.00* | | *ug/L* | *10.0* | | *60* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.00* | | *ug/L* | *10.0* | | *80* | *35-125* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **LCS (G805055-BS1)** | | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Acenaphthene | 8.14 | 2.50 | ug/L | 10.0 | | 81 | 46-128 | | | |
| Pyrene | 9.04 | 1.50 | ug/L | 10.0 | | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.9* | | *ug/L* | *10.0* | | *109* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.02* | | *ug/L* | *10.0* | | *60* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.72* | | *ug/L* | *10.0* | | *67* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.11* | | *ug/L* | *10.0* | | *81* | *35-125* | | | |
| **LCS (G805055-BS2)** | | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.56 | 2.50 | ug/L | 10.0 | | 76 | 46-128 | | | |
| Pyrene | 9.02 | 1.50 | ug/L | 10.0 | | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.1* | | *ug/L* | *10.0* | | *101* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.66* | | *ug/L* | *10.0* | | *57* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.02* | | *ug/L* | *10.0* | | *60* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.45* | | *ug/L* | *10.0* | | *84* | *35-125* | | | |
| **Matrix Spike (G805055-MS1)** | **Source: 8051201-09** | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Acenaphthene | 8.03 | 2.50 | ug/L | 10.0 | 0.04 | 80 | 46-128 | | | |
| Pyrene | 9.03 | 1.50 | ug/L | 10.0 | 0.05 | 90 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.18* | | *ug/L* | *10.0* | | *92* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.36* | | *ug/L* | *10.0* | | *54* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.19* | | *ug/L* | *10.0* | | *62* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.07* | | *ug/L* | *10.0* | | *81* | *35-125* | | | |
| **Matrix Spike (G805055-MS2)** | **Source: 8051301-18** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.83 | 2.50 | ug/L | 10.0 | 0.01 | 78 | 46-128 | | | |
| Pyrene | 8.80 | 1.50 | ug/L | 10.0 | 0.02 | 88 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.91* | | *ug/L* | *10.0* | | *99* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.76* | | *ug/L* | *10.0* | | *58* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.27* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.88* | | *ug/L* | *10.0* | | *79* | *35-125* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805055 - EPA 3510C_MS** | | | | | | | | | | |
| **Matrix Spike Dup (G805055-MSD1)** | **Source: 8051201-09** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 8.82 | 2.50 | ug/L | 10.0 | 0.04 | 88 | 46-128 | 9 | 31 | |
| Pyrene | 9.51 | 1.50 | ug/L | 10.0 | 0.05 | 95 | 26-127 | 5 | 31 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *11.3* | | *ug/L* | *10.0* | | *113* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.18* | | *ug/L* | *10.0* | | *62* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.95* | | *ug/L* | *10.0* | | *70* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *8.34* | | *ug/L* | *10.0* | | *83* | *35-125* | | | |
| **Matrix Spike Dup (G805055-MSD2)** | **Source: 8051301-18** | | | Prepared: 17-May-08 Analyzed: 18-May-08 | | | | | | |
| Acenaphthene | 7.97 | 2.50 | ug/L | 10.0 | 0.01 | 80 | 46-128 | 2 | 31 | |
| Pyrene | 8.70 | 1.50 | ug/L | 10.0 | 0.02 | 87 | 26-127 | 1 | 31 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *10.5* | | *ug/L* | *10.0* | | *105* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.98* | | *ug/L* | *10.0* | | *60* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.34* | | *ug/L* | *10.0* | | *63* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.69* | | *ug/L* | *10.0* | | *77* | *35-125* | | | |
| **Batch G805076 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G805076-BLK1)** | | | | Prepared & Analyzed: 20-May-08 | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 33.0 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 33.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 83.0 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg wet | | | | | | | |
| Chrysene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1190* | | *ug/kg wet* | *1000* | | *119* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *725* | | *ug/kg wet* | *1000* | | *72* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *769* | | *ug/kg wet* | *1000* | | *77* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *950* | | *ug/kg wet* | *1000* | | *95* | *25-130* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805076 - EPA 3545 MS** | | | | | | | | | | |
| **LCS (G805076-BS1)** | | | | Prepared & Analyzed: 20-May-08 | | | | | | |
| Acenaphthene | 793 | 50.0 | ug/kg wet | 1000 | | 79 | 31-137 | | | |
| Pyrene | 1040 | 50.0 | ug/kg wet | 1000 | | 104 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *998* | | *ug/kg wet* | *1000* | | *100* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *595* | | *ug/kg wet* | *1000* | | *60* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *640* | | *ug/kg wet* | *1000* | | *64* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *913* | | *ug/kg wet* | *1000* | | *91* | *25-130* | | | |
| **Matrix Spike (G805076-MS1)** | **Source: 8051303-03** | | | Prepared: 20-May-08 Analyzed: 21-May-08 | | | | | | |
| Acenaphthene | 704 | 50.0 | ug/kg dry | 1070 | 4.27 | 66 | 31-137 | | | |
| Pyrene | 1120 | 50.0 | ug/kg dry | 1070 | 84.4 | 97 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *846* | | *ug/kg dry* | *1070* | | *79* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *533* | | *ug/kg dry* | *1070* | | *50* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *571* | | *ug/kg dry* | *1070* | | *53* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *879* | | *ug/kg dry* | *1070* | | *82* | *25-130* | | | |
| **Matrix Spike (G805076-MS2)** | **Source: 8051303-05** | | | Prepared: 20-May-08 Analyzed: 21-May-08 | | | | | | |
| Acenaphthene | 636 | 50.0 | ug/kg dry | 1060 | 1.06 | 60 | 31-137 | | | |
| Pyrene | 1100 | 50.0 | ug/kg dry | 1060 | 4.26 | 103 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *735* | | *ug/kg dry* | *1060* | | *69* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *460* | | *ug/kg dry* | *1060* | | *43* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *516* | | *ug/kg dry* | *1060* | | *48* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *915* | | *ug/kg dry* | *1060* | | *86* | *25-130* | | | |
| **Matrix Spike Dup (G805076-MSD1)** | **Source: 8051303-03** | | | Prepared: 20-May-08 Analyzed: 21-May-08 | | | | | | |
| Acenaphthene | 652 | 50.0 | ug/kg dry | 1070 | 4.27 | 61 | 31-137 | 8 | 25 | |
| Pyrene | 962 | 50.0 | ug/kg dry | 1070 | 84.4 | 82 | 35-142 | 17 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *817* | | *ug/kg dry* | *1070* | | *77* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *489* | | *ug/kg dry* | *1070* | | *46* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *546* | | *ug/kg dry* | *1070* | | *51* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *741* | | *ug/kg dry* | *1070* | | *69* | *25-130* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G805076 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike Dup (G805076-MSD2)** | **Source: 8051303-05** | | | Prepared: 20-May-08 Analyzed: 21-May-08 | | | | | | |
| Acenaphthene | 550 | 50.0 | ug/kg dry | 1060 | 1.06 | 52 | 31-137 | 15 | 25 | |
| Pyrene | 821 | 50.0 | ug/kg dry | 1060 | 4.26 | 77 | 35-142 | 29 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *619* | | *ug/kg dry* | *1060* | | *58* | *50-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *377* | | *ug/kg dry* | *1060* | | *35* | *26-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *430* | | *ug/kg dry* | *1060* | | *40* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *680* | | *ug/kg dry* | *1060* | | *64* | *25-130* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## STAT Analysis Corp

## D2974 - Quality Control

## STAT Analysis Corp

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch R44677 - D2974** | | | | | | | | | | |
| **LCS (R44677-LCS1)** | | | | Prepared: 15-May-08 Analyzed: 16-May-08 | | | | | | |
| Percent Moisture | 4.82 | 0.01 | wt% | 5 | | 96.4 | 80-120 | | | |
| **LCS (R44677-LCS2)** | | | | Prepared: 15-May-08 Analyzed: 16-May-08 | | | | | | |
| Percent Moisture | 99.78 | 0.01 | wt% | 99.8 | | 100 | 80-120 | | | |
| **MBLK (R44677-MBLK)** | | | | Prepared: 15-May-08 Analyzed: 16-May-08 | | | | | | |
| Percent Moisture | ND | 0.01 | wt% | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## SW9012A - Quality Control

## STAT Analysis Corp

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35189 - SW9012A** | | | | | | | | | | |
| **LCS (35189-LCS)** | | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Cyanide | 9.726 | 0.25 | mg/Kg-dry | 10 | | 97.3 | 90-110 | | | |
| **MBLK (35189-MBLK)** | | | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Cyanide | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| **MS (35189-MS08)** | | **Source: 8051501-08** | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Cyanide | 11.46 | 0.33 | mg/Kg-dry | 13.05 | 0.1359 | 86.8 | 75-125 | | | |
| **MSD (35189-MSD08)** | | **Source: 8051501-08** | | Prepared & Analyzed: 17-May-08 | | | | | | |
| Cyanide | 11.85 | 0.33 | mg/Kg-dry | 13.05 | 0.1359 | 89.7 | 75-125 | 3.30 | 20 | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## SW9045C - Quality Control

## STAT Analysis Corp

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch R44697 - SW9045C** | | | | | | | | | | |
| **DUP (R44697-DUP08)** | **Source: 8051501-08** | | | Prepared & Analyzed: 16-May-08 | | | | | | |
| pH | 7.75 | 0 | pH Units | | 8 | | - | 2.67 | 20 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 12-Jun-08 18:02 |

## Notes and Definitions

| | |
|---|---|
| S | Spike Recovery outside accepted recovery limits |
| J | Analyte detected below quantitation limits |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

June 26, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8061301

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-U14-6-SO-0102 | 8061301-01 | Soil | 12-Jun-08 11:17 | 12-Jun-08 19:10 |
| CS-U14-6-SO-0406 | 8061301-02 | Soil | 12-Jun-08 11:20 | 12-Jun-08 19:10 |
| CS-I18-6-SO-0102 | 8061301-03 | Soil | 12-Jun-08 13:26 | 12-Jun-08 19:10 |
| CS-I18-6-SO-0405 | 8061301-04 | Soil | 12-Jun-08 13:30 | 12-Jun-08 19:10 |
| CS-U4-7-SO-0102 | 8061301-05 | Soil | 12-Jun-08 13:10 | 12-Jun-08 19:10 |
| CS-U4-7-SO-0405 | 8061301-06 | Soil | 12-Jun-08 13:13 | 12-Jun-08 19:10 |
| CS-U4-6-SO-0405 | 8061301-07 | Soil | 12-Jun-08 14:02 | 12-Jun-08 19:10 |
| CS-U4-6-SO-0002 | 8061301-08 | Soil | 12-Jun-08 14:00 | 12-Jun-08 19:10 |
| CS-I18-5-SO-0506 | 8061301-09 | Soil | 12-Jun-08 13:48 | 12-Jun-08 19:10 |
| CS-I18-5-SO-0102 | 8061301-10 | Soil | 12-Jun-08 13:45 | 12-Jun-08 19:10 |
| CS-I19-4-SO-0809 | 8061301-11 | Soil | 12-Jun-08 09:22 | 12-Jun-08 19:10 |
| CS-I19-4-SO-0102 | 8061301-12 | Soil | 12-Jun-08 09:13 | 12-Jun-08 19:10 |
| CS-I19-3-SO-0809 | 8061301-13 | Soil | 12-Jun-08 08:20 | 12-Jun-08 19:10 |
| CS-I19-3-SO-0002 | 8061301-14 | Soil | 12-Jun-08 08:15 | 12-Jun-08 19:10 |
| CS-I19-5-SO-0102 | 8061301-15 | Soil | 12-Jun-08 09:40 | 12-Jun-08 19:10 |
| CS-I19-5-SO-0810 | 8061301-16 | Soil | 12-Jun-08 09:46 | 12-Jun-08 19:10 |
| CS-I19-6-SO-0809 | 8061301-17 | Soil | 12-Jun-08 10:09 | 12-Jun-08 19:10 |
| CS-I19-6-SO-0001 | 8061301-18 | Soil | 12-Jun-08 09:59 | 12-Jun-08 19:10 |
| Trip Blank | 8061301-19 | Water | 12-Jun-08 00:00 | 12-Jun-08 19:10 |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U14-6-SO-0102**

**Lab Sample ID: 8061301-01 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **65.2** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **80.3** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **250** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| **Fluorene** | **168** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **3120** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| **Anthracene** | **728** | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **5840** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| **Pyrene** | **5940** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| **Chrysene** | **2920** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **1070** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 13-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *76 %* | *22-135* | | *13-Jun-08* | *13-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *51 %* | *25-135* | | *13-Jun-08* | *13-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *50 %* | *25-130* | | *13-Jun-08* | *13-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *25-130* | | *13-Jun-08* | *13-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.63** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **85.9** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U14-6-SO-0102**

**Lab Sample ID: 8061301-01 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **14.6** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **13** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **230** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Cadmium** | **1.2** | 0.54 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **15** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **1000** | 0.54 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Selenium** | **1.7** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **2.2** | 0.55 | mg/Kg-dry | 20 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U14-6-SO-0406**

**Lab Sample ID: 8061301-02 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **52.3** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *94 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *62 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *56 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *68 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.58** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **91.7** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U14-6-SO-0406**

**Lab Sample ID: 8061301-02 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **6.1** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **4.3** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **3** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **2.6** | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.026 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I18-6-SO-0102**

**Lab Sample ID: 8061301-03 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *92 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *64 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *59 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *77 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.27** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **92.5** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I18-6-SO-0102**

**Lab Sample ID: 8061301-03 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **11.3** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **20** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **190** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Cadmium** | **1.7** | 0.56 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **16** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **390** | 0.56 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.45** | 0.028 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I18-6-SO-0405**

**Lab Sample ID: 8061301-04 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *102 %* | *45-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *84 %* | *45-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I18-6-SO-0405**

**Lab Sample ID: 8061301-04 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **79.7** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **55.8** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **78.6** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluorene** | **64.9** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **1650** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Anthracene** | **363** | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **2670** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Pyrene** | **2570** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Chrysene** | **1420** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **527** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *72 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *48 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *46 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *70 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.06** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **87.8** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I18-6-SO-0405**

**Lab Sample ID: 8061301-04 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **6.3** | 0.01 | wt% | 1 | 19-Jun-08 | 20-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **2** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **16** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **6** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **4.3** | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.026 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U4-7-SO-0102**

**Lab Sample ID: 8061301-05 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| **Tetrachloroethene** | **8** | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *103 %* | *45-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *78 %* | *45-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U4-7-SO-0102**

**Lab Sample ID: 8061301-05 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **152** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **115** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **395** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluorene** | **375** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **6090** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Anthracene** | **1530** | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **8670** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Pyrene** | **8030** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Chrysene** | **3500** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **1240** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *64 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *47 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *45 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *71 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.19** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **75.0** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U4-7-SO-0102**

**Lab Sample ID: 8061301-05 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.0** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **6** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **110** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Cadmium** | **0.61** | 0.54 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **16** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **310** | 0.54 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.96** | 0.14 | mg/Kg-dry | 5 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U4-7-SO-0405**

**Lab Sample ID: 8061301-06 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| **Tetrachloroethene** | **6** | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *101 %* | *45-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *96 %* | *62-129* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *81 %* | *45-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U4-7-SO-0405**

**Lab Sample ID: 8061301-06 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **44.8** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *66 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *46 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *43 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *72 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.52** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **91.6** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U4-7-SO-0405**

**Lab Sample ID: 8061301-06 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **4.2** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.94 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **6.5** | 0.94 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.47 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **4.4** | 0.94 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **2.9** | 0.47 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 0.94 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 0.94 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.025 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U4-6-SO-0405**

**Lab Sample ID: 8061301-07 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **57.9** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **418** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Anthracene** | **173** | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **848** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Pyrene** | **772** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Chrysene** | **618** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **473** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *93 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *68 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *63 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *69 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **9.92** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **96.8** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U4-6-SO-0405**

**Lab Sample ID: 8061301-07 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **7.2** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **1.1** | 0.94 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **6.8** | 0.94 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.47 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **4.1** | 0.94 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **7.4** | 0.47 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 0.94 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 0.94 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.073** | 0.025 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U4-6-SO-0002**

**Lab Sample ID: 8061301-08 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **62.8** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **58.3** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluorene** | **50.4** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **1050** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Anthracene** | **321** | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **3250** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Pyrene** | **3010** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Chrysene** | **1730** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **692** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *73 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *49 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *48 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *69 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.98** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **89.2** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-U4-6-SO-0002**

**Lab Sample ID: 8061301-08 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **10.8** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **5.3** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **91** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Cadmium** | **0.6** | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **8.3** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **240** | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.68** | 0.027 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I18-5-SO-0506**

**Lab Sample ID: 8061301-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **40.4** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *109 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *76 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *64 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *72 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.01** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **74.3** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I18-5-SO-0506**

**Lab Sample ID: 8061301-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **6.9** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **1.9** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **12** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **4.7** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **8.3** | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.03** | 0.026 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I18-5-SO-0102**

**Lab Sample ID: 8061301-10 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **349** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **583** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Pyrene** | **628** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Chrysene** | **355** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **141** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *107 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *73 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *66 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **9.08** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **88.2** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I18-5-SO-0102**

**Lab Sample ID: 8061301-10 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **13.5** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **16** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **82** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Cadmium** | **2.6** | 0.53 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **12** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **460** | 0.53 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.18** | 0.029 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-4-SO-0809**

**Lab Sample ID: 8061301-11 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *74 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *55 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *58 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.86** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **84.7** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-4-SO-0809**

**Lab Sample ID: 8061301-11 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.5** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **1.2** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **3.1** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.54 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **2.7** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **2.6** | 0.54 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.027 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-4-SO-0102**

**Lab Sample ID: 8061301-12 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **279** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **128** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **622** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluorene** | **748** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **9400** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Anthracene** | **3780** | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **16700** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Pyrene** | **13600** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Chrysene** | **6360** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **1990** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *73 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *54 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *55 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.83** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **81.3** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-4-SO-0102**

**Lab Sample ID: 8061301-12 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **5.7** | 0.01 | wt% | 1 | 19-Jun-08 | 20-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **3.9** | 0.99 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **4.8** | 0.99 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.5 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **5.8** | 0.99 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **11** | 0.5 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 0.99 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 0.99 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.025 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-3-SO-0809**

**Lab Sample ID: 8061301-13 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **63.2** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Pyrene** | **54.5** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **88.2** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *81 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *58 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *56 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **9.11** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **91.8** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-3-SO-0809**

**Lab Sample ID: 8061301-13 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **8.9** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| Arsenic | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **4.7** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.5 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **3.4** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **3.1** | 0.5 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.027 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-3-SO-0002**

**Lab Sample ID: 8061301-14 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **232** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **123** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **52.5** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluorene** | **55.9** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **777** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Anthracene** | **276** | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **2680** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Pyrene** | **2620** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Chrysene** | **1730** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **874** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *60 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *45 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *47 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *73 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.41** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **89.5** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-3-SO-0002**

**Lab Sample ID: 8061301-14 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **11.4** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **5.6** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **38** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Cadmium** | **0.53** | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **8.9** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **140** | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.49** | 0.027 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-5-SO-0102**

**Lab Sample ID: 8061301-15 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **62.5** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **220** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Anthracene** | **104** | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **902** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Pyrene** | **788** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Chrysene** | **554** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **228** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *83 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *60 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *60 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *75 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.71** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **91.2** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-5-SO-0102**

**Lab Sample ID: 8061301-15 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **8.2** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **3.6** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **23** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.51 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **5.2** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **68** | 0.51 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.46** | 0.026 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-5-SO-0810**

**Lab Sample ID: 8061301-16 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *74 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *53 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *52 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *67 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **9.03** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **92.5** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-5-SO-0810**

**Lab Sample ID: 8061301-16 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **5.4** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **1.1** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **3.6** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **3.7** | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **3.3** | 0.52 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.024 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-6-SO-0809**

**Lab Sample ID: 8061301-17 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **67.2** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **77.1** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Pyrene** | **70.9** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *58 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *56 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *57 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *77 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.27** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **80.4** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-6-SO-0809**

**Lab Sample ID: 8061301-17 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **9.2** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **2.1** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **17** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.55 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **5.9** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **25** | 0.55 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.12** | 0.026 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-6-SO-0001**

**Lab Sample ID: 8061301-18 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **173** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **524** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **141** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluorene** | **161** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **2760** | 33.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Anthracene** | **972** | 83.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **8160** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Pyrene** | **7360** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Chrysene** | **4520** | 50.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **1770** | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 13-Jun-08 | 14-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *88 %* | *22-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *66 %* | *25-135* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *63 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *66 %* | *25-130* | | *13-Jun-08* | *14-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.17** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **67.6** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: CS-I19-6-SO-0001**

**Lab Sample ID: 8061301-18 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **15.6** | 0.01 | wt% | 1 | 19-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **30** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **120** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Cadmium** | **0.95** | 0.57 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Chromium** | **12** | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **320** | 0.57 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 20-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.97** | 0.14 | mg/Kg-dry | 5 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Client Sample ID: Trip Blank**

**Lab Sample ID: 8061301-19 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 0.2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *97 %* | *60-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *96 %* | *62-129* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *89 %* | *60-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

**Grace Analytical Lab, Inc.**

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806040 - EPA 5035** | | | | | | | | | | |
| **Blank (G806040-BLK1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| Chloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Vinyl chloride | ND | 2 | ug/kg wet | | | | | | | |
| Bromomethane | ND | 5 | ug/kg wet | | | | | | | |
| Chloroethane | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Acetone | ND | 50 | ug/kg wet | | | | | | | |
| Carbon disulfide | ND | 5 | ug/kg wet | | | | | | | |
| Methylene Chloride | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Butanone | ND | 5 | ug/kg wet | | | | | | | |
| Chloroform | ND | 5 | ug/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Trichloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/kg wet | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/kg wet | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Hexanone | ND | 5 | ug/kg wet | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Chlorobenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Styrene | ND | 5 | ug/kg wet | | | | | | | |
| Bromoform | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *49.0* | | *ug/kg wet* | *50.0* | | *98* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *48.2* | | *ug/kg wet* | *50.0* | | *96* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *44.8* | | *ug/kg wet* | *50.0* | | *90* | *45-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806040 - EPA 5035** | | | | | | | | | | |
| **LCS (G806040-BS1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| 1,1-Dichloroethylene | 32 | 5 | ug/kg wet | 50.0 | | 63 | 35-155 | | | |
| Benzene | 48 | 5 | ug/kg wet | 50.0 | | 97 | 35-150 | | | |
| Trichloroethene | 26 | 5 | ug/kg wet | 50.0 | | 52 | 35-135 | | | |
| Toluene | 34 | 5 | ug/kg wet | 50.0 | | 69 | 40-151 | | | |
| Chlorobenzene | 40 | 5 | ug/kg wet | 50.0 | | 80 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *46.4* | | *ug/kg wet* | *50.0* | | *93* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *51.0* | | *ug/kg wet* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.0* | | *ug/kg wet* | *50.0* | | *96* | *45-145* | | | |
| **Batch G806043 - EPA 5030B** | | | | | | | | | | |
| **Blank (G806043-BLK1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 0.2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806043 - EPA 5030B** | | | | | | | | | | |
| **Blank (G806043-BLK1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *72.4* | | *ug/L* | *50.0* | | *145* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *50.1* | | *ug/L* | *50.0* | | *100* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *41.1* | | *ug/L* | *50.0* | | *82* | *60-145* | | | |
| **LCS (G806043-BS1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| 1,1-Dichloroethylene | 35 | 5 | ug/L | 50.0 | | 70 | 56-135 | | | |
| Benzene | 61 | 5 | ug/L | 50.0 | | 122 | 71-137 | | | |
| Trichloroethene | 36 | 5 | ug/L | 50.0 | | 73 | 70-138 | | | |
| Toluene | 46 | 5 | ug/L | 50.0 | | 92 | 71-145 | | | |
| Chlorobenzene | 52 | 5 | ug/L | 50.0 | | 105 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *48.6* | | *ug/L* | *50.0* | | *97* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *50.9* | | *ug/L* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.0* | | *ug/L* | *50.0* | | *96* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806038 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G806038-BLK1)** | | | | Prepared & Analyzed: 13-Jun-08 | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 33.0 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 33.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 83.0 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg wet | | | | | | | |
| Chrysene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1050* | | *ug/kg wet* | *1000* | | *105* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *660* | | *ug/kg wet* | *1000* | | *66* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *609* | | *ug/kg wet* | *1000* | | *61* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *786* | | *ug/kg wet* | *1000* | | *79* | *25-130* | | | |
| **LCS (G806038-BS1)** | | | | Prepared & Analyzed: 13-Jun-08 | | | | | | |
| Acenaphthene | 723 | 50.0 | ug/kg wet | 1000 | | 72 | 31-137 | | | |
| Pyrene | 970 | 50.0 | ug/kg wet | 1000 | | 97 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *989* | | *ug/kg wet* | *1000* | | *99* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *630* | | *ug/kg wet* | *1000* | | *63* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *558* | | *ug/kg wet* | *1000* | | *56* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *793* | | *ug/kg wet* | *1000* | | *79* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806038 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike (G806038-MS1)** | **Source: 8061301-16** | | | Prepared: 13-Jun-08 Analyzed: 16-Jun-08 | | | | | | |
| Acenaphthene | 718 | 50.0 | ug/kg dry | 1080 | 2.16 | 66 | 31-137 | | | |
| Pyrene | 1080 | 50.0 | ug/kg dry | 1080 | 7.57 | 99 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *733* | | *ug/kg dry* | *1080* | | *68* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *568* | | *ug/kg dry* | *1080* | | *53* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *574* | | *ug/kg dry* | *1080* | | *53* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *843* | | *ug/kg dry* | *1080* | | *78* | *25-130* | | | |
| **Matrix Spike Dup (G806038-MSD1)** | **Source: 8061301-16** | | | Prepared: 13-Jun-08 Analyzed: 14-Jun-08 | | | | | | |
| Acenaphthene | 733 | 50.0 | ug/kg dry | 1080 | 2.16 | 68 | 31-137 | 2 | 25 | |
| Pyrene | 1090 | 50.0 | ug/kg dry | 1080 | 7.57 | 100 | 35-142 | 1 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *735* | | *ug/kg dry* | *1080* | | *68* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *589* | | *ug/kg dry* | *1080* | | *54* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *572* | | *ug/kg dry* | *1080* | | *53* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *877* | | *ug/kg dry* | *1080* | | *81* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

## STAT

## D2974 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch R45543 - D2974** | | | | | | | | | | |
| **DUP (DUP-R45543)** | | **Source: 8061301-18** | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | 17.85 | 0.01 | wt% | | 15.62 | | - | 13.3 | 20 | |
| **LCS (LCSSR45543)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | 4.4 | 0.01 | wt% | 5 | | 88 | 80-120 | | | |
| **LCS (LCSWR45543)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | 99.79 | 0.01 | wt% | 99.8 | | 100 | 80-120 | | | |
| **MBLK (MB-R45543)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | ND | 0.01 | wt% | | | | - | | | |
| **Batch R45580 - D2974** | | | | | | | | | | |
| **LCS (LCSSR45580)** | | | | Prepared: 19-Jun-08 Analyzed: 20-Jun-08 | | | | | | |
| Percent Moisture | 4.9 | 0.01 | wt% | 5 | | 98 | 80-120 | | | |
| **LCS (LCSWR45580)** | | | | Prepared: 19-Jun-08 Analyzed: 20-Jun-08 | | | | | | |
| Percent Moisture | 99.8 | 0.01 | wt% | 99.8 | | 100 | 80-120 | | | |
| **MBLK (MB-R45580)** | | | | Prepared: 19-Jun-08 Analyzed: 20-Jun-08 | | | | | | |
| Percent Moisture | ND | 0.01 | wt% | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

## SW6020 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35853 - SW3050B** | | | | | | | | | | |
| **LCS (LCS-35853)** | | | | Prepared & Analyzed: 20-Jun-08 | | | | | | |
| Arsenic | 26.2 | 0.5 | mg/Kg-dry | 25 | | 105 | 80-120 | | | |
| Barium | 27.42 | 0.5 | mg/Kg-dry | 25 | | 109 | 80-120 | | | |
| Cadmium | 26.84 | 0.25 | mg/Kg-dry | 25 | | 107 | 80-120 | | | |
| Chromium | 27.05 | 0.5 | mg/Kg-dry | 25 | | 108 | 80-120 | | | |
| Lead | 27.48 | 0.25 | mg/Kg-dry | 25 | | 110 | 80-120 | | | |
| Selenium | 26.22 | 0.5 | mg/Kg-dry | 25 | | 105 | 80-120 | | | |
| Silver | 11.22 | 0.5 | mg/Kg-dry | 10 | | 112 | 80-120 | | | |
| **MBLK (MB-35853)** | | | | Prepared & Analyzed: 20-Jun-08 | | | | | | |
| Arsenic | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Barium | 0.073 | 0.5 | mg/Kg-dry | | | | - | | | J |
| Cadmium | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| Chromium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Lead | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| Selenium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Silver | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| **MS (MS-35853)** | **Source: 8061301-09** | | | Prepared & Analyzed: 20-Jun-08 | | | | | | |
| Arsenic | 27.7 | 1 | mg/Kg-dry | 25.82 | 1.892 | 100 | 75-125 | | | |
| Barium | 37.73 | 1 | mg/Kg-dry | 25.82 | 12.13 | 99.1 | 75-125 | | | |
| Cadmium | 26.74 | 0.52 | mg/Kg-dry | 25.82 | ND | 104 | 75-125 | | | |
| Chromium | 32.15 | 1 | mg/Kg-dry | 25.82 | 4.718 | 106 | 75-125 | | | |
| Lead | 34.11 | 0.52 | mg/Kg-dry | 25.82 | 8.337 | 99.8 | 75-125 | | | |
| Selenium | 25.76 | 1 | mg/Kg-dry | 25.82 | 0.6831 | 97.1 | 75-125 | | | |
| Silver | 10.85 | 1 | mg/Kg-dry | 10.33 | ND | 105 | 75-125 | | | |
| **MSD (MSD-35853)** | **Source: 8061301-09** | | | Prepared & Analyzed: 20-Jun-08 | | | | | | |
| Arsenic | 28.31 | 1 | mg/Kg-dry | 25.82 | 1.892 | 102 | 75-125 | 2.16 | 20 | |
| Barium | 38.66 | 1 | mg/Kg-dry | 25.82 | 12.13 | 103 | 75-125 | 2.43 | 20 | |
| Cadmium | 27.11 | 0.52 | mg/Kg-dry | 25.82 | ND | 105 | 75-125 | 1.36 | 20 | |
| Chromium | 32.57 | 1 | mg/Kg-dry | 25.82 | 4.718 | 108 | 75-125 | 1.31 | 20 | |
| Lead | 34.96 | 0.52 | mg/Kg-dry | 25.82 | 8.337 | 103 | 75-125 | 2.45 | 20 | |
| Selenium | 26.99 | 1 | mg/Kg-dry | 25.82 | 0.6831 | 102 | 75-125 | 4.68 | 20 | |
| Silver | 11.09 | 1 | mg/Kg-dry | 10.33 | ND | 107 | 75-125 | 2.16 | 20 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 26-Jun-08 11:43 |

## Notes and Definitions

| | |
|---|---|
| O-04 | This sample was analyzed outside the EPA recommended holding time. |
| J | Analyte detected below quantitation limits |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

July 25, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8061302

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-U14-4-SO-0809D | 8061302-01 | Soil | 12-Jun-08 10:56 | 12-Jun-08 19:10 |
| CS-U14-4-SO-0809 | 8061302-02 | Soil | 12-Jun-08 10:55 | 12-Jun-08 19:10 |
| CS-U14-5-SO-0405 | 8061302-03 | Soil | 12-Jun-08 11:50 | 12-Jun-08 19:10 |
| CS-U14-4-SO-0102 | 8061302-04 | Soil | 12-Jun-08 10:47 | 12-Jun-08 19:10 |
| CS-U14-5-SO-0001 | 8061302-05 | Soil | 12-Jun-08 11:47 | 12-Jun-08 19:10 |
| CS-U14-3-SO-0102 | 8061302-06 | Soil | 12-Jun-08 11:04 | 12-Jun-08 19:10 |
| CS-U14-3-SO-0406 | 8061302-07 | Soil | 12-Jun-08 11:09 | 12-Jun-08 19:10 |
| CS-I19-2-SO-0102 | 8061302-08 | Soil | 12-Jun-08 08:40 | 12-Jun-08 19:10 |
| CS-I19-2-SO-0810 | 8061302-09 | Soil | 12-Jun-08 08:45 | 12-Jun-08 19:10 |
| Trip Blank | 8061302-10 | Water | 12-Jun-08 00:00 | 12-Jun-08 19:10 |
| CS-I18-3-SO-0406 | 8061302-11 | Soil | 12-Jun-08 15:58 | 12-Jun-08 19:10 |
| CS-I18-3-SO-0203 | 8061302-12 | Soil | 12-Jun-08 15:55 | 12-Jun-08 19:10 |
| CS-I1-3-SO-0103 | 8061302-13 | Soil | 12-Jun-08 14:54 | 12-Jun-08 19:10 |
| CS-I1-3-SO-0001 | 8061302-14 | Soil | 12-Jun-08 14:51 | 12-Jun-08 19:10 |
| CS-I1-2-SO-0102 | 8061302-15 | Soil | 12-Jun-08 15:10 | 12-Jun-08 19:10 |
| CS-I1-2-SO-0506 | 8061302-16 | Soil | 12-Jun-08 15:13 | 12-Jun-08 19:10 |
| CS-I18-2-SO-0103 | 8061302-17 | Soil | 12-Jun-08 16:04 | 12-Jun-08 19:10 |
| CS-I18-2-SO-0405 | 8061302-18 | Soil | 12-Jun-08 16:06 | 12-Jun-08 19:10 |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-4-SO-0809D**

**Lab Sample ID: 8061302-01 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *106 %* | *45-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *77 %* | *45-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-4-SO-0809D**

**Lab Sample ID: 8061302-01 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **1220** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **464** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **1030** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **1250** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **13800** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **2840** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **15600** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **16900** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **7480** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **2020** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *95 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *66 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *62 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *79 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.19** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **82.8** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-4-SO-0809D**

**Lab Sample ID: 8061302-01 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **17.8** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **9.6** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Barium** | **300** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Cadmium** | **1** | 0.59 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Chromium** | **14** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Lead** | **680** | 0.59 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Selenium** | **1.4** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.26** | 0.029 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-4-SO-0809**

**Lab Sample ID: 8061302-02 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *104 %* | *45-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *94 %* | *62-129* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *71 %* | *45-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-4-SO-0809**

**Lab Sample ID: 8061302-02 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **1670** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **1380** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **711** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **1580** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **18700** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **4380** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **29200** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **35800** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **12200** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **4350** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *103 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *71 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *66 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *77 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.00** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **74.5** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-4-SO-0809**

**Lab Sample ID: 8061302-02 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **14.1** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **7.7** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Barium** | **140** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Chromium** | **15** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Lead** | **210** | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.29** | 0.029 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-5-SO-0405**

**Lab Sample ID: 8061302-03 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *109 %* | *45-145* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *99 %* | *62-129* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *85 %* | *45-145* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-5-SO-0405**

**Lab Sample ID: 8061302-03 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **111** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **161** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **175** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *88 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *60 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *60 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *81 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.99** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **91.3** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-5-SO-0405**

**Lab Sample ID: 8061302-03 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **6.0** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **1.4** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Barium** | **5.6** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.53 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Chromium** | **2.6** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Lead** | **2.7** | 0.53 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.036** | 0.027 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-4-SO-0102**

**Lab Sample ID: 8061302-04 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **1190** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **1410** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **933** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **1270** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **12700** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **3780** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **22800** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **21200** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **11000** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **3530** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *90 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *63 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *59 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *77 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.14** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **85.2** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-4-SO-0102**

**Lab Sample ID: 8061302-04 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **11.8** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **2.3** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Barium** | **21** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.53 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Chromium** | **4** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Lead** | **74** | 0.53 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.054** | 0.027 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-5-SO-0001**

**Lab Sample ID: 8061302-05 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **159** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **547** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **193** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **236** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **2620** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **887** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **7780** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **7780** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **4640** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **1780** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *90 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *63 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *59 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *79 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.90** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **90.6** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-5-SO-0001**

**Lab Sample ID: 8061302-05 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **11.7** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **6.1** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Barium** | **98** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Cadmium** | **0.62** | 0.54 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Chromium** | **8.9** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Lead** | **210** | 0.54 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.35** | 0.027 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-3-SO-0102**

**Lab Sample ID: 8061302-06 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **457** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **826** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **422** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **565** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **6560** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **1850** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **10900** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **10600** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **5520** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **2020** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *90 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *62 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *57 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *75 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.08** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **80.3** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-3-SO-0102**

**Lab Sample ID: 8061302-06 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **26.5** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **19** | 1.3 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Barium** | **430** | 1.3 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Cadmium** | **3.4** | 0.64 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Chromium** | **18** | 1.3 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Lead** | **1000** | 0.64 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.3 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Silver | ND | 1.3 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **1.7** | 0.33 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-3-SO-0406**

**Lab Sample ID: 8061302-07 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **67.4** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **93.0** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **57.0** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **627** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **241** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **1010** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **987** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **541** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **295** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *107 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *76 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *70 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *79 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.11** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **86.0** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-U14-3-SO-0406**

**Lab Sample ID: 8061302-07 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.4** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **8.5** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Barium** | **190** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Cadmium** | **0.81** | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Chromium** | **9.9** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Lead** | **380** | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.56** | 0.026 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I19-2-SO-0102**

**Lab Sample ID: 8061302-08 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **70.2** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **149** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **87.0** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **401** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **401** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **295** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **135** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *106 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *73 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *81 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.54** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **89.7** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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ACCREDITED IN ACCORDANCE WITH nelac

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I19-2-SO-0102**

**Lab Sample ID: 8061302-08 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **11.1** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **7** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Barium** | **82** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Chromium** | **9.3** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Lead** | **310** | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **1.4** | 0.28 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I19-2-SO-0810**

**Lab Sample ID: 8061302-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **75.0** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **36.4** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **410** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **150** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **859** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **781** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **503** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **175** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *115 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *77 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *79 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.58** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **88.0** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I19-2-SO-0810**

**Lab Sample ID: 8061302-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **7.6** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **3.2** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Barium** | **44** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Chromium** | **11** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **Lead** | **62** | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 18-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.72** | 0.026 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: Trip Blank**

**Lab Sample ID: 8061302-10 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 0.2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *99 %* | *60-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *88 %* | *60-145* | | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I18-3-SO-0406**

**Lab Sample ID: 8061302-11 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **407** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **301** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **198** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **341** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **4620** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **1100** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **7040** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **6150** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **3230** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **1070** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *114 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *79 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *70 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *82 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **9.07** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **92.0** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I18-3-SO-0406**

**Lab Sample ID: 8061302-11 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **21.1** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **8.4** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **120** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **1.1** | 0.61 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **26** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **230** | 0.61 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Selenium** | **1.3** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.17** | 0.032 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I18-3-SO-0203**

**Lab Sample ID: 8061302-12 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **583** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **843** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **878** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **1210** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **19500** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **4640** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **30800** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **33500** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **15500** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **4860** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *76 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *54 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *54 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *84 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.06** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **84.6** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I18-3-SO-0203**

**Lab Sample ID: 8061302-12 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **14.3** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **9.4** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **160** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **1.2** | 0.58 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **13** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **610** | 0.58 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.57** | 0.028 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I1-3-SO-0103**

**Lab Sample ID: 8061302-13 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **168** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **340** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **183** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **293** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **3000** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **951** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **5380** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **4780** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **3720** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **1280** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *105 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *74 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *83 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **11.3** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **87.1** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I1-3-SO-0103**

**Lab Sample ID: 8061302-13 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **14.6** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **10** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **280** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **1.5** | 0.57 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **15** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **340** | 0.57 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.58** | 0.027 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I1-3-SO-0001**

**Lab Sample ID: 8061302-14 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **TCLP Metals by 6000/7000 Series Methods** | | | | | | | | |
| **Lead** | **0.0865** | 0.00500 | mg/L | 1 | 03-Jul-08 | 03-Jul-08 | 1311/ 7421 | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **171** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **309** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **249** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **352** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **4770** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **1320** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **8520** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **7460** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **4200** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **1400** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *94 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *63 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *65 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *82 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.36** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I1-3-SO-0001**

**Lab Sample ID: 8061302-14 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **85.8** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **14.2** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **13** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **470** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **1.7** | 0.58 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **50** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **1200** | 0.58 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.7** | 0.028 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I1-2-SO-0102**

**Lab Sample ID: 8061302-15 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **67.3** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **51.3** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **580** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **247** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **993** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **897** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **520** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **307** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *100 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *72 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *67 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *83 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **9.13** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **93.6** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I1-2-SO-0102**

**Lab Sample ID: 8061302-15 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **18.3** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **8.3** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **190** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **1.1** | 0.6 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **21** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **490** | 0.6 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.8** | 0.031 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I1-2-SO-0506**

**Lab Sample ID: 8061302-16 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *109 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *77 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *72 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *82 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | **O-04** |
| **pH** | **8.68** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **95.9** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I1-2-SO-0506**

**Lab Sample ID: 8061302-16 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **4.0** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **1.6** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **4.2** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.51 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **2.9** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **3** | 0.51 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.026 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I18-2-SO-0103**

**Lab Sample ID: 8061302-17 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **270** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **291** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **254** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **347** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **5040** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **1330** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **8140** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **7510** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **4120** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **1390** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *100 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *73 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *80 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **8.02** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **84.9** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I18-2-SO-0103**

**Lab Sample ID: 8061302-17 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.5** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **9.1** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **170** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **1.3** | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **16** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **390** | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.54** | 0.029 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I18-2-SO-0405**

**Lab Sample ID: 8061302-18 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **729** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **359** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **1230** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluorene** | **1420** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **12900** | 33.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Anthracene** | **3480** | 83.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **16400** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Pyrene** | **16500** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Chrysene** | **7550** | 50.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **2090** | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 17-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *100 %* | *22-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *70 %* | *25-135* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | *25-130* | | *17-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| **Classical Chemistry Parameters** | | | | | | | | |
| **pH** | **9.11** | | N/A | 1 | 13-Jun-08 | 13-Jun-08 | 9045C | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **87.9** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Client Sample ID: CS-I18-2-SO-0405**

**Lab Sample ID: 8061302-18 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.8** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **13** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **130** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **32** | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **15** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **470** | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Selenium** | **1.2** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.29** | 0.028 | mg/Kg-dry | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**Grace Analytical Lab, Inc.**

## TCLP Metals by 6000/7000 Series Methods - Quality Control

### Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G807010 - EPA 3010A** | | | | | | | | | | |
| **Blank (G807010-BLK1)** | | | | Prepared & Analyzed: 03-Jul-08 | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | | | | |
| **LCS (G807010-BS1)** | | | | Prepared & Analyzed: 03-Jul-08 | | | | | | |
| Lead | 0.836 | 0.100 | mg/L | 0.800 | | 104 | 80-120 | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806040 - EPA 5035** | | | | | | | | | | |
| **Blank (G806040-BLK1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| Chloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Vinyl chloride | ND | 2 | ug/kg wet | | | | | | | |
| Bromomethane | ND | 5 | ug/kg wet | | | | | | | |
| Chloroethane | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Acetone | ND | 50 | ug/kg wet | | | | | | | |
| Carbon disulfide | ND | 5 | ug/kg wet | | | | | | | |
| Methylene Chloride | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Butanone | ND | 5 | ug/kg wet | | | | | | | |
| Chloroform | ND | 5 | ug/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Trichloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/kg wet | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/kg wet | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Hexanone | ND | 5 | ug/kg wet | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Chlorobenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Styrene | ND | 5 | ug/kg wet | | | | | | | |
| Bromoform | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *49.0* | | *ug/kg wet* | *50.0* | | *98* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *48.2* | | *ug/kg wet* | *50.0* | | *96* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *44.8* | | *ug/kg wet* | *50.0* | | *90* | *45-145* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806040 - EPA 5035** | | | | | | | | | | |
| **LCS (G806040-BS1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| 1,1-Dichloroethylene | 32 | 5 | ug/kg wet | 50.0 | | 63 | 35-155 | | | |
| Benzene | 48 | 5 | ug/kg wet | 50.0 | | 97 | 35-150 | | | |
| Trichloroethene | 26 | 5 | ug/kg wet | 50.0 | | 52 | 35-135 | | | |
| Toluene | 34 | 5 | ug/kg wet | 50.0 | | 69 | 40-151 | | | |
| Chlorobenzene | 40 | 5 | ug/kg wet | 50.0 | | 80 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *46.4* | | *ug/kg wet* | *50.0* | | *93* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *51.0* | | *ug/kg wet* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.0* | | *ug/kg wet* | *50.0* | | *96* | *45-145* | | | |
| **Batch G806043 - EPA 5030B** | | | | | | | | | | |
| **Blank (G806043-BLK1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 0.2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806043 - EPA 5030B** | | | | | | | | | | |
| **Blank (G806043-BLK1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *72.4* | | *ug/L* | *50.0* | | *145* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *50.1* | | *ug/L* | *50.0* | | *100* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *41.1* | | *ug/L* | *50.0* | | *82* | *60-145* | | | |
| **LCS (G806043-BS1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| 1,1-Dichloroethylene | 35 | 5 | ug/L | 50.0 | | 70 | 56-135 | | | |
| Benzene | 61 | 5 | ug/L | 50.0 | | 122 | 71-137 | | | |
| Trichloroethene | 36 | 5 | ug/L | 50.0 | | 73 | 70-138 | | | |
| Toluene | 46 | 5 | ug/L | 50.0 | | 92 | 71-145 | | | |
| Chlorobenzene | 52 | 5 | ug/L | 50.0 | | 105 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *48.6* | | *ug/L* | *50.0* | | *97* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *50.9* | | *ug/L* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.0* | | *ug/L* | *50.0* | | *96* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806048 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G806048-BLK1)** | | | | Prepared & Analyzed: 17-Jun-08 | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 33.0 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 33.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 83.0 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg wet | | | | | | | |
| Chrysene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1030* | | *ug/kg wet* | *1000* | | *103* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *667* | | *ug/kg wet* | *1000* | | *67* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *671* | | *ug/kg wet* | *1000* | | *67* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *929* | | *ug/kg wet* | *1000* | | *93* | *25-130* | | | |
| **LCS (G806048-BS1)** | | | | Prepared: 17-Jun-08 Analyzed: 18-Jun-08 | | | | | | |
| Acenaphthene | 749 | 50.0 | ug/kg wet | 1000 | | 75 | 31-137 | | | |
| Pyrene | 1020 | 50.0 | ug/kg wet | 1000 | | 102 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *955* | | *ug/kg wet* | *1000* | | *96* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *626* | | *ug/kg wet* | *1000* | | *63* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *598* | | *ug/kg wet* | *1000* | | *60* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *875* | | *ug/kg wet* | *1000* | | *88* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806048 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike (G806048-MS1)** | **Source: 8061302-16** | | | Prepared: 17-Jun-08 Analyzed: 18-Jun-08 | | | | | | |
| Acenaphthene | 811 | 50.0 | ug/kg dry | 1040 | 3.13 | 77 | 31-137 | | | |
| Pyrene | 1080 | 50.0 | ug/kg dry | 1040 | 22.9 | 101 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *951* | | *ug/kg dry* | *1040* | | *91* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *673* | | *ug/kg dry* | *1040* | | *64* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *655* | | *ug/kg dry* | *1040* | | *63* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *860* | | *ug/kg dry* | *1040* | | *82* | *25-130* | | | |
| **Matrix Spike Dup (G806048-MSD1)** | **Source: 8061302-16** | | | Prepared: 17-Jun-08 Analyzed: 18-Jun-08 | | | | | | |
| Acenaphthene | 827 | 50.0 | ug/kg dry | 1040 | 3.13 | 79 | 31-137 | 2 | 25 | |
| Pyrene | 1080 | 50.0 | ug/kg dry | 1040 | 22.9 | 102 | 35-142 | 0.3 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1060* | | *ug/kg dry* | *1040* | | *101* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *724* | | *ug/kg dry* | *1040* | | *69* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *691* | | *ug/kg dry* | *1040* | | *66* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *876* | | *ug/kg dry* | *1040* | | *84* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

**STAT**

## D2974 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch R45547 - D2974** | | | | | | | | | | |
| **DUP (003A DUP)** | | **Source: 8061302-03** | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | 5.95 | 0.01 | wt% | | 6 | | - | 0.670 | 20 | |
| **LCS (PMLCSS3 LCS)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | 4.6 | 0.01 | wt% | 5 | | 92 | 80-120 | | | |
| **LCS (PMLCSW3 618)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | 99.81 | 0.01 | wt% | 99.8 | | 100 | 80-120 | | | |
| **MBLK (PMMBK3 MBLK)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | ND | 0.01 | wt% | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

## SW6020 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35748 - SW3050B** | | | | | | | | | | |
| **LCS (ILCSS1 6/18)** | | | | Prepared & Analyzed: 18-Jun-08 | | | | | | |
| Arsenic | 24.41 | 0.5 | mg/Kg-dry | 25 | | 97.6 | 80-120 | | | |
| Barium | 25.72 | 0.5 | mg/Kg-dry | 25 | | 103 | 80-120 | | | |
| Cadmium | 24.68 | 0.25 | mg/Kg-dry | 25 | | 98.7 | 80-120 | | | |
| Lead | 26.66 | 0.25 | mg/Kg-dry | 25 | | 107 | 80-120 | | | |
| Selenium | 24.44 | 0.5 | mg/Kg-dry | 25 | | 97.7 | 80-120 | | | |
| Silver | 10.88 | 0.5 | mg/Kg-dry | 10 | | 109 | 80-120 | | | |
| **MBLK (IMBS1 6/18)** | | | | Prepared & Analyzed: 18-Jun-08 | | | | | | |
| Arsenic | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Barium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Cadmium | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| Lead | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| Selenium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Silver | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| **Batch 35804 - SW3050B** | | | | | | | | | | |
| **MS (016AMS)** | | **Source: 8061302-16** | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | 31.3 | 1 | mg/Kg-dry | 25.38 | 1.566 | 117 | 75-125 | | | |
| Barium | 35.32 | 1 | mg/Kg-dry | 25.38 | 4.217 | 123 | 75-125 | | | |
| Cadmium | 29.17 | 0.51 | mg/Kg-dry | 25.38 | ND | 115 | 75-125 | | | |
| Chromium | 32.52 | 1 | mg/Kg-dry | 25.38 | 2.933 | 117 | 75-125 | | | |
| Lead | 34.61 | 0.51 | mg/Kg-dry | 25.38 | 2.988 | 125 | 75-125 | | | |
| Selenium | 27.81 | 1 | mg/Kg-dry | 25.38 | ND | 110 | 75-125 | | | |
| Silver | 11.27 | 1 | mg/Kg-dry | 10.15 | ND | 111 | 75-125 | | | |
| **MSD (016AMSD)** | | **Source: 8061302-16** | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | 30.08 | 1 | mg/Kg-dry | 25.35 | 1.566 | 112 | 75-125 | 3.98 | 20 | |
| Barium | 34.94 | 1 | mg/Kg-dry | 25.35 | 4.217 | 121 | 75-125 | 1.06 | 20 | |
| Cadmium | 28.73 | 0.51 | mg/Kg-dry | 25.35 | ND | 113 | 75-125 | 1.53 | 20 | |
| Chromium | 32.33 | 1 | mg/Kg-dry | 25.35 | 2.933 | 116 | 75-125 | 0.598 | 20 | |
| Lead | 33.82 | 0.51 | mg/Kg-dry | 25.35 | 2.988 | 122 | 75-125 | 2.31 | 20 | |
| Selenium | 27.92 | 1 | mg/Kg-dry | 25.35 | ND | 110 | 75-125 | 0.412 | 20 | |
| Silver | 11.05 | 1 | mg/Kg-dry | 10.14 | ND | 109 | 75-125 | 1.92 | 20 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

## SW6020 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35804 - SW3050B** | | | | | | | | | | |
| **LCS (ILCSS2 6/18)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | 27.43 | 0.5 | mg/Kg-dry | 25 | | 110 | 80-120 | | | |
| Barium | 29.11 | 0.5 | mg/Kg-dry | 25 | | 116 | 80-120 | | | |
| Cadmium | 28.08 | 0.25 | mg/Kg-dry | 25 | | 112 | 80-120 | | | |
| Chromium | 29.4 | 0.5 | mg/Kg-dry | 25 | | 118 | 80-120 | | | |
| Lead | 28.29 | 0.25 | mg/Kg-dry | 25 | | 113 | 80-120 | | | |
| Selenium | 26.02 | 0.5 | mg/Kg-dry | 25 | | 104 | 80-120 | | | |
| Silver | 11.31 | 0.5 | mg/Kg-dry | 10 | | 113 | 80-120 | | | |
| **MBLK (IMBS2 6/18)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Barium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Cadmium | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| Chromium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Lead | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| Selenium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Silver | ND | 0.5 | mg/Kg-dry | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:20 |

## Notes and Definitions

| | |
|---|---|
| O-04 | This sample was analyzed outside the EPA recommended holding time. |
| J | Analyte detected below quantitation limits |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

June 23, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8061303

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

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ACCREDITED IN ACCORDANCE WITH nelac

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-U14-4-GW-061208 | 8061303-01 | Water | 12-Jun-08 14:30 | 12-Jun-08 19:10 |
| CS-U14-5-GW-061208 | 8061303-02 | Water | 12-Jun-08 13:43 | 12-Jun-08 19:10 |
| CS-I19-2-GW-061208 | 8061303-03 | Water | 12-Jun-08 10:34 | 12-Jun-08 19:10 |
| CS-I19-2-GW-061208-FD | 8061303-04 | Water | 12-Jun-08 10:40 | 12-Jun-08 19:10 |
| CS-I19-3-GW-061208 | 8061303-05 | Water | 12-Jun-08 09:23 | 12-Jun-08 19:10 |
| CS-I19-6-GW-061208 | 8061303-06 | Water | 12-Jun-08 11:56 | 12-Jun-08 19:10 |
| CS-I19-4-GW-061208 | 8061303-07 | Water | 12-Jun-08 10:30 | 12-Jun-08 19:10 |
| CS-I18-6-GW-061208 | 8061303-08 | Water | 12-Jun-08 15:36 | 12-Jun-08 19:10 |
| CS-I18-6-GW-061208-FD | 8061303-09 | Water | 12-Jun-08 15:38 | 12-Jun-08 19:10 |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-U14-4-GW-061208**

**Lab Sample ID: 8061303-01 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 0.2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *123 %* | | *60-145* | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *96 %* | | *62-129* | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *86 %* | | *60-145* | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-U14-4-GW-061208**

**Lab Sample ID: 8061303-01 (Water)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Barium** | **0.2** | 0.004 | mg/L | 2 | 18-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 18-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Chromium | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Lead** | **0.18** | 0.002 | mg/L | 2 | 18-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **Selenium** | **0.0056** | 0.004 | mg/L | 2 | 18-Jun-08 | 20-Jun-08 | RCRA METALS | |
| Silver | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 20-Jun-08 | RCRA METALS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-U14-5-GW-061208**

**Lab Sample ID: 8061303-02 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 0.2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *128 %* | *60-145* | | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *89 %* | *60-145* | | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-U14-5-GW-061208**

**Lab Sample ID: 8061303-02 (Water)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **0.12** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Chromium | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Lead | ND | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Selenium** | **0.0069** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-I19-2-GW-061208**

**Lab Sample ID: 8061303-03 (Water)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **0.043** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Chromium | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Lead | ND | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Selenium** | **0.011** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-I19-2-GW-061208-FD**

**Lab Sample ID: 8061303-04 (Water)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **0.044** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Chromium | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **0.0023** | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Selenium** | **0.01** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-I19-3-GW-061208**

**Lab Sample ID: 8061303-05 (Water)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **0.073** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **0.0067** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **0.0051** | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Selenium** | **0.004** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-I19-6-GW-061208**

**Lab Sample ID: 8061303-06 (Water)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **0.023** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Chromium | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **0.0027** | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


ACCREDITED IN ACCORDANCE WITH nelac

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-I19-4-GW-061208**

**Lab Sample ID: 8061303-07 (Water)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| Arsenic | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **0.09** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **0.0098** | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **0.011** | 0.002 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 0.004 | mg/L | 2 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 18-Jun-08 | 18-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-I18-6-GW-061208**

**Lab Sample ID: 8061303-08 (Water)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Metals [Total] by EPA 6000/7000 Series Methods** | | | | | | | | |
| **Lead** | **0.006** | 0.005 | mg/L | 1 | 19-Jun-08 | 19-Jun-08 | Lead Total 7421 | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 0.2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *127 %* | | *60-145* | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-I18-6-GW-061208**

**Lab Sample ID: 8061303-08 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *89 %* | *60-145* | | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-I18-6-GW-061208-FD**

**Lab Sample ID: 8061303-09 (Water)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Metals [Total] by EPA 6000/7000 Series Methods** | | | | | | | | |
| Lead | ND | 0.005 | mg/L | 1 | 19-Jun-08 | 19-Jun-08 | Lead Total 7421 | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| Chloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 0.2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *122 %* | | *60-145* | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Client Sample ID: CS-I18-6-GW-061208-FD**

**Lab Sample ID: 8061303-09 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| *Surrogate: Toluene-d8* | | *97 %* | *62-129* | | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *86 %* | *60-145* | | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**Grace Analytical Lab, Inc.**

## Metals [Total] by EPA 6000/7000 Series Methods - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806036 - EPA 3010A** | | | | | | | | | | |
| **Blank (G806036-BLK1)** | | | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Lead | ND | 0.005 | mg/L | | | | | | | |
| **LCS (G806036-BS1)** | | | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Lead | 0.842 | 0.100 | mg/L | 0.800 | | 105 | 80-120 | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806037 - EPA 5030B** | | | | | | | | | | |
| **Blank (G806037-BLK1)** | | | | Prepared & Analyzed: 14-Jun-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 0.2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *65.5* | | *ug/L* | *50.0* | | *131* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *48.7* | | *ug/L* | *50.0* | | *97* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *43.4* | | *ug/L* | *50.0* | | *87* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806037 - EPA 5030B** | | | | | | | | | | |
| **LCS (G806037-BS1)** | | | | Prepared & Analyzed: 14-Jun-08 | | | | | | |
| 1,1-Dichloroethylene | 35 | 5 | ug/L | 50.0 | | 69 | 56-135 | | | |
| Benzene | 57 | 5 | ug/L | 50.0 | | 113 | 71-137 | | | |
| Trichloroethene | 35 | 5 | ug/L | 50.0 | | 71 | 70-138 | | | |
| Toluene | 43 | 5 | ug/L | 50.0 | | 87 | 71-145 | | | |
| Chlorobenzene | 51 | 5 | ug/L | 50.0 | | 103 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *58.7* | | *ug/L* | *50.0* | | *117* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *49.2* | | *ug/L* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.8* | | *ug/L* | *50.0* | | *98* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

**STAT**

## SW6020 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35791 - SW3005A** | | | | | | | | | | |
| **LCS (35791-LCS)** | | | | Prepared & Analyzed: 18-Jun-08 | | | | | | |
| Arsenic | 0.5377 | 0.004 | mg/L | 0.5 | | 108 | 80-120 | | | |
| Barium | 0.5455 | 0.004 | mg/L | 0.5 | | 109 | 80-120 | | | |
| Cadmium | 0.5456 | 0.002 | mg/L | 0.5 | | 109 | 80-120 | | | |
| Chromium | 0.5448 | 0.004 | mg/L | 0.5 | | 109 | 80-120 | | | |
| Lead | 0.4662 | 0.002 | mg/L | 0.5 | | 93.2 | 80-120 | | | |
| Selenium | 0.541 | 0.004 | mg/L | 0.5 | | 108 | 80-120 | | | |
| Silver | 0.2218 | 0.004 | mg/L | 0.2 | | 111 | 80-120 | | | |
| **MBLK (35791-MBLK)** | | | | Prepared & Analyzed: 18-Jun-08 | | | | | | |
| Arsenic | ND | 0.004 | mg/L | | | | - | | | |
| Barium | ND | 0.004 | mg/L | | | | - | | | |
| Cadmium | 0.00319 | 0.002 | mg/L | | | | - | | | |
| Chromium | ND | 0.004 | mg/L | | | | - | | | |
| Lead | ND | 0.002 | mg/L | | | | - | | | |
| Selenium | ND | 0.004 | mg/L | | | | - | | | |
| Silver | ND | 0.004 | mg/L | | | | - | | | |
| **MS (35791-MS01)** | **Source: 8061303-01** | | | Prepared: 18-Jun-08 Analyzed: 20-Jun-08 | | | | | | |
| Arsenic | 0.497 | 0.004 | mg/L | 0.5 | 0.00331 | 98.7 | 75-125 | | | |
| Barium | 0.7093 | 0.004 | mg/L | 0.5 | 0.2014 | 102 | 75-125 | | | |
| Cadmium | 0.4884 | 0.002 | mg/L | 0.5 | 0.00055 | 97.6 | 75-125 | | | |
| Chromium | 0.4937 | 0.004 | mg/L | 0.5 | 0.00285 | 98.2 | 75-125 | | | |
| Lead | 0.6497 | 0.002 | mg/L | 0.5 | 0.1815 | 93.6 | 75-125 | | | |
| Selenium | 0.4805 | 0.004 | mg/L | 0.5 | 0.00564 | 95 | 75-125 | | | |
| Silver | 0.2019 | 0.004 | mg/L | 0.2 | ND | 101 | 75-125 | | | |
| **MSD (35791-MSD01)** | **Source: 8061303-01** | | | Prepared: 18-Jun-08 Analyzed: 20-Jun-08 | | | | | | |
| Arsenic | 0.4999 | 0.004 | mg/L | 0.5 | 0.00331 | 99.3 | 75-125 | 0.582 | 20 | |
| Barium | 0.7144 | 0.004 | mg/L | 0.5 | 0.2014 | 103 | 75-125 | 0.716 | 20 | |
| Cadmium | 0.4947 | 0.002 | mg/L | 0.5 | 0.00055 | 98.8 | 75-125 | 1.28 | 20 | |
| Chromium | 0.4989 | 0.004 | mg/L | 0.5 | 0.00285 | 99.2 | 75-125 | 1.05 | 20 | |
| Lead | 0.6567 | 0.002 | mg/L | 0.5 | 0.1815 | 95 | 75-125 | 1.07 | 20 | |
| Selenium | 0.4869 | 0.004 | mg/L | 0.5 | 0.00564 | 96.3 | 75-125 | 1.32 | 20 | |
| Silver | 0.2044 | 0.004 | mg/L | 0.2 | ND | 102 | 75-125 | 1.23 | 20 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 18:03 |

## Notes and Definitions

| | |
|---|---|
| J | Analyte detected below quantitation limits |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

July 25, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8061304

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-I18-4-GW-061308 | 8061304-01 | Water | 13-Jun-08 08:52 | 13-Jun-08 15:00 |
| CS-I18-4-GW-061308FD | 8061304-02 | Water | 13-Jun-08 08:55 | 13-Jun-08 15:00 |
| CS-P5-6-GW-061308 | 8061304-03 | Water | 13-Jun-08 10:18 | 13-Jun-08 15:00 |
| CS-I19-5-GW-061308 | 8061304-04 | Water | 13-Jun-08 07:50 | 13-Jun-08 15:00 |
| CS-U1-4-SO-0102 | 8061304-05 | Soil | 13-Jun-08 09:53 | 13-Jun-08 15:00 |
| CS-U1-4-SO-0406 | 8061304-06 | Soil | 13-Jun-08 09:55 | 13-Jun-08 15:00 |
| CS-U2-7-SO-0102 | 8061304-07 | Soil | 13-Jun-08 09:25 | 13-Jun-08 15:00 |
| CS-U2-7-SO-0406 | 8061304-08 | Soil | 13-Jun-08 09:28 | 13-Jun-08 15:00 |
| CS-U2-6-SO-0103 | 8061304-09 | Soil | 13-Jun-08 09:03 | 13-Jun-08 15:00 |
| CS-U2-6-SO-0406 | 8061304-10 | Soil | 13-Jun-08 09:10 | 13-Jun-08 15:00 |
| CS-U1-5-SO-0102 | 8061304-11 | Soil | 13-Jun-08 09:40 | 13-Jun-08 15:00 |
| CS-U1-5-SO-0405 | 8061304-12 | Soil | 13-Jun-08 09:42 | 13-Jun-08 15:00 |
| CS-P5-6-SO-0102 | 8061304-13 | Soil | 13-Jun-08 07:53 | 13-Jun-08 15:00 |
| CS-P5-6-SO-0405 | 8061304-14 | Soil | 13-Jun-08 07:58 | 13-Jun-08 15:00 |
| TRIP BLANK | 8061304-15 | Water | 13-Jun-08 10:18 | 13-Jun-08 15:00 |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-I18-4-GW-061308**

**Lab Sample ID: 8061304-01 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Metals [Total] by EPA 6000/7000 Series Methods** | | | | | | | | |
| **Lead** | **0.030** | 0.005 | mg/L | 1 | 19-Jun-08 | 19-Jun-08 | EPA 7421 | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | **QM-02, QM-06** |
| Chloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 0.2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *129 %* | | *60-145* | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *97 %* | | *62-129* | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-I18-4-GW-061308**

**Lab Sample ID: 8061304-01 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | **QM-02, QM-06** |
| *Surrogate: 4-Bromofluorobenzene* | | *89 %* | *60-145* | | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 18-Jun-08 | 18-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *93 %* | *55-135* | | *18-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *63 %* | *40-125* | | *18-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *57 %* | *40-130* | | *18-Jun-08* | *18-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *67 %* | *35-125* | | *18-Jun-08* | *18-Jun-08* | *EPA 8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-I18-4-GW-061308FD**

**Lab Sample ID: 8061304-02 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 0.2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 14-Jun-08 | 14-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *128 %* | *60-145* | | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *87 %* | *60-145* | | *14-Jun-08* | *14-Jun-08* | *EPA 8260B* | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-I18-4-GW-061308FD**

**Lab Sample ID: 8061304-02 (Water)**

**Grace Analytical Lab, Inc.**

**Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *94 %* | *55-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *66 %* | *40-125* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *59 %* | *40-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *69 %* | *35-125* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-P5-6-GW-061308**

**Lab Sample ID: 8061304-03 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 0.2 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *128 %* | | *60-145* | *14-Jun-08* | *15-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *99 %* | | *62-129* | *14-Jun-08* | *15-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *86 %* | | *60-145* | *14-Jun-08* | *15-Jun-08* | *EPA 8260B* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-P5-6-GW-061308**

**Lab Sample ID: 8061304-03 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| | | | **STAT** | | | | | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.017** | 0.004 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **0.018** | 0.004 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **0.0051** | 0.004 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **0.008** | 0.002 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 0.004 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 0.004 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 19-Jun-08 | 19-Jun-08 | Mercury | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-I19-5-GW-061308**

**Lab Sample ID: 8061304-04 (Water)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **0.0058** | 0.004 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **0.067** | 0.004 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.002 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **0.0099** | 0.004 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **0.015** | 0.002 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 0.004 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 0.004 | mg/L | 2 | 19-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7470A** | | | | | | | | |
| Mercury | ND | 0.00025 | mg/L | 1 | 19-Jun-08 | 19-Jun-08 | Mercury | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U1-4-SO-0102**

**Lab Sample ID: 8061304-05 (Soil)**

**Grace Analytical Lab, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **TCLP Metals by 6000/7000 Series Methods** | | | | | | | | |
| **Lead** | **0.185** | 0.00500 | mg/L | 1 | 03-Jul-08 | 03-Jul-08 | 1311/ 7421 | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **77.0** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **131** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Pyrene** | **126** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Chrysene** | **82.4** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **31.5** | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *101 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *68 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *65 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *81 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **92.2** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U1-4-SO-0102**

**Lab Sample ID: 8061304-05 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **D2974** | | | | | | | | |
| **Percent Moisture** | **6.5** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |
| **SW6020** | | | | | | | | |
| **Arsenic** | **5** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **59** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **0.58** | 0.5 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **5.2** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **7400** | 5 | mg/Kg-dry | 100 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.44** | 0.053 | mg/Kg-dry | 2 | 19-Jun-08 | 19-Jun-08 | Mercury 7471A | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.4** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U1-4-SO-0406**

**Lab Sample ID: 8061304-06 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Acenaphthylene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Phenanthrene | ND | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Anthracene | ND | 83.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Fluoranthene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Pyrene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Chrysene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *77 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *52 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *54 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *78 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **92.4** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **5.3** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U1-4-SO-0406**

**Lab Sample ID: 8061304-06 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **1.4** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **4.3** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **2.6** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **3.3** | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| Mercury | ND | 0.026 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury 7471A | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.8** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U2-7-SO-0102**

**Lab Sample ID: 8061304-07 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **638** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **9330** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluorene** | **7160** | 33.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **121000** | 33.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Anthracene** | **42100** | 83.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **141000** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Pyrene** | **227000** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Chrysene** | **132000** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **12700** | 25.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *109 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *67 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *103 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **87.0** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.8** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U2-7-SO-0102**

**Lab Sample ID: 8061304-07 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **2.4** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **22** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **3.2** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **120** | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.68** | 0.029 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury 7471A | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.1** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U2-7-SO-0406**

**Lab Sample ID: 8061304-08 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **92.0** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **448** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **3340** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluorene** | **2850** | 33.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **40800** | 33.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Anthracene** | **13500** | 83.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **53400** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Pyrene** | **84200** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Chrysene** | **47000** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **8430** | 25.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *111 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *72 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *85 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **84.8** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.4** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U2-7-SO-0406**

**Lab Sample ID: 8061304-08 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **3.9** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **130** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **1.1** | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **5.5** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **390** | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.13** | 0.027 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury 7471A | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.7** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U2-6-SO-0103**

**Lab Sample ID: 8061304-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **235** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **78.4** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluorene** | **35.5** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **737** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Anthracene** | **157** | 83.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **958** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Pyrene** | **958** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Chrysene** | **732** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **477** | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *104 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *72 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *68 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *75 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **81.6** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **17.7** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U2-6-SO-0103**

**Lab Sample ID: 8061304-09 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **32** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **220** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **6.4** | 0.6 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **16** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **340** | 0.6 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Selenium** | **1.3** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.59** | 0.03 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury 7471A | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.3** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U2-6-SO-0406**

**Lab Sample ID: 8061304-10 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *112 %* | *45-145* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *90 %* | *62-129* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *49 %* | *45-145* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U2-6-SO-0406**

**Lab Sample ID: 8061304-10 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **93.5** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **50.2** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Fluorene | ND | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **397** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Anthracene** | **137** | 83.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **785** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Pyrene** | **723** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Chrysene** | **540** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **213** | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *102 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *68 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *65 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *74 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **85.6** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **10.0** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

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ACCREDITED IN ACCORDANCE WITH nelac

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U2-6-SO-0406**

**Lab Sample ID: 8061304-10 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **5.6** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **25** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.54 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **4.3** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **66** | 0.54 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.12** | 0.027 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury 7471A | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.8** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U1-5-SO-0102**

**Lab Sample ID: 8061304-11 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **558** | 50.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **1020** | 50.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **428** | 50.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluorene** | **541** | 33.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **10800** | 33.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Anthracene** | **2410** | 83.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **20300** | 50.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Pyrene** | **21500** | 50.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Chrysene** | **10500** | 50.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **2930** | 25.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *95 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *68 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *68 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **81.4** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **13.2** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U1-5-SO-0102**

**Lab Sample ID: 8061304-11 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **15** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **170** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **1.4** | 0.54 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **13** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **550** | 0.54 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.76** | 0.028 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury 7471A | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.7** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U1-5-SO-0405**

**Lab Sample ID: 8061304-12 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **2510** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **1500** | 50.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **3980** | 50.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluorene** | **4870** | 33.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **32200** | 33.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Anthracene** | **10100** | 83.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **37600** | 50.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Pyrene** | **34900** | 50.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Chrysene** | **14900** | 50.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **4070** | 25.0 | ug/kg dry | 2 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *101 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *71 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *68 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **86.8** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.9** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-U1-5-SO-0405**

**Lab Sample ID: 8061304-12 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **4.4** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **65** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **7.4** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **230** | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.3** | 0.029 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury 7471A | |
| **SW9045C** | | | | | | | | |
| **pH** | **9.7** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-P5-6-SO-0102**

**Lab Sample ID: 8061304-13 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *107 %* | *45-145* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *99 %* | *62-129* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *70 %* | *45-145* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-P5-6-SO-0102**

**Lab Sample ID: 8061304-13 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **80.8** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Acenaphthene | ND | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluorene** | **42.6** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **377** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Anthracene** | **164** | 83.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **752** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Pyrene** | **728** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Chrysene** | **453** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **439** | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *107 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *73 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *71 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **89.1** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **8.6** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-P5-6-SO-0102**

**Lab Sample ID: 8061304-13 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **3.1** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **20** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.5 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **5.7** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **85** | 0.5 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **1.5** | 0.13 | mg/Kg-dry | 5 | 19-Jun-08 | 19-Jun-08 | Mercury 7471A | |
| **SW9045C** | | | | | | | | |
| **pH** | **9.7** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-P5-6-SO-0405**

**Lab Sample ID: 8061304-14 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *105 %* | *45-145* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | *62-129* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *82 %* | *45-145* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-P5-6-SO-0405**

**Lab Sample ID: 8061304-14 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **57.3** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthylene** | **94.7** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Acenaphthene** | **78.2** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluorene** | **85.9** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Phenanthrene** | **835** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Anthracene** | **300** | 83.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Fluoranthene** | **1690** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Pyrene** | **1620** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Chrysene** | **948** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| **Indeno(1,2,3-cd)pyrene** | **303** | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | EPA 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *108 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *72 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *70 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| *Surrogate: Terphenyl-d14* | | *75 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *EPA 8270C* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **90.8** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **9.2** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: CS-P5-6-SO-0405**

**Lab Sample ID: 8061304-14 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **3** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **31** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **0.9** | 0.53 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **17** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **75** | 0.53 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.3** | 0.027 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury 7471A | |
| **SW9045C** | | | | | | | | |
| **pH** | **11.4** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 8061304-15 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 0.2 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 14-Jun-08 | 15-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *128 %* | *60-145* | | *14-Jun-08* | *15-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *96 %* | *62-129* | | *14-Jun-08* | *15-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *88 %* | *60-145* | | *14-Jun-08* | *15-Jun-08* | *EPA 8260B* | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## Grace Analytical Lab, Inc.

## Metals [Total] by EPA 6000/7000 Series Methods - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806036 - EPA 3010A** | | | | | | | | | | |
| **Blank (G806036-BLK1)** | | | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Lead | ND | 0.005 | mg/L | | | | | | | |
| **LCS (G806036-BS1)** | | | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Lead | 0.842 | 0.100 | mg/L | 0.800 | | 105 | 80-120 | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## TCLP Metals by 6000/7000 Series Methods - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G807010 - EPA 3010A** | | | | | | | | | | |
| **Blank (G807010-BLK1)** | | | | Prepared & Analyzed: 03-Jul-08 | | | | | | |
| Lead | ND | 0.00500 | mg/L | | | | | | | |
| **LCS (G807010-BS1)** | | | | Prepared & Analyzed: 03-Jul-08 | | | | | | |
| Lead | 0.836 | 0.100 | mg/L | 0.800 | | 104 | 80-120 | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806037 - EPA 5030B** | | | | | | | | | | |
| **Blank (G806037-BLK1)** | | | | Prepared & Analyzed: 14-Jun-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 0.2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *65.5* | | *ug/L* | *50.0* | | *131* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *48.7* | | *ug/L* | *50.0* | | *97* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *43.4* | | *ug/L* | *50.0* | | *87* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806037 - EPA 5030B** | | | | | | | | | | |
| **LCS (G806037-BS1)** | | | | Prepared & Analyzed: 14-Jun-08 | | | | | | |
| 1,1-Dichloroethylene | 35 | 5 | ug/L | 50.0 | | 69 | 56-135 | | | |
| Benzene | 57 | 5 | ug/L | 50.0 | | 113 | 71-137 | | | |
| Trichloroethene | 35 | 5 | ug/L | 50.0 | | 71 | 70-138 | | | |
| Toluene | 43 | 5 | ug/L | 50.0 | | 87 | 71-145 | | | |
| Chlorobenzene | 51 | 5 | ug/L | 50.0 | | 103 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *58.7* | | *ug/L* | *50.0* | | *117* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *49.2* | | *ug/L* | *50.0* | | *98* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.8* | | *ug/L* | *50.0* | | *98* | *60-145* | | | |
| **Batch G806040 - EPA 5035** | | | | | | | | | | |
| **Blank (G806040-BLK1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| Chloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Vinyl chloride | ND | 2 | ug/kg wet | | | | | | | |
| Bromomethane | ND | 5 | ug/kg wet | | | | | | | |
| Chloroethane | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Acetone | ND | 50 | ug/kg wet | | | | | | | |
| Carbon disulfide | ND | 5 | ug/kg wet | | | | | | | |
| Methylene Chloride | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Butanone | ND | 5 | ug/kg wet | | | | | | | |
| Chloroform | ND | 5 | ug/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Trichloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/kg wet | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/kg wet | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Hexanone | ND | 5 | ug/kg wet | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Chlorobenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Styrene | ND | 5 | ug/kg wet | | | | | | | |
| Bromoform | ND | 2 | ug/kg wet | | | | | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806040 - EPA 5035** | | | | | | | | | | |
| **Blank (G806040-BLK1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *49.0* | | *ug/kg wet* | *50.0* | | *98* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *48.2* | | *ug/kg wet* | *50.0* | | *96* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *44.8* | | *ug/kg wet* | *50.0* | | *90* | *45-145* | | | |
| **LCS (G806040-BS1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| 1,1-Dichloroethylene | 32 | 5 | ug/kg wet | 50.0 | | 63 | 35-155 | | | |
| Benzene | 48 | 5 | ug/kg wet | 50.0 | | 97 | 35-150 | | | |
| Trichloroethene | 26 | 5 | ug/kg wet | 50.0 | | 52 | 35-135 | | | |
| Toluene | 34 | 5 | ug/kg wet | 50.0 | | 69 | 40-151 | | | |
| Chlorobenzene | 40 | 5 | ug/kg wet | 50.0 | | 80 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *46.4* | | *ug/kg wet* | *50.0* | | *93* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *51.0* | | *ug/kg wet* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.0* | | *ug/kg wet* | *50.0* | | *96* | *45-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806050 - EPA 3510C_MS** | | | | | | | | | | |
| **Blank (G806050-BLK1)** | | | | Prepared & Analyzed: 18-Jun-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.53* | | *ug/L* | *10.0* | | *95* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.87* | | *ug/L* | *10.0* | | *69* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *5.93* | | *ug/L* | *10.0* | | *59* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.34* | | *ug/L* | *10.0* | | *73* | *35-125* | | | |
| **LCS (G806050-BS1)** | | | | Prepared & Analyzed: 18-Jun-08 | | | | | | |
| Acenaphthene | 7.25 | 2.50 | ug/L | 10.0 | | 72 | 46-128 | | | |
| Pyrene | 8.90 | 1.50 | ug/L | 10.0 | | 89 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.25* | | *ug/L* | *10.0* | | *92* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.99* | | *ug/L* | *10.0* | | *70* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *5.97* | | *ug/L* | *10.0* | | *60* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.74* | | *ug/L* | *10.0* | | *77* | *35-125* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806051 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G806051-BLK1)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 33.0 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 33.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 83.0 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg wet | | | | | | | |
| Chrysene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1080* | | *ug/kg wet* | *1000* | | *108* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *698* | | *ug/kg wet* | *1000* | | *70* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *715* | | *ug/kg wet* | *1000* | | *72* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *830* | | *ug/kg wet* | *1000* | | *83* | *25-130* | | | |
| **LCS (G806051-BS1)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Acenaphthene | 832 | 50.0 | ug/kg wet | 1000 | | 83 | 31-137 | | | |
| Pyrene | 1110 | 50.0 | ug/kg wet | 1000 | | 111 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1070* | | *ug/kg wet* | *1000* | | *107* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *701* | | *ug/kg wet* | *1000* | | *70* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *690* | | *ug/kg wet* | *1000* | | *69* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *831* | | *ug/kg wet* | *1000* | | *83* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806051 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike (G806051-MS1)** | **Source: 8061305-09** | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | **QM-02, QM-06** |
| Acenaphthene | 944 | 50.0 | ug/kg dry | 1070 | 106 | 78 | 31-137 | | | |
| Pyrene | 3010 | 50.0 | ug/kg dry | 1070 | 2760 | 23 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *936* | | *ug/kg dry* | *1070* | | *87* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *637* | | *ug/kg dry* | *1070* | | *59* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *665* | | *ug/kg dry* | *1070* | | *62* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *773* | | *ug/kg dry* | *1070* | | *72* | *25-130* | | | |
| **Matrix Spike Dup (G806051-MSD1)** | **Source: 8061305-09** | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | **QM-02, QM-06** |
| Acenaphthene | 989 | 50.0 | ug/kg dry | 1070 | 106 | 82 | 31-137 | 5 | 25 | |
| Pyrene | 4820 | 50.0 | ug/kg dry | 1070 | 2760 | 192 | 35-142 | 157 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1050* | | *ug/kg dry* | *1070* | | *98* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *724* | | *ug/kg dry* | *1070* | | *68* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *734* | | *ug/kg dry* | *1070* | | *68* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *837* | | *ug/kg dry* | *1070* | | *78* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

**STAT**

## SW6020 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35815 - SW3005A** | | | | | | | | | | |
| **LCS (35815-LCS)** | | | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | 0.4916 | 0.004 | mg/L | 0.5 | | 98 | 80-120 | | | |
| Barium | 0.5012 | 0.004 | mg/L | 0.5 | | 100 | 80-120 | | | |
| Cadmium | 0.4897 | 0.002 | mg/L | 0.5 | | 97.9 | 80-120 | | | |
| Chromium | 0.4723 | 0.004 | mg/L | 0.5 | | 94.5 | 80-120 | | | |
| Lead | 0.4834 | 0.002 | mg/L | 0.5 | | 96.5 | 80-120 | | | |
| Selenium | 0.4896 | 0.004 | mg/L | 0.5 | | 97.4 | 80-120 | | | |
| Silver | 0.2082 | 0.004 | mg/L | 0.2 | | 104 | 80-120 | | | |
| **MBLK (35815-MBLK)** | | | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | 0.00166 | 0.004 | mg/L | | | | - | | | J |
| Barium | ND | 0.004 | mg/L | | | | - | | | |
| Cadmium | ND | 0.002 | mg/L | | | | - | | | |
| Chromium | ND | 0.004 | mg/L | | | | - | | | |
| Lead | 0.00073 | 0.002 | mg/L | | | | - | | | J |
| Selenium | 0.00272 | 0.004 | mg/L | | | | - | | | J |
| Silver | ND | 0.004 | mg/L | | | | - | | | |
| **MS (35815-MS03)** | | **Source: 8061304-03** | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | 0.5072 | 0.004 | mg/L | 0.5 | 0.01669 | 98.1 | 75-125 | | | |
| Barium | 0.5263 | 0.004 | mg/L | 0.5 | 0.01843 | 102 | 75-125 | | | |
| Cadmium | 0.4814 | 0.002 | mg/L | 0.5 | ND | 96.3 | 75-125 | | | |
| Chromium | 0.4769 | 0.004 | mg/L | 0.5 | 0.00508 | 94.4 | 75-125 | | | |
| Lead | 0.4957 | 0.002 | mg/L | 0.5 | 0.00797 | 97.5 | 75-125 | | | |
| Selenium | 0.4775 | 0.004 | mg/L | 0.5 | 0.00282 | 94.9 | 75-125 | | | |
| Silver | 0.2042 | 0.004 | mg/L | 0.2 | ND | 102 | 75-125 | | | |
| **MSD (35815-MSD03)** | | **Source: 8061304-03** | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | 0.5093 | 0.004 | mg/L | 0.5 | 0.01669 | 98.5 | 75-125 | 0.413 | 20 | |
| Barium | 0.5233 | 0.004 | mg/L | 0.5 | 0.01843 | 101 | 75-125 | 0.572 | 20 | |
| Cadmium | 0.479 | 0.002 | mg/L | 0.5 | ND | 95.8 | 75-125 | 0.500 | 20 | |
| Chromium | 0.4744 | 0.004 | mg/L | 0.5 | 0.00508 | 93.9 | 75-125 | 0.526 | 20 | |
| Lead | 0.5021 | 0.002 | mg/L | 0.5 | 0.00797 | 98.8 | 75-125 | 1.28 | 20 | |
| Selenium | 0.4862 | 0.004 | mg/L | 0.5 | 0.00282 | 96.7 | 75-125 | 1.81 | 20 | |
| Silver | 0.203 | 0.004 | mg/L | 0.2 | ND | 102 | 75-125 | 0.589 | 20 | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## D2974 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch R45541 - D2974** | | | | | | | | | | |
| **LCS (R45541-LCS1)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | 4.3 | 0.01 | wt% | 5 | | 86 | 80-120 | | | |
| **LCS (R45541-LCS2)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | 99.81 | 0.01 | wt% | 99.8 | | 100 | 80-120 | | | |
| **MBLK (R45541-MBLK)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | ND | 0.01 | wt% | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## SW6020 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35805 - SW3050B** | | | | | | | | | | |
| **LCS (35805-LCS)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | 27.94 | 0.5 | mg/Kg-dry | 25 | | 112 | 80-120 | | | |
| Barium | 29.02 | 0.5 | mg/Kg-dry | 25 | | 116 | 80-120 | | | |
| Cadmium | 27.59 | 0.25 | mg/Kg-dry | 25 | | 110 | 80-120 | | | |
| Chromium | 29.08 | 0.5 | mg/Kg-dry | 25 | | 116 | 80-120 | | | |
| Lead | 28.5 | 0.25 | mg/Kg-dry | 25 | | 114 | 80-120 | | | |
| Selenium | 26.27 | 0.5 | mg/Kg-dry | 25 | | 105 | 80-120 | | | |
| Silver | 11.31 | 0.5 | mg/Kg-dry | 10 | | 113 | 80-120 | | | |
| **MBLK (35805-MBLK)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Barium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Cadmium | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| Chromium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Lead | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| Selenium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Silver | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| **MS (35805-MS06)** | **Source: 8061304-06** | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | 28.36 | 1 | mg/Kg-dry | 25.66 | 1.36 | 105 | 75-125 | | | |
| Barium | 32.56 | 1 | mg/Kg-dry | 25.66 | 4.292 | 110 | 75-125 | | | |
| Cadmium | 27.03 | 0.51 | mg/Kg-dry | 25.66 | ND | 105 | 75-125 | | | |
| Chromium | 30.65 | 1 | mg/Kg-dry | 25.66 | 2.579 | 109 | 75-125 | | | |
| Lead | 31.9 | 0.51 | mg/Kg-dry | 25.66 | 3.253 | 112 | 75-125 | | | |
| Selenium | 25.59 | 1 | mg/Kg-dry | 25.66 | 0.5778 | 97.5 | 75-125 | | | |
| Silver | 10.3 | 1 | mg/Kg-dry | 10.26 | ND | 100 | 75-125 | | | |
| **MSD (35805-MSD06)** | **Source: 8061304-06** | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | 27.21 | 1 | mg/Kg-dry | 26.03 | 1.36 | 99.3 | 75-125 | 4.15 | 20 | |
| Barium | 31.6 | 1 | mg/Kg-dry | 26.03 | 4.292 | 105 | 75-125 | 3.01 | 20 | |
| Cadmium | 26.28 | 0.52 | mg/Kg-dry | 26.03 | ND | 101 | 75-125 | 2.78 | 20 | |
| Chromium | 28.85 | 1 | mg/Kg-dry | 26.03 | 2.579 | 101 | 75-125 | 6.06 | 20 | |
| Lead | 31.07 | 0.52 | mg/Kg-dry | 26.03 | 3.253 | 107 | 75-125 | 2.65 | 20 | |
| Selenium | 25.47 | 1 | mg/Kg-dry | 26.03 | 0.5778 | 95.6 | 75-125 | 0.495 | 20 | |
| Silver | 9.966 | 1 | mg/Kg-dry | 10.41 | ND | 95.7 | 75-125 | 3.33 | 20 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## SW7471A - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35810 - SW7471A** | | | | | | | | | | |
| **LCS (35810-LCS)** | | | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Mercury | 0.253 | 0.025 | mg/Kg-dry | 0.25 | | 100 | 80-120 | | | |
| **MBLK (35810-MBLK)** | | | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Mercury | 0.003 | 0.025 | mg/Kg-dry | | | | - | | | J |
| **MS (35810-MS05)** | | **Source: 8061304-05** | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Mercury | 0.8444 | 0.053 | mg/Kg-dry | 0.2639 | 0.4363 | 155 | 75-125 | | | S |
| **MSD (35810-MSD05)** | | **Source: 8061304-05** | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Mercury | 0.9082 | 0.053 | mg/Kg-dry | 0.2665 | 0.4363 | 177 | 75-125 | 7.29 | 20 | S |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## SW9045C - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch R45529 - SW9045C** | | | | | | | | | | |
| **DUP (R45529-DUP05)** | **Source: 8061304-05** | | | Prepared & Analyzed: 18-Jun-08 | | | | | | |
| pH | 8.42 | 0 | pH Units | 8.4 | 8.4 | 8.4 | - | | 20 | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 25-Jul-08 12:09 |

## Notes and Definitions

| | |
|---|---|
| S | Spike Recovery outside accepted recovery limits |
| QM-06 | Due to noted non-homogeneity of the QC sample matrix, the MS/MSD did not provide reliable results for accuracy and precision. Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values. |
| QM-02 | The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample. |
| J | Analyte detected below quantitation limits |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

June 23, 2008

Dave Klatt
CH2M Hill
8501 W. Higgins Rd #300
Chicago, IL 60631

Project ID: Chicago Project
Grace Analytical Job ID: 8061305

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


ACCREDITED IN ACCORDANCE WITH nelac

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| CS-U2-6-GW-061308 | 8061305-01 | Water | 13-Jun-08 11:50 | 13-Jun-08 15:00 |
| CS-U2-6-GW-061308FD | 8061305-02 | Water | 13-Jun-08 11:51 | 13-Jun-08 15:00 |
| CS-U2-8-GW-061308 | 8061305-03 | Water | 13-Jun-08 11:20 | 13-Jun-08 15:00 |
| CS-I18-4-SO-0102 | 8061305-04 | Soil | 13-Jun-08 07:30 | 13-Jun-08 15:00 |
| CS-I18-4-SO-0810 | 8061305-05 | Soil | 13-Jun-08 07:32 | 13-Jun-08 15:00 |
| CS-U2-8-SO-0103 | 8061305-06 | Soil | 13-Jun-08 08:38 | 13-Jun-08 15:00 |
| CS-U2-8-SO-0406 | 8061305-07 | Soil | 13-Jun-08 08:42 | 13-Jun-08 15:00 |
| CS-U3-5-SO-0102 | 8061305-08 | Soil | 13-Jun-08 08:19 | 13-Jun-08 15:00 |
| CS-U3-5-SO-0407 MS/MSD | 8061305-09 | Soil | 13-Jun-08 08:21 | 13-Jun-08 15:00 |
| Trip Blank | 8061305-10 | Water | 13-Jun-08 00:00 | 13-Jun-08 15:00 |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-U2-6-GW-061308**

**Lab Sample ID: 8061305-01 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Metals [Total] by EPA 6000/7000 Series Methods** | | | | | | | | |
| **Lead** | **0.195** | 0.005 | mg/L | 1 | 19-Jun-08 | 19-Jun-08 | Lead Total 7421 | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *88 %* | *55-135* | | *18-Jun-08* | *19-Jun-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *73 %* | *40-125* | | *18-Jun-08* | *19-Jun-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *54 %* | *40-130* | | *18-Jun-08* | *19-Jun-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *66 %* | *35-125* | | *18-Jun-08* | *19-Jun-08* | *8270C* | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-U2-6-GW-061308FD**

**Lab Sample ID: 8061305-02 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Metals [Total] by EPA 6000/7000 Series Methods** | | | | | | | | |
| **Lead** | **0.031** | 0.005 | mg/L | 1 | 19-Jun-08 | 19-Jun-08 | Lead Total 7421 | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-U2-8-GW-061308**

**Lab Sample ID: 8061305-03 (Water)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Metals [Total] by EPA 6000/7000 Series Methods** | | | | | | | | |
| **Lead** | **0.025** | 0.005 | mg/L | 1 | 19-Jun-08 | 19-Jun-08 | Lead Total 7421 | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Acenaphthylene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Acenaphthene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Fluorene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Phenanthrene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Anthracene | ND | 2.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Fluoranthene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Pyrene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Chrysene | ND | 1.50 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | 1 | 18-Jun-08 | 19-Jun-08 | 8270C | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *70 %* | *55-135* | | *18-Jun-08* | *19-Jun-08* | *8270C* | |
| *Surrogate: Nitrobenzene-d5* | | *51 %* | *40-125* | | *18-Jun-08* | *19-Jun-08* | *8270C* | |
| *Surrogate: 2-Fluorobiphenyl* | | *46 %* | *40-130* | | *18-Jun-08* | *19-Jun-08* | *8270C* | |
| *Surrogate: Terphenyl-d14* | | *60 %* | *35-125* | | *18-Jun-08* | *19-Jun-08* | *8270C* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-I18-4-SO-0102**

**Lab Sample ID: 8061305-04 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **79.3** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthylene** | **108** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthene** | **176** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluorene** | **237** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Phenanthrene** | **3180** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Anthracene** | **780** | 83.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluoranthene** | **6690** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Pyrene** | **6770** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Chrysene** | **3510** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **913** | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *85 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *61 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *55 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *61 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **74.4** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **14.7** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-I18-4-SO-0102**

**Lab Sample ID: 8061305-04 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **10** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **210** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **1.3** | 0.53 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **17** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **440** | 0.53 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.62** | 0.029 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.6** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

**GRACE ANALYTICAL LAB, INC.**
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-I18-4-SO-0810**

**Lab Sample ID: 8061305-05 (Soil)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| **Tetrachloroethene** | **6** | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/kg dry | 1 | 16-Jun-08 | 17-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *91 %* | *45-145* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *106 %* | *62-129* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *83 %* | *45-145* | | *16-Jun-08* | *17-Jun-08* | *EPA 8260B* | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-I18-4-SO-0810**

**Lab Sample ID: 8061305-05 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **1920** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthylene** | **425** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthene** | **2280** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluorene** | **2170** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Phenanthrene** | **19400** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Anthracene** | **5950** | 83.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluoranthene** | **22600** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Pyrene** | **23400** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Chrysene** | **10300** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **3100** | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *101 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *68 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *66 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *75 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **94.2** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **19.7** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-I18-4-SO-0810**

**Lab Sample ID: 8061305-05 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **4.3** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **38** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.59 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **5.3** | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **110** | 0.59 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.2 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.6** | 0.029 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.3** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

# GRACE ANALYTICAL LAB, INC.

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| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-U2-8-SO-0103**

**Lab Sample ID: 8061305-06 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **2050** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthylene** | **1210** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthene** | **3620** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluorene** | **5920** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Phenanthrene** | **63400** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Anthracene** | **13700** | 83.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluoranthene** | **76500** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Pyrene** | **74400** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Chrysene** | **32400** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **8330** | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *93 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *65 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *65 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *77 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **87.7** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **11.0** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-U2-8-SO-0103**

**Lab Sample ID: 8061305-06 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **5.4** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **73** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.54 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **11** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **160** | 0.54 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.21** | 0.028 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury | |
| **SW9045C** | | | | | | | | |
| **pH** | **9.4** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-U2-8-SO-0406**

**Lab Sample ID: 8061305-07 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **148000** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthylene** | **36000** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthene** | **81900** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluorene** | **158000** | 33.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Phenanthrene** | **1120000** | 33.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Anthracene** | **326000** | 83.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluoranthene** | **1200000** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Pyrene** | **1270000** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Chrysene** | **541000** | 50.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **127000** | 25.0 | ug/kg dry | 5 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *114 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *74 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *72 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *92 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **76.2** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **12.7** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-U2-8-SO-0406**

**Lab Sample ID: 8061305-07 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **8.4** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **90** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Cadmium** | **0.75** | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **17** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **660** | 0.56 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.58** | 0.028 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.0** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-U3-5-SO-0102**

**Lab Sample ID: 8061305-08 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **197** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthylene** | **635** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthene** | **77.2** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluorene** | **176** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Phenanthrene** | **1120** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Anthracene** | **1080** | 83.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluoranthene** | **2400** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Pyrene** | **2330** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Chrysene** | **1290** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **4420** | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *81 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *56 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *55 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *75 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **93.3** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| **STAT** | | | | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **5.9** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

# GRACE ANALYTICAL LAB, INC.

5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449


| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-U3-5-SO-0102**

**Lab Sample ID: 8061305-08 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **3** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **30** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **6.1** | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **67** | 0.52 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.24** | 0.026 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.4** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-U3-5-SO-0407 MS/MSD**

**Lab Sample ID: 8061305-09 (Soil)**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Grace Analytical Lab, Inc.** | | | | | | | | |
| **Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring** | | | | | | | | |
| **Naphthalene** | **62.2** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthylene** | **170** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Acenaphthene** | **106** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluorene** | **149** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Phenanthrene** | **1920** | 33.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Anthracene** | **584** | 83.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Fluoranthene** | **3230** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Pyrene** | **2760** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Chrysene** | **1590** | 50.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| **Indeno(1,2,3-cd)pyrene** | **536** | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg dry | 1 | 18-Jun-08 | 19-Jun-08 | 8270c | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | | *97 %* | *22-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Nitrobenzene-d5* | | *68 %* | *25-135* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| *Surrogate: Terphenyl-d14* | | *76 %* | *25-130* | | *18-Jun-08* | *19-Jun-08* | *8270c* | |
| **Wet Chemistry** | | | | | | | | |
| **% Solids** | **93.2** | | % by Weight | 1 | 18-Jun-08 | 18-Jun-08 | 2540B | |
| | | | **STAT** | | | | | |
| **D2974** | | | | | | | | |
| **Percent Moisture** | **7.4** | 0.01 | wt% | 1 | 18-Jun-08 | 19-Jun-08 | Percent Moisture | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: CS-U3-5-SO-0407 MS/MSD**

**Lab Sample ID: 8061305-09 (Soil)**

**STAT**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **SW6020** | | | | | | | | |
| **Arsenic** | **5** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Barium** | **59** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Cadmium | ND | 0.53 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Chromium** | **7.7** | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **Lead** | **210** | 0.53 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Selenium | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| Silver | ND | 1.1 | mg/Kg-dry | 10 | 18-Jun-08 | 19-Jun-08 | RCRA METALS | |
| **SW7471A** | | | | | | | | |
| **Mercury** | **0.41** | 0.027 | mg/Kg-dry | 1 | 19-Jun-08 | 19-Jun-08 | Mercury | |
| **SW9045C** | | | | | | | | |
| **pH** | **8.6** | 0 | pH Units | 1 | 18-Jun-08 | 18-Jun-08 | pH (25 °C) | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**Client Sample ID: Trip Blank**

**Lab Sample ID: 8061305-10 (Water)**

**Grace Analytical Lab, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

| Analyte | Result | Reporting Limit | Units | Dilution | Prepared | Analyzed | Method | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Vinyl chloride | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromomethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Acetone | ND | 50 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon disulfide | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methylene Chloride | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1-Dichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Butanone | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chloroform | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Carbon Tetrachloride | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Benzene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Trichloroethene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,2-Dichloropropane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromodichloromethane | ND | 0.2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Toluene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Tetrachloroethene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 2-Hexanone | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Dibromochloromethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Chlorobenzene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Ethylbenzene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Styrene | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Bromoform | ND | 2 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| Xylenes, total | ND | 5 | ug/L | 1 | 16-Jun-08 | 16-Jun-08 | EPA 8260B | |
| *Surrogate: Dibromofluoromethane* | | *94 %* | | *60-145* | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: Toluene-d8* | | *98 %* | | *62-129* | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |
| *Surrogate: 4-Bromofluorobenzene* | | *85 %* | | *60-145* | *16-Jun-08* | *16-Jun-08* | *EPA 8260B* | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

## Grace Analytical Lab, Inc.

## Metals [Total] by EPA 6000/7000 Series Methods - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806036 - EPA 3010A** | | | | | | | | | | |
| **Blank (G806036-BLK1)** | | | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Lead | ND | 0.005 | mg/L | | | | | | | |
| **LCS (G806036-BS1)** | | | | Prepared & Analyzed: 19-Jun-08 | | | | | | |
| Lead | 0.842 | 0.100 | mg/L | 0.800 | | 105 | 80-120 | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806040 - EPA 5035** | | | | | | | | | | |
| **Blank (G806040-BLK1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| Chloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Vinyl chloride | ND | 2 | ug/kg wet | | | | | | | |
| Bromomethane | ND | 5 | ug/kg wet | | | | | | | |
| Chloroethane | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Acetone | ND | 50 | ug/kg wet | | | | | | | |
| Carbon disulfide | ND | 5 | ug/kg wet | | | | | | | |
| Methylene Chloride | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Butanone | ND | 5 | ug/kg wet | | | | | | | |
| Chloroform | ND | 5 | ug/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/kg wet | | | | | | | |
| Benzene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Trichloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/kg wet | | | | | | | |
| Bromodichloromethane | ND | 2 | ug/kg wet | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/kg wet | | | | | | | |
| Toluene | ND | 5 | ug/kg wet | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/kg wet | | | | | | | |
| 2-Hexanone | ND | 5 | ug/kg wet | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/kg wet | | | | | | | |
| Chlorobenzene | ND | 5 | ug/kg wet | | | | | | | |
| Ethylbenzene | ND | 5 | ug/kg wet | | | | | | | |
| Styrene | ND | 5 | ug/kg wet | | | | | | | |
| Bromoform | ND | 2 | ug/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/kg wet | | | | | | | |
| Xylenes, total | ND | 5 | ug/kg wet | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *49.0* | | *ug/kg wet* | *50.0* | | *98* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *48.2* | | *ug/kg wet* | *50.0* | | *96* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *44.8* | | *ug/kg wet* | *50.0* | | *90* | *45-145* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806040 - EPA 5035** | | | | | | | | | | |
| **LCS (G806040-BS1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| 1,1-Dichloroethylene | 32 | 5 | ug/kg wet | 50.0 | | 63 | 35-155 | | | |
| Benzene | 48 | 5 | ug/kg wet | 50.0 | | 97 | 35-150 | | | |
| Trichloroethene | 26 | 5 | ug/kg wet | 50.0 | | 52 | 35-135 | | | |
| Toluene | 34 | 5 | ug/kg wet | 50.0 | | 69 | 40-151 | | | |
| Chlorobenzene | 40 | 5 | ug/kg wet | 50.0 | | 80 | 34-158 | | | |
| *Surrogate: Dibromofluoromethane* | *46.4* | | *ug/kg wet* | *50.0* | | *93* | *45-145* | | | |
| *Surrogate: Toluene-d8* | *51.0* | | *ug/kg wet* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.0* | | *ug/kg wet* | *50.0* | | *96* | *45-145* | | | |
| **Batch G806043 - EPA 5030B** | | | | | | | | | | |
| **Blank (G806043-BLK1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| Chloromethane | ND | 5 | ug/L | | | | | | | |
| Vinyl chloride | ND | 2 | ug/L | | | | | | | |
| Bromomethane | ND | 5 | ug/L | | | | | | | |
| Chloroethane | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Acetone | ND | 50 | ug/L | | | | | | | |
| Carbon disulfide | ND | 5 | ug/L | | | | | | | |
| Methylene Chloride | ND | 5 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether | ND | 5 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5 | ug/L | | | | | | | |
| 2-Butanone | ND | 5 | ug/L | | | | | | | |
| Chloroform | ND | 5 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 5 | ug/L | | | | | | | |
| Benzene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 5 | ug/L | | | | | | | |
| Trichloroethene | ND | 5 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 5 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 0.2 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| Methyl Isobutyl Ketone | ND | 5 | ug/L | | | | | | | |
| Toluene | ND | 5 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 2 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5 | ug/L | | | | | | | |
| Tetrachloroethene | ND | 5 | ug/L | | | | | | | |
| 2-Hexanone | ND | 5 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 5 | ug/L | | | | | | | |
| Chlorobenzene | ND | 5 | ug/L | | | | | | | |
| Ethylbenzene | ND | 5 | ug/L | | | | | | | |
| Styrene | ND | 5 | ug/L | | | | | | | |
| Bromoform | ND | 2 | ug/L | | | | | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806043 - EPA 5030B** | | | | | | | | | | |
| **Blank (G806043-BLK1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5 | ug/L | | | | | | | |
| Xylenes, total | ND | 5 | ug/L | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *72.4* | | *ug/L* | *50.0* | | *145* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *50.1* | | *ug/L* | *50.0* | | *100* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *41.1* | | *ug/L* | *50.0* | | *82* | *60-145* | | | |
| **LCS (G806043-BS1)** | | | | Prepared & Analyzed: 16-Jun-08 | | | | | | |
| 1,1-Dichloroethylene | 35 | 5 | ug/L | 50.0 | | 70 | 56-135 | | | |
| Benzene | 61 | 5 | ug/L | 50.0 | | 122 | 71-137 | | | |
| Trichloroethene | 36 | 5 | ug/L | 50.0 | | 73 | 70-138 | | | |
| Toluene | 46 | 5 | ug/L | 50.0 | | 92 | 71-145 | | | |
| Chlorobenzene | 52 | 5 | ug/L | 50.0 | | 105 | 72-143 | | | |
| *Surrogate: Dibromofluoromethane* | *48.6* | | *ug/L* | *50.0* | | *97* | *60-145* | | | |
| *Surrogate: Toluene-d8* | *50.9* | | *ug/L* | *50.0* | | *102* | *62-129* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *48.0* | | *ug/L* | *50.0* | | *96* | *60-145* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806050 - EPA 3510C_MS** | | | | | | | | | | |
| **Blank (G806050-BLK1)** | | | | Prepared & Analyzed: 18-Jun-08 | | | | | | |
| Naphthalene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthylene | ND | 2.50 | ug/L | | | | | | | |
| Acenaphthene | ND | 2.50 | ug/L | | | | | | | |
| Fluorene | ND | 2.50 | ug/L | | | | | | | |
| Phenanthrene | ND | 2.50 | ug/L | | | | | | | |
| Anthracene | ND | 2.50 | ug/L | | | | | | | |
| Fluoranthene | ND | 1.50 | ug/L | | | | | | | |
| Pyrene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (a) anthracene | ND | 0.10 | ug/L | | | | | | | |
| Chrysene | ND | 1.50 | ug/L | | | | | | | |
| Benzo (b) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (k) fluoranthene | ND | 0.10 | ug/L | | | | | | | |
| Benzo (a) pyrene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.40 | ug/L | | | | | | | |
| Dibenz (a,h) anthracene | ND | 0.30 | ug/L | | | | | | | |
| Benzo (g,h,i) perylene | ND | 0.70 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.53* | | *ug/L* | *10.0* | | *95* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.87* | | *ug/L* | *10.0* | | *69* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *5.93* | | *ug/L* | *10.0* | | *59* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.34* | | *ug/L* | *10.0* | | *73* | *35-125* | | | |
| **LCS (G806050-BS1)** | | | | Prepared & Analyzed: 18-Jun-08 | | | | | | |
| Acenaphthene | 7.25 | 2.50 | ug/L | 10.0 | | 72 | 46-128 | | | |
| Pyrene | 8.90 | 1.50 | ug/L | 10.0 | | 89 | 26-127 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *9.25* | | *ug/L* | *10.0* | | *92* | *55-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.99* | | *ug/L* | *10.0* | | *70* | *40-125* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *5.97* | | *ug/L* | *10.0* | | *60* | *40-130* | | | |
| *Surrogate: Terphenyl-d14* | *7.74* | | *ug/L* | *10.0* | | *77* | *35-125* | | | |

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|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806051 - EPA 3545 MS** | | | | | | | | | | |
| **Blank (G806051-BLK1)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Naphthalene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 50.0 | ug/kg wet | | | | | | | |
| Acenaphthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Fluorene | ND | 33.0 | ug/kg wet | | | | | | | |
| Phenanthrene | ND | 33.0 | ug/kg wet | | | | | | | |
| Anthracene | ND | 83.0 | ug/kg wet | | | | | | | |
| Fluoranthene | ND | 50.0 | ug/kg wet | | | | | | | |
| Pyrene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (a) anthracene | ND | 8.50 | ug/kg wet | | | | | | | |
| Chrysene | ND | 50.0 | ug/kg wet | | | | | | | |
| Benzo (b) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (k) fluoranthene | ND | 11.0 | ug/kg wet | | | | | | | |
| Benzo (a) pyrene | ND | 15.0 | ug/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 25.0 | ug/kg wet | | | | | | | |
| Dibenz (a,h) anthracene | ND | 20.0 | ug/kg wet | | | | | | | |
| Benzo (g,h,i) perylene | ND | 25.0 | ug/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1080* | | *ug/kg wet* | *1000* | | *108* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *698* | | *ug/kg wet* | *1000* | | *70* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *715* | | *ug/kg wet* | *1000* | | *72* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *830* | | *ug/kg wet* | *1000* | | *83* | *25-130* | | | |
| **LCS (G806051-BS1)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Acenaphthene | 832 | 50.0 | ug/kg wet | 1000 | | 83 | 31-137 | | | |
| Pyrene | 1110 | 50.0 | ug/kg wet | 1000 | | 111 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1070* | | *ug/kg wet* | *1000* | | *107* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *701* | | *ug/kg wet* | *1000* | | *70* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *690* | | *ug/kg wet* | *1000* | | *69* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *831* | | *ug/kg wet* | *1000* | | *83* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

## Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

## Grace Analytical Lab, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch G806051 - EPA 3545 MS** | | | | | | | | | | |
| **Matrix Spike (G806051-MS1)** | **Source: 8061305-09** | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | **QM-02, QM-06** |
| Acenaphthene | 944 | 50.0 | ug/kg dry | 1070 | 106 | 78 | 31-137 | | | |
| Pyrene | 3010 | 50.0 | ug/kg dry | 1070 | 2760 | 23 | 35-142 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *936* | | *ug/kg dry* | *1070* | | *87* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *637* | | *ug/kg dry* | *1070* | | *59* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *665* | | *ug/kg dry* | *1070* | | *62* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *773* | | *ug/kg dry* | *1070* | | *72* | *25-130* | | | |
| **Matrix Spike Dup (G806051-MSD1)** | **Source: 8061305-09** | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | **QM-02, QM-06** |
| Acenaphthene | 989 | 50.0 | ug/kg dry | 1070 | 106 | 82 | 31-137 | 5 | 25 | |
| Pyrene | 4820 | 50.0 | ug/kg dry | 1070 | 2760 | 192 | 35-142 | 157 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *1050* | | *ug/kg dry* | *1070* | | *98* | *22-135* | | | |
| *Surrogate: Nitrobenzene-d5* | *724* | | *ug/kg dry* | *1070* | | *68* | *25-135* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *734* | | *ug/kg dry* | *1070* | | *68* | *25-130* | | | |
| *Surrogate: Terphenyl-d14* | *837* | | *ug/kg dry* | *1070* | | *78* | *25-130* | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

**STAT**

## D2974 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 0806062 - D2974** | | | | | | | | | | |
| **DUP (08060627-006A D)** | | **Source: 8061305-09** | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | 7.6 | 0.01 | wt% | | 7.4 | | - | 2.67 | 20 | |
| **Batch R45541 - D2974** | | | | | | | | | | |
| **LCS (PMLCS-S 6/18/08)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | 4.3 | 0.01 | wt% | 5 | | 86 | 80-120 | | | |
| **LCS (PMLCS-W 6/18/08)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | 99.81 | 0.01 | wt% | 99.8 | | 100 | 80-120 | | | |
| **MBLK (PMMBK 6/18/08)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Percent Moisture | ND | 0.01 | wt% | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

## SW6020 - Quality Control

## STAT

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 35804 - SW3050B** | | | | | | | | | | |
| **LCS (ILCSS2 6/18/08)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | 27.43 | 0.5 | mg/Kg-dry | 25 | | 110 | 80-120 | | | |
| Barium | 29.11 | 0.5 | mg/Kg-dry | 25 | | 116 | 80-120 | | | |
| Cadmium | 28.08 | 0.25 | mg/Kg-dry | 25 | | 112 | 80-120 | | | |
| Chromium | 29.4 | 0.5 | mg/Kg-dry | 25 | | 118 | 80-120 | | | |
| Lead | 28.29 | 0.25 | mg/Kg-dry | 25 | | 113 | 80-120 | | | |
| Selenium | 26.02 | 0.5 | mg/Kg-dry | 25 | | 104 | 80-120 | | | |
| Silver | 11.31 | 0.5 | mg/Kg-dry | 10 | | 113 | 80-120 | | | |
| **MBLK (IMBS2 6/18/08)** | | | | Prepared: 18-Jun-08 Analyzed: 19-Jun-08 | | | | | | |
| Arsenic | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Barium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Cadmium | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| Chromium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Lead | ND | 0.25 | mg/Kg-dry | | | | - | | | |
| Selenium | ND | 0.5 | mg/Kg-dry | | | | - | | | |
| Silver | ND | 0.5 | mg/Kg-dry | | | | - | | | |

| | | |
|---|---|---|
| CH2M Hill | Project Name: Chicago Project | |
| 8501 W. Higgins Rd #300 | Project Number: Chicago Project/353971.CH.ZZ | **Reported:** |
| Chicago IL, 60631 | Project Manager: Dave Klatt | 23-Jun-08 17:07 |

## Notes and Definitions

| | |
|---|---|
| QM-06 | Due to noted non-homogeneity of the QC sample matrix, the MS/MSD did not provide reliable results for accuracy and precision. Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values. |
| QM-02 | The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample. |
| J | Analyte detected below quantitation limits |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

# Appendix G
# Underground Storage Tank Report

Carnow, Conibear & Assoc., Ltd.
*Environmental Consulting Services*
600 West Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccaltd.com

**CARNOW CONIBEAR**

July 19, 2012

Ms. LeeAnn Tomas-Foster
Public Building Commission of Chicago
Richard J. Daley Center, Room 200
50 West Washington Avenue
Chicago, Illinois 60602

**RE: Michael Reese Hospital – Building 1**
**2929 South Ellis Avenue**
**UST Summary**

Dear Ms. Tomas-Foster:

Carnow, Conibear & Assoc., Ltd. (Carnow Conibear) has reviewed previous environmental reports regarding the above referenced project for information concerning the presence of underground storage tanks (USTs). Carnow Conibear identified three areas (Areas 1, 2, and 3) within the parcel for the Administrative Services Building (Building 1) that have or may potentially have USTs. **Exhibit I** depicts the locations of the USTs. Site photographs are attached in **Attachment A.**

A summary of the USTs and their status are presented in **Table 1.** Additional attachments included consist of drawings and maps extracted from the Phase I ESAs reviewed for this summary.

Please call me at (312) 762-2927 or David Bremer at (312) 762-2915 should you have any questions.

Sincerely,

**CARNOW, CONIBEAR & ASSOC., Ltd.**

Nohemi Melero
Environmental Specialist

David S. Bremer, CHMM, REM
Director, Environmental Engineering

Attachments:

- Table 1: UST Summary
- Exhibit I: UST Locations
- Attachment A: Site Photographs
- Attachment B: July 6, 1993 45-Day Report Exhibit
- Attachment C: 1911 Sanborn Map
- Attachment D: 1990 Phase I ESA Exhibit
- Attachment E: 2008 Phase I ESA Figure 2
- Attachment F: November 19, 1993 45-Day Report Exhibit
- Attachment G: 1998 Phase I ESA Appendix A Site Sketch
- Attachment H: 2003 Phase I ESA Figure 2 Site Schematic

Table 1: UST Summary

CARNOW
CONIBEAR

Michael Reese Hospital - Building 1
2929 South Ellis Avenue

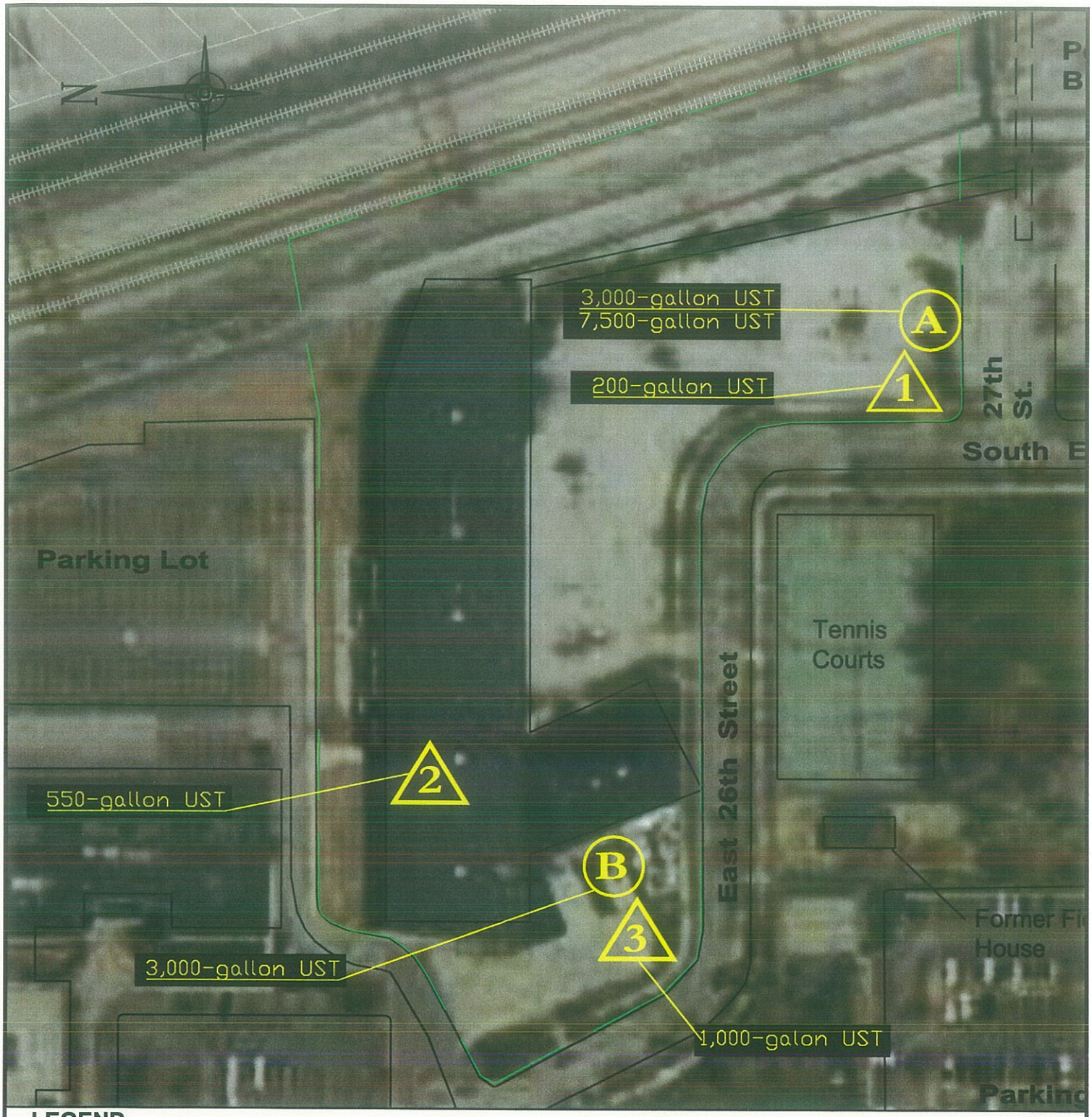
Table 1. UST Summary

| UST Designation | UST | Contents | Location | Status | LUST | Source | Comments |
|---|---|---|---|---|---|---|---|
| A | 3,000-gallon | gasoline | NE corner of 27th St and S. Ellis Ave. | Removed 1993 | #931373, NFR received in 1993 | • 1990 Phase I ESA<br>• 1998 Phase I ESA<br>• 2003 Phase I ESA<br>• 2008 Phase I ESA | • 1990 - Acknowleges presence of UST.<br>• 1998 - States UST removed, LUST incident declared, NFR received 9/13/93.<br>• 2003 - Same as above.<br>• 2008 - Same as above. **Attachment B** presents the location of the former UST provided in the 45-Day Report. |
| A | 7,500-gallon | gasoline | NE corner of 27th St and S. Ellis Ave. | Removed 1993 | #931373, NFR received in 1993 | • 1990 Phase I ESA<br>• 1998 Phase I ESA<br>• 2003 Phase I ESA<br>• 2008 Phase I ESA | • 1990 - Acknowleges presence of UST.<br>• 1998 - States UST removed, LUST incident declared, NFR received 9/13/93.<br>• 2003 - Same as above.<br>• 2008 - Same as above. **Attachment B** presents the location of the former UST provided in the 45-Day Report. |
| 1 | 200-gallon UST | unknown | Corner of 27th St and S. Ellis Ave. | Unknown | Unknown | 2008 Phase I ESA | UST depicted on 1911 Sanborn. See **Attachment C.** |
| 2 | 550-gallon | unknown | Under ASC building | Abandoned in place, remains on site. | Unknown | • 1990 Preliminary Phase I ESA<br>• 1998 Phase I ESA<br>• 2003 Phase I ESA<br>• 2008 Phase I ESA | • 1990 - Site investigation identifies pipelines associated with UST near the NW corner of the ASC building, assumes UST improperly abandoned in place and 550-gallon capacity, no records found. **Attachment D** presents the approximate location of the suspect UST.<br>• 1998 - States capacity and contents of UST are unknown.<br>• 2003 - Same as above.<br>• 2008 - Indicates location of UST is in ASC building loading dock area. **Attachment E** the location of the UST in Figure 2. |
| B | 3,000-gallon | fuel oil | ASC loading dock | Removed 1993 | #931472, NFR received in 1997 | • 1990 Preliminary Phase I ESA<br>• 1998 Phase I ESA<br>• 2003 Phase I ESA<br>• 2008 Phase I ESA | • 1990 - Acknowedges presence of UST, lists location of UST as in the ASC building loading dock.<br>• 1998 - States UST removed, LUST incident declared, NFR received 5/9/97.<br>• 2003 - Lists capacity of UST as 2,000-gallons.<br>• 2008 - 45-day Report attached in the Appendices lists capacity of UST as 3,000 gallons. **Attachment F** presents the location of the former UST provided in the 45-Day Report. |
| 3 | 1,000-gallon | diesel fuel | Parking lot west of ASC building. | Out of service, remains on site. | No | • 1998 Phase I ESA<br>• 2003 Phase I ESA Site<br>• 2008 Phase I ESA<br>• 2010 Carnow Conibear Site Observations<br>• Office of the State Fire Marshall Online UST Public Inquiry webpage - Accessed 2/14/2012 | • 1998 - Appendix A site sketch lists location of tank near ASC loading dock. See **Attachment G.**<br>• 2003 - Site Schematic drawing shows UST to be in the parking lot west of the ASC building. See **Attachment H.**<br>• 2008 - Report does not list UST.<br>• 2010 - Carnow Conibear observed the removal of 350-gallons of product from the UST, UST remains in place.<br>• 2012 - OSFM query results indicate UST installation date as 6/22/1993, 1,000-gallon diesel fuel UST, out of service. |

CARNOW CONIBEAR

# Exhibit I: UST Locations

CARNOW
CONIBEAR




**LEGEND**

Site Boundary

1 — UST Area Locations

B — Former UST Area Locations

| | |
|---|---|
| Date: | July 2012 |
| Scale: | 1"=100' |
| Drawn by: | NM |
| Checked by: | DB |

**Exhibit I: UST Locations**
Michael Reese Hospital - Building 1
Chicago, Illinois

*Your Environmental Resource*

Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
600 W. Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccalld.com

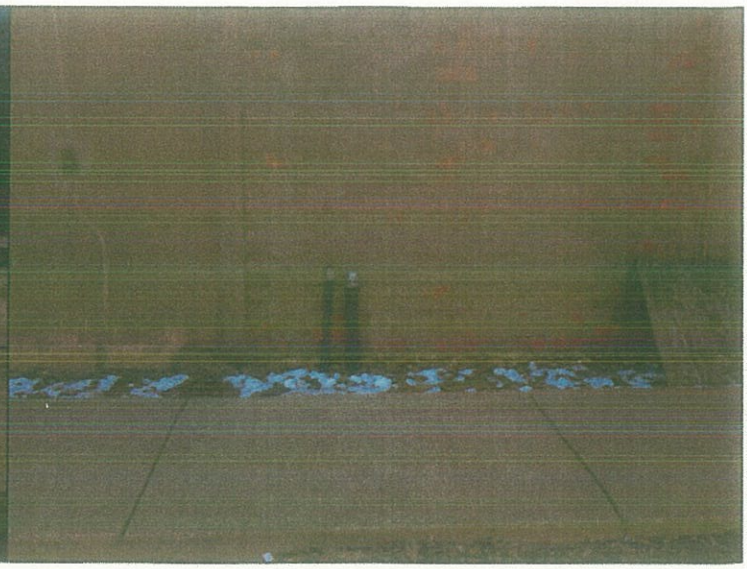
CARNOW CONIBEAR

# Site Photographs

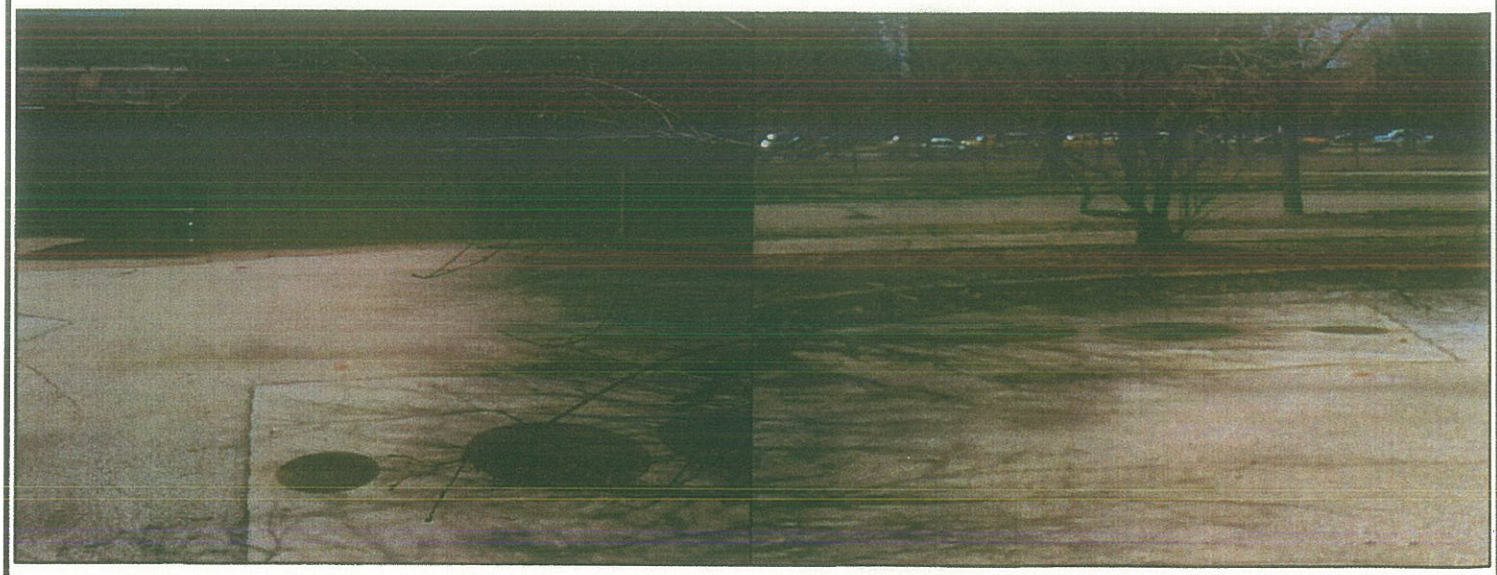
CARNOW
CONIBEAR



1: Area 1 - Facing East



2: Suspect tank pipes in Area 2 - Facing South



3: Area 3 - Facing East

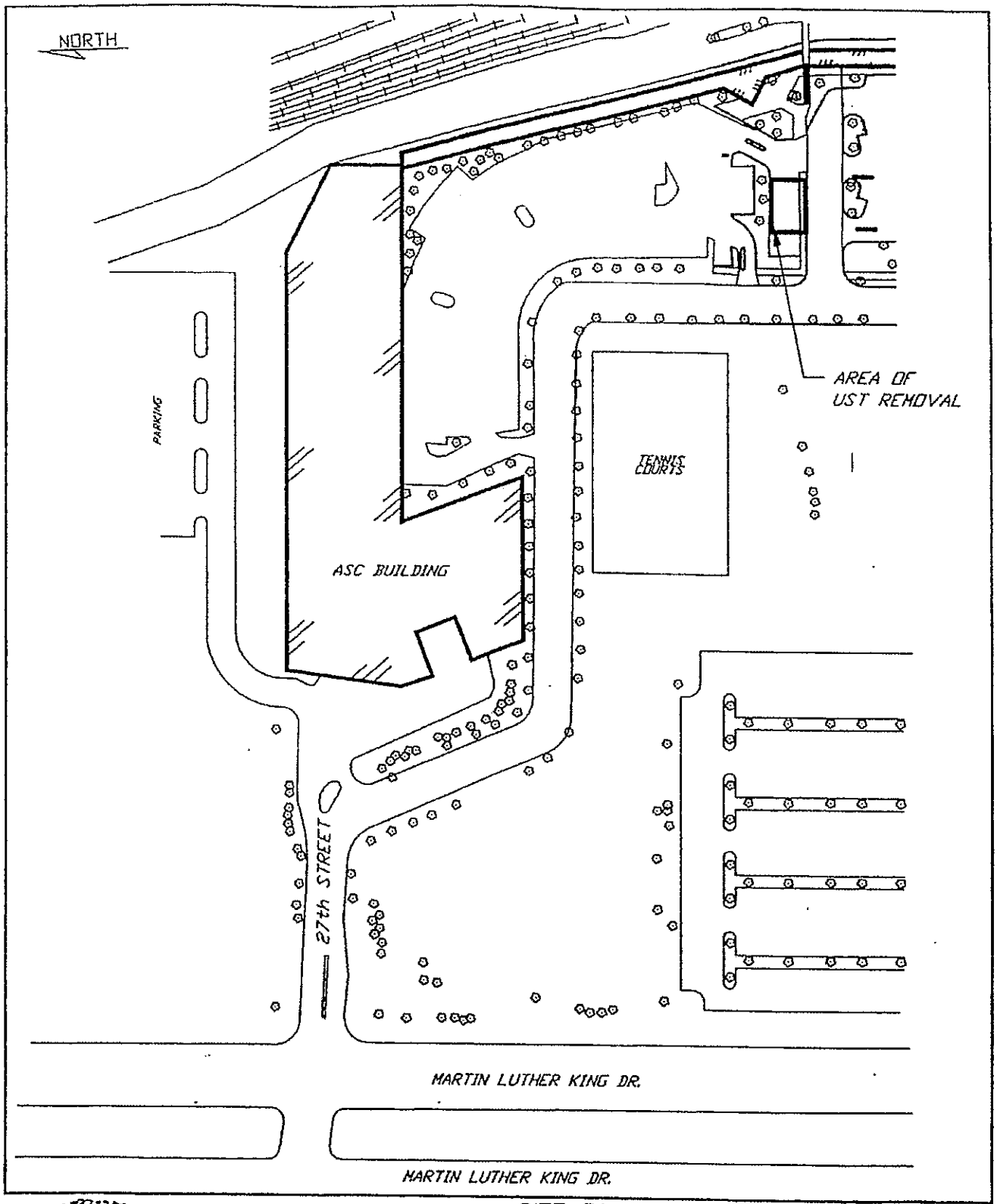
4: Area 3 - Facing West

| | |
|---|---|
| Photo Date: April 7, 2009<br>Created by: NM<br>Checked by: DB<br>Page 1 of1 | **Site Photographs**<br>Michael Reese Hospital<br>UST Locations<br>Chicago, Illinois |
| *Your Environmental Resource*<br>W:\Com\PBCC-2009 Reese Hospital\Building 1 USTs\PhotoAppendix.dwg | **Carnow, Conibear & Assoc., Ltd.**<br>*Environmental Consulting Services*<br>300 W. Adams St., Suite 1200, Chicago, IL 60606<br>t: 312.782.4486 f: 312.782.5145<br>www.ccaltd.com<br>CARNOW CONIBEAR |

July 6, 1993 45-Day Report Exhibit

CARNOW
CONIBEAR

July 6, 1993 45-Day Report Exhibit




SITE PLAN

FIGURE 2

ENVIRONICS
ENGINEERING · GEOSCIENCES · REMEDIATION

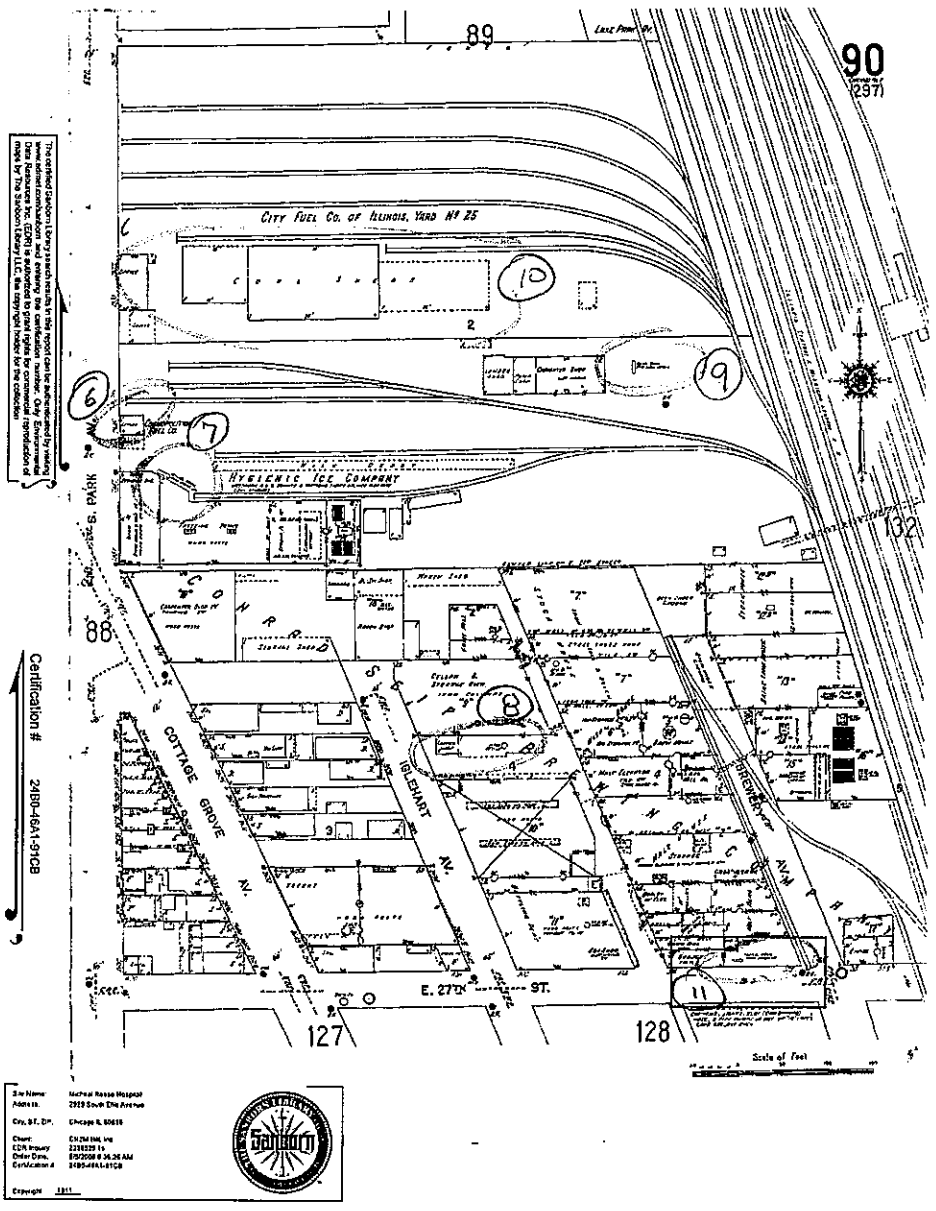
UST REMOVAL
MICHAEL REESE HOSPITAL AND MEDICAL CENTER

| DR. BY | FILE NAME | PROJ. # | SCALE | DATE |
|---|---|---|---|---|
| KW | 1427-C1 | N1427-01 | 1" = 120' | 7/2/93 |

1911 Sanborn Map

CARNOW
CONIBEAR

1911 ✓




(10) CITY FUEL CO. COAL SHED

(7) 120 GAL UG GAS TANK

(8) COOPER SHOP, 8 ITEM KETTLE

(9) 120 GAL UG GAS TANK

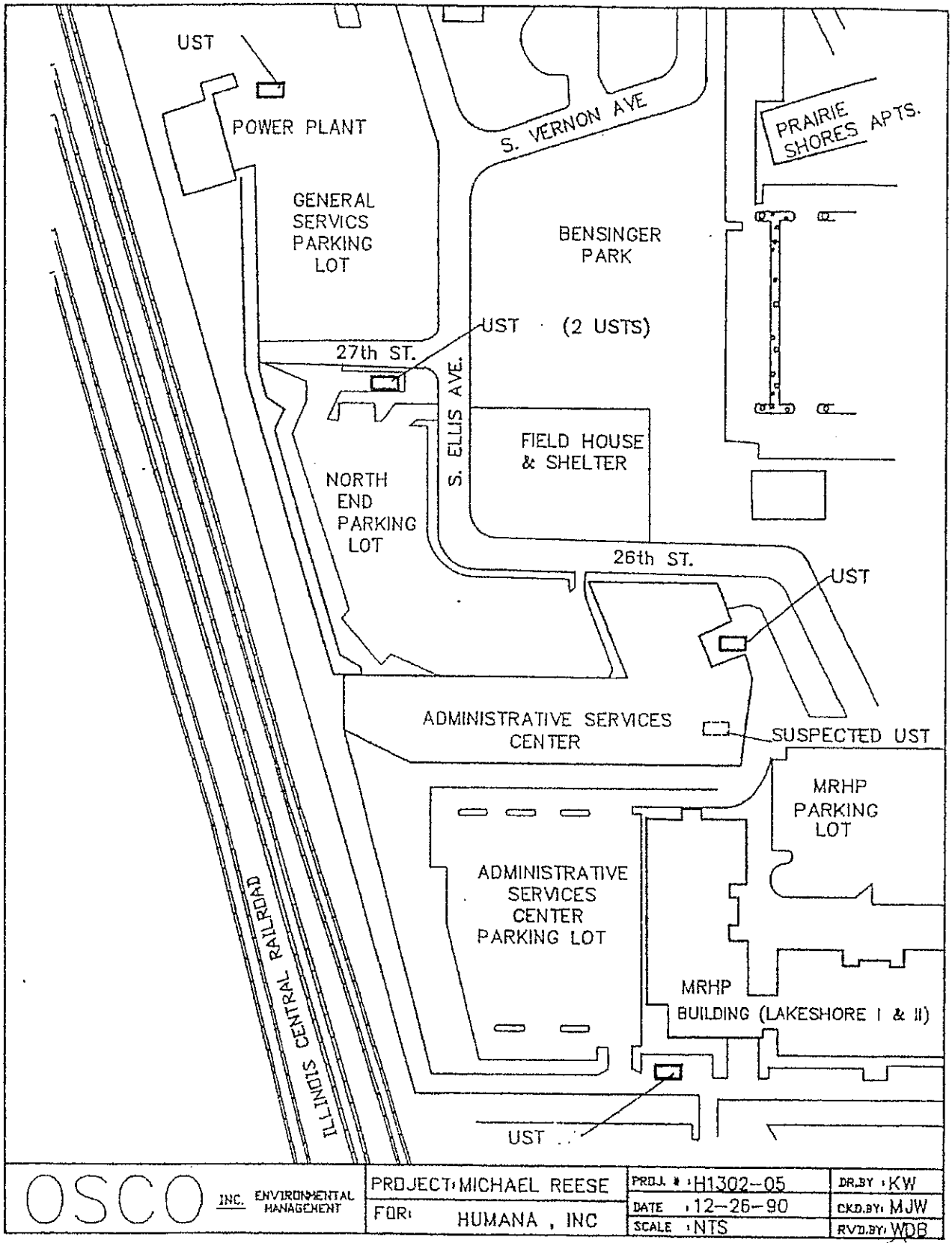
(11) 200 GAL UG GAS TANK

(6) Cosmopolitan Fuel Co.

1990 Phase I ESA Exhibit

CARNOW
CONIBEAR

# EXHIBIT 2

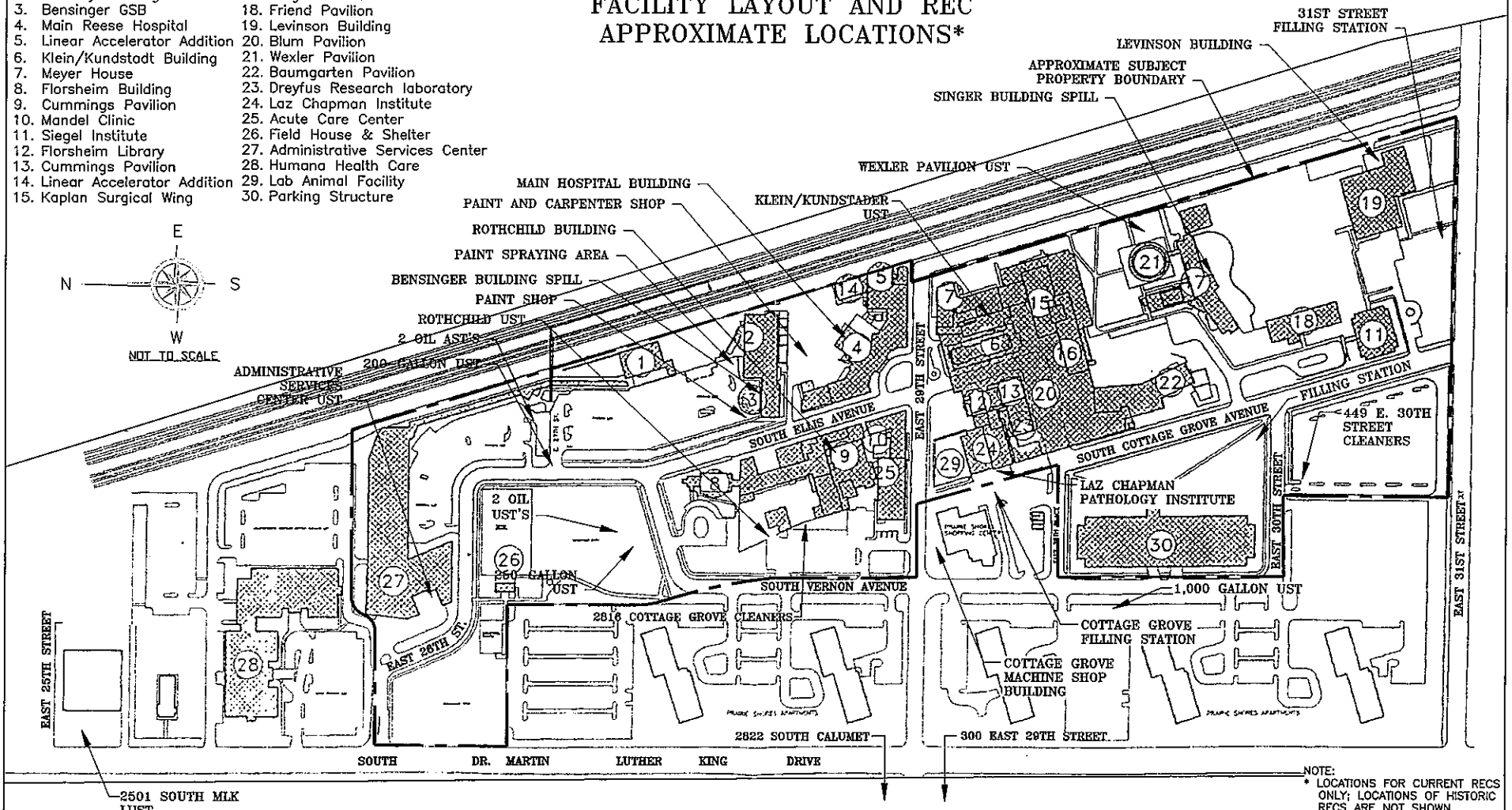

UST
POWER PLANT
S. VERNON AVE
PRAIRIE SHORES APTS.
GENERAL SERVICS PARKING LOT
BENSINGER PARK
UST (2 USTS)
27th ST.
S. ELLIS AVE.
FIELD HOUSE & SHELTER
NORTH END PARKING LOT
26th ST.
UST
ADMINISTRATIVE SERVICES CENTER
SUSPECTED UST
MRHP PARKING LOT
ADMINISTRATIVE SERVICES CENTER PARKING LOT
MRHP BUILDING (LAKESHORE I & II)
ILLINOIS CENTRAL RAILROAD
UST
OSCO INC. ENVIRONMENTAL MANAGEMENT
PROJECT: MICHAEL REESE
FOR: HUMANA, INC
PROJ. # : H1302-05
DATE : 12-26-90
SCALE : NTS
DR.BY : KW
CKD.BY: MJW
RVD.BY: WDB

2008 Phase I ESA Figure 2

CARNOW
CONIBEAR

# FIGURE 2
# FACILITY LAYOUT AND REC APPROXIMATE LOCATIONS*

1. Power Plant
2. Laundry Building
3. Bensinger GSB
4. Main Reese Hospital
5. Linear Accelerator Addition
6. Klein/Kundstadt Building
7. Meyer House
8. Florsheim Building
9. Cummings Pavilion
10. Mandel Clinic
11. Siegel Institute
12. Florsheim Library
13. Cummings Pavilion
14. Linear Accelerator Addition
15. Kaplan Surgical Wing
16. Kaplan Pavilion
17. Singer Pavilion
18. Friend Pavilion
19. Levinson Building
20. Blum Pavilion
21. Wexler Pavilion
22. Baumgarten Pavilion
23. Dreyfus Research laboratory
24. Laz Chapman Institute
25. Acute Care Center
26. Field House & Shelter
27. Administrative Services Center
28. Humana Health Care
29. Lab Animal Facility
30. Parking Structure




NOTE:
* LOCATIONS FOR CURRENT RECS ONLY; LOCATIONS OF HISTORIC RECS ARE NOT SHOWN

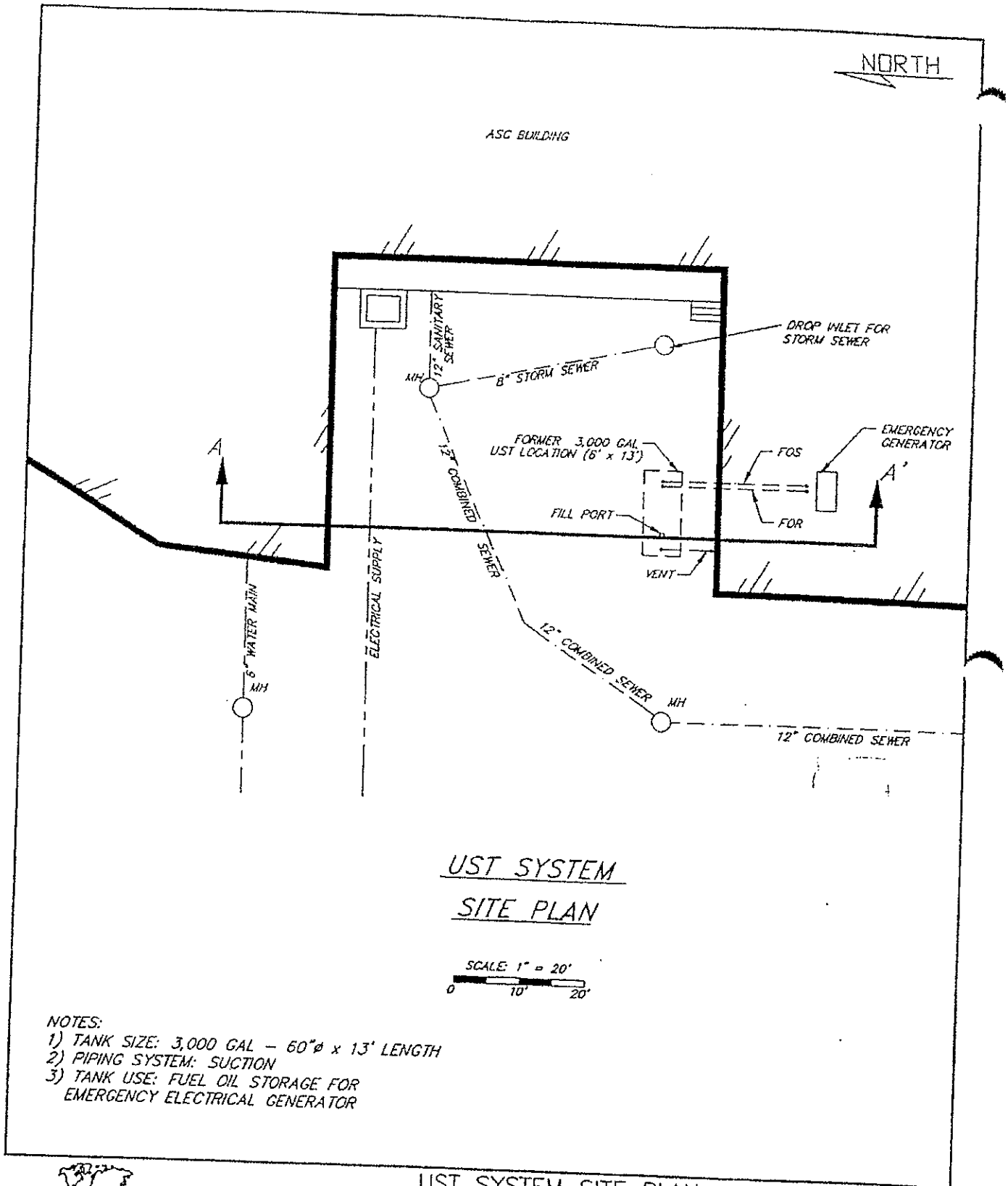
Environmental Design International inc.
Civil, Survey, Environmental and Construction Inspection Services
33 W. MONROE STREET, SUITE 1825, CHICAGO, IL 60603
Ph. (312) 345-1400 Fax (312)345-0529
www.envdesignl.com
Excellence, Dedication, Innovation

| | |
|---|---|
| CLIENT: CH2MHILL | PROJ. No: 1430.007 |
| | DATE: 7/08/2008 |
| PROJECT: PHASE I ESA UPDATE - MICHAEL REESE HOSPITAL AND MEDICAL CENTER | DRAWN BY: SB |
| | APPROVED BY: JG |

November 19, 1993 45-Day Report Exhibit

CARNOW
CONIBEAR

November 19, 1993 45-Day Report Exhibit




## UST SYSTEM SITE PLAN

SCALE: 1" = 20'

0 10' 20'

NOTES:
1) TANK SIZE: 3,000 GAL – 60"ø x 13' LENGTH
2) PIPING SYSTEM: SUCTION
3) TANK USE: FUEL OIL STORAGE FOR EMERGENCY ELECTRICAL GENERATOR

ENVIRONICS
ENGINEERING • GEOSCIENCES • REMEDIATION

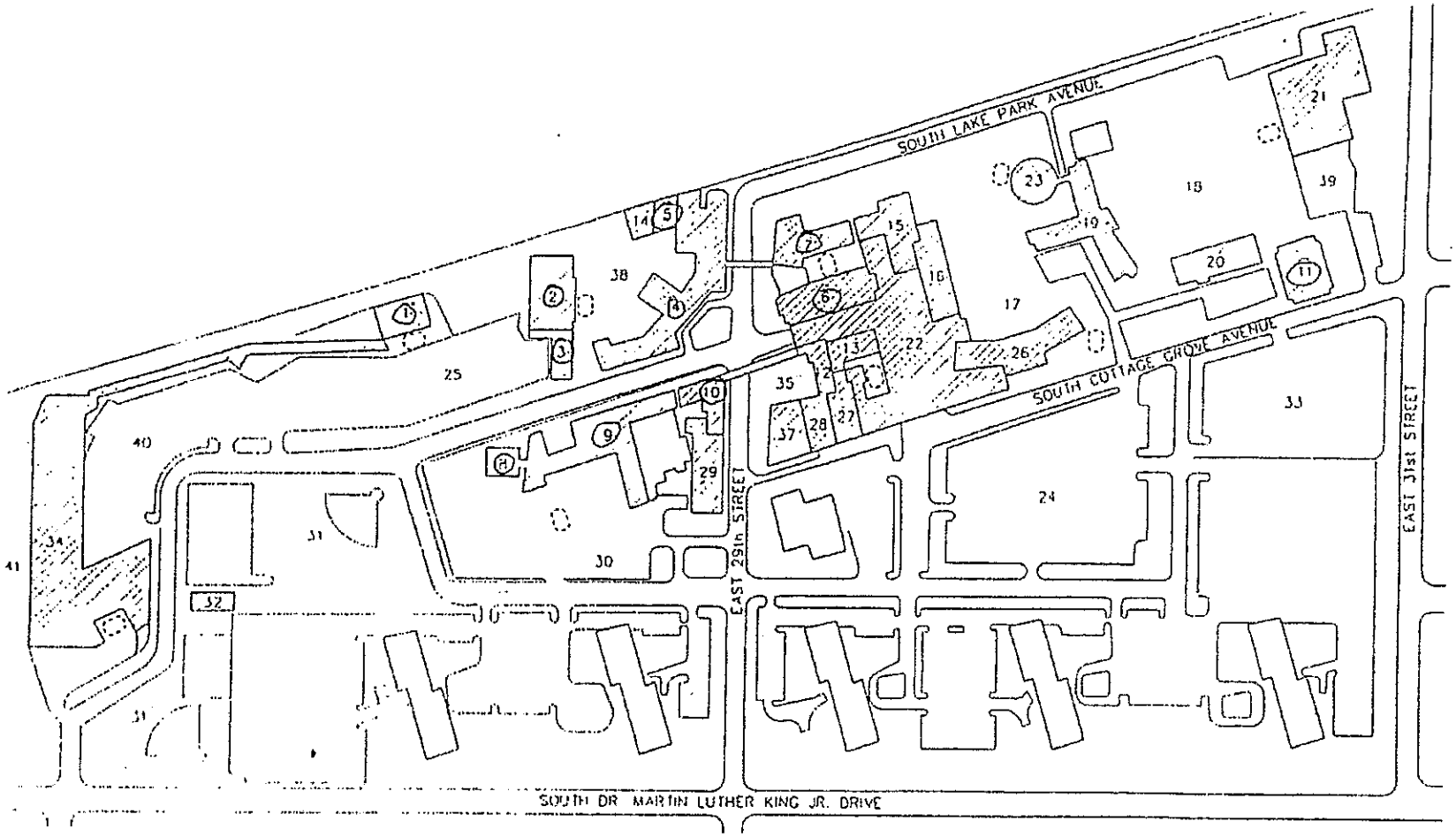
UST SYSTEM SITE PLAN
MICHAEL REESE MEDICAL CENTER
ASC BUILDING

FIGURE 2

| DR. BY | FILE NAME | PROJ. # | SCALE | DATE |
|---|---|---|---|---|
| KW | 01427-C4 | 15-01427.99 | 1" = 20' | 11/12/93 |

1998 Phase I ESA Appendix A Site Sketch

CARNOW
CONIBEAR




LEGEND

APPROXIMATE LOCATION OF UST

SHADED AREA INDICATES MICHAEL REESE BUILDINGS

GRAPHIC SCALE

0 50 100 200

SCALE 1" = 200'

**SITE SKETCH**

MICHAEL REESE MEDICAL CENTER
2929 SOUTH ELLIS AVENUE
CHICAGO, ILLINOIS

PSI Information To Build On
Engineering • Consulting • Testing

| | | |
|---|---|---|
| DRAWN BY: NMR | SCALE: 1" = 200' | PROJ. NO.: 041-8E018-1 |
| CHKD. BY: | DATE: 3/30/98 | DWG.: 1 |

2003 Phase I ESA Figure 2 Site Schematic

CARNOW
CONIBEAR

**Building Description**

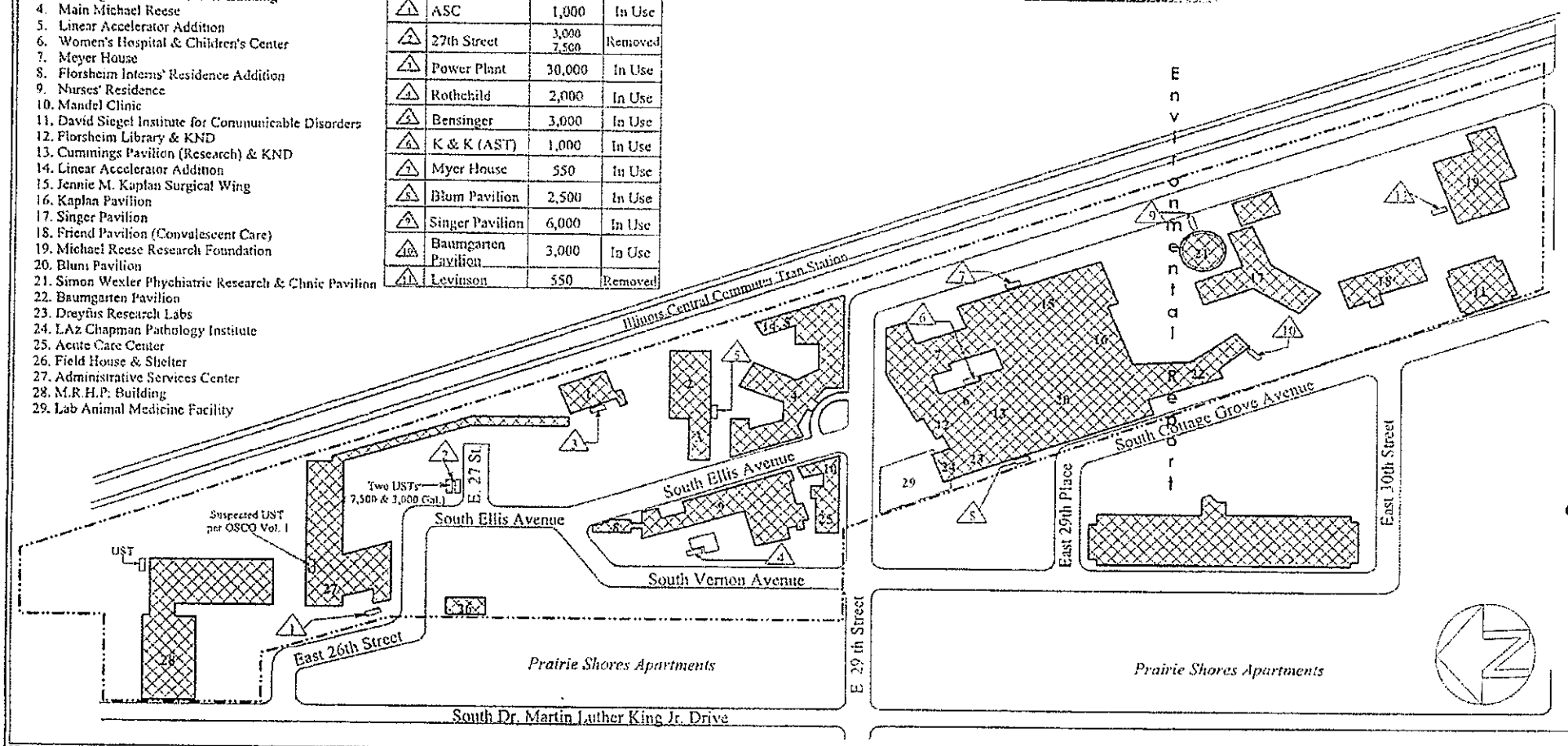
1. Michael Reese Service League Power Plant
2. Laundry Building
3. Bensinger General Services Building
4. Main Michael Reese
5. Linear Accelerator Addition
6. Women's Hospital & Children's Center
7. Meyer House
8. Florsheim Interns' Residence Addition
9. Nurses' Residence
10. Mandel Clinic
11. David Siegel Institute for Communicable Disorders
12. Florsheim Library & KND
13. Cummings Pavilion (Research) & KND
14. Linear Accelerator Addition
15. Jennie M. Kaplan Surgical Wing
16. Kaplan Pavilion
17. Singer Pavilion
18. Friend Pavilion (Convalescent Care)
19. Michael Reese Research Foundation
20. Blum Pavilion
21. Simon Wexler Phychiatric Research & Clinic Pavilion
22. Baumgarten Pavilion
23. Dreyfus Research Labs
24. LAz Chapman Pathology Institute
25. Acute Care Center
26. Field House & Shelter
27. Administrative Services Center
28. M.R.H.P. Building
29. Lab Animal Medicine Facility

*Michael Reese Hospital Site*

COLLIERS B&K

Table of Contents | Chicago Metropolitan Area Overview | Property Description | Title Policy | Real Estate Tax Bills | Environmental Report | Parcel Agreement

| | | | |
|---|---|---|---|
| 1 | ASC | 1,000 | In Use |
| 2 | 27th Street | 3,000<br>7,500 | Removed |
| 3 | Power Plant | 30,000 | In Use |
| 4 | Rothchild | 2,000 | In Use |
| 5 | Bensinger | 3,000 | In Use |
| 6 | K & K (AST) | 1,000 | In Use |
| 7 | Myer House | 550 | In Use |
| 8 | Blum Pavilion | 2,500 | In Use |
| 9 | Singer Pavilion | 6,000 | In Use |
| 10 | Baumgarten Pavilion | 3,000 | In Use |
| 11 | Levinson | 550 | Removed |




2003 Phase I ESA Figure 2

# SITE SCHEMATIC

Michael Reese Hospital
and Medical Center
Chicago, Illinois

Site Building
UST Location
Corresponding UST Number

NOT TO SCALE

May 21, 2003

COLLIERS B&K 6250 N. River Road, #11-100 Rosemont, IL 60018 Tel: 847.696.8144 Fax: 847.696.8145

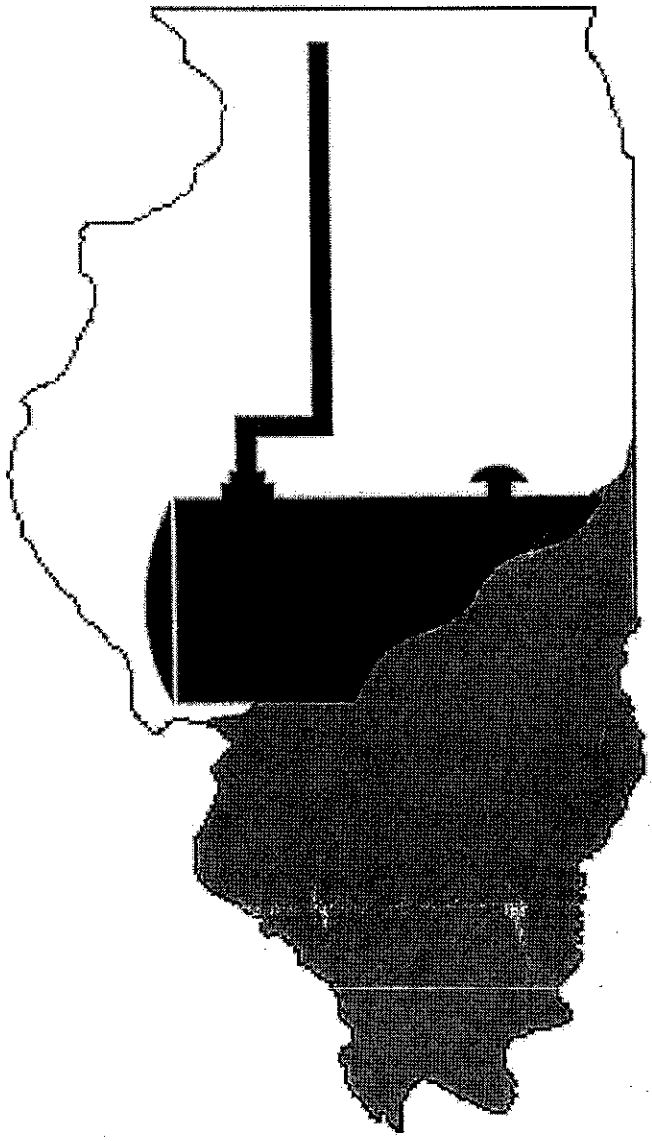
VERTEX

Engineering Services, Inc.
FIGURE NO. 2

# Office of the Illinois State Fire Marshal
# Division of Petroleum and Chemical Safety

1035 Stevenson Drive
Springfield, Illinois 62703-4259

# Notification Form for Underground Storage Tanks



# General Information

Notification is required by state law for all underground storage tanks (USTs) that have been in use any time since January 1, 1974 and were in ground as of September 24, 1987 (other than heating oil tanks). Federal law required notification by May, 8 1986.

The primary purpose of this notification program is to locate and evaluate USTs that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief or recollection.

**Who must notify?** Owners of USTs are responsible for notification. Owner means:
In the case of a UST system in use on November 8, 1984, or bought into use after that date, any person who owns a UST system for storage, use of dispensing of regulated substance; and

(b) In the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned such UST immediately before the discontinuation of its use.

**What tanks are included?** a UST must contain or have contained a regulated substance, regulated substances include petroleum or hazardous substances.

**Are Heating Oil Tanks included?** Although Federal Law excludes these tanks used for consumptive use on the premises where stored, the state includes them, if: They are 1100 gallons or greater and were in the ground as of July 11, 1990; or they are than 110 gallons or 1100 gallons and were in the ground as of September 6, 1991. Heating oil USTs located on one and two family residences and farms are excluded.

**When to notify?** Owners of USTs other than heating oil that have been in use at any time since January 1, 1974 and were in the ground as of September 24, 1987, should be registered immediately, including USTs already removed. In the case the case of heating oil USTs, see the dates above. Any owner of newly installed UST is required to register within 30 days after product is placed in tank. Any new owner of a UST who was previously registered, is required to file an amended notification form within 30 days after acquiring ownership. There must be an amended notification on a previously filed form within 30 days of such change.

**Where to notify?** Completed notification forms should be sent to: Office of the State Fire Marshal, Division of Petroleum and Chemical Safety, 1035 Stevenson Dr., Springfield, IL 62703-4259.

**Penalties: The Office of the State Fire Marshal is requesting this information pursuant to the Gasoline Storage Act, 430 ILCS 15/4. This information is REQUIRED. Failure to provide the information can result in a fine up to $10,000 per day and a loss of registration. Additionally, under Federal Law, any owner who knowingly fails to notify or submits false information may be subject to a federal civil penalty not to exceed $10,000, plus any applicable state fines, for each tank which notification is not given or of which false information is submitted.**

# IL Notification for Underground Storage Tanks

- A separate form must be used for each site.
- If you have more than five tanks, photocopy pages 1-5 and attach to this notification form.
- Please type, or print in ink; the signature under "certification" (section IX) must be signed in Ink.

**OFFICE USE ONLY**

ID NUMBER

DATE RECEIVED

Facility I.D. # (if known) _____ Owner I.D. # (if known) _____

## TYPE OF NOTIFICATION

☐ New Facility ☑ Amended (Changes/Corrections/Additional Tanks) Mark all that apply:

_____ Owner Address Change (this facility only)
_____ Owner Address Change (all facilities owned)
_____ New Owner
_____ Tank(s) Removed (Permit # _____ )
_____ Tanks Relined (Permit # _____ )
_____ Tanks Installed (Permit # _____ )
_____ Tanks Upgraded/Repaired (Permit # _____ )
✓ Abandonment Notice (Permit # UST ABN121404 )
_____ Other _____

## I. Ownership of Tank(s)

City of Chgo, Dept of Housing & Economic Development
Owner Name (Corp., Individual., Public Agency or other Entity)

121 N. La Salle St. 10th floor
Mailing Address

Chicago | IL | 60602
City | State | Zip

Cook
County

Robert Wolf | 312-744-2777
Contact Name | (Area Code) Phone

## II. Location of Tank(s)

(if same as Section I, Mark box) ☐

Michael Reese Hospital Campus-Adm Svcs Building
Facility Name or Company Site Identifier, as applicable

2929 S Ellis Ave,
Street Address or State Road, as applicable (exact address)

Chicago | IL | 60616
City | State | Zip

Cook
County

Richard Schleyer | 312-744-7627
Contact Name | (Area Code) Phone

## III. TYPE OF OWNERSHIP (mark all that apply)

☐ Current Owner of Tanks
Date Purchased ___/___/___
☐ Former Owner
☐ Ownership Uncertain _____
☒ Other CITY OF CHICAGO REMAINS OWNER. DEPARTMENT NAME RECENTLY UPDATED.

## IV. TYPE OF FACILITY

Type of Facility: (Circle correct code)

A. Service Station (Former)
B. Bulk Plant
C. Petroleum Distributor
D. Convenience Store
E. Auto Dealer
F. Commercial/Retail
G. Industrial/Manufacturing
H. Private Institution
I. Residence (Non-Farm)
J. Farm
K. Airport
L. Marina
M. City/Town
N. County
O. State
P. Federal (Military)
Q. Federal (Non-Military)
R. School District
S. Port District
T. Utility District
U. Fire Dept.
V. Other Special Service Districts
W. Other _____ (Please Specify)

| V. Description of Underground Storage Tanks (Complete entire column for each tank) | | | | | |
|---|---|---|---|---|---|
| **Tank Identification Number** | Tank No. 16 | Tank No. ___ | Tank No. ___ | Tank No. ___ | Tank No. ___ |
| **1. Status of Tanks** | | | | | |
| Currently in use | ☐ | ☐ | ☐ | ☐ | ☐ |
| Temporarily out of use (Section 2 must be completed) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Permanently out of use (Section 2 must be completed) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Removed (Section 3 must be completed) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Abandoned in place (Section 4 must be completed) | ☑ | ☐ | ☐ | ☐ | ☐ |
| **2. Tanks Permanently & Temporarily Out of Use** | | | | | |
| Estimated date last used | 06/29/09 | / / | / / | / / | / / |
| **3. Tanks Removed** | | | | | |
| Date tank(s) removed | / / | / / | / / | / / | / / |
| Estimated date last used | / / | / / | / / | / / | / / |
| **4. Abandoned in Place** | | | | | |
| Date tanks filled | 08/01/12 | / / | / / | / / | / / |
| Tank filled with: | | | | | |
| Inert materials (sand, etc.) | ☑ | ☐ | ☐ | ☐ | ☐ |
| Water | ☐ | ☐ | ☐ | ☐ | ☐ |
| Unknown | ☐ | ☐ | ☐ | ☐ | ☐ |
| Other (please specify) | | | | | |
| **5. Age of Tank** | | | | | |
| Date tank installed | / / | / / | / / | / / | / / |
| Date product placed in tank | / / | / / | / / | / / | / / |
| **6. Estimated Total Capacity** (gallons) | 1000 | | | | |
| **7. Substances Currently or Last Stored:** | | | | | |
| **Petroleum** | | | | | |
| Diesel | ☑ | ☐ | ☐ | ☐ | ☐ |
| Kerosene | ☐ | ☐ | ☐ | ☐ | ☐ |
| Gasoline | ☐ | ☐ | ☐ | ☐ | ☐ |
| Used oil | ☐ | ☐ | ☐ | ☐ | ☐ |
| Other (Please specify) | | | | | |
| **Petroleum Use** (if applicable): | | | | | |
| Heating oil (consumptive use on premises) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Back-up generator | ☐ | ☐ | ☐ | ☐ | ☐ |
| Other (please specify) | | | | | |
| **Hazardous Substance:** | | | | | |
| Name of principal CERCLA substance | | | | | |
| Chemical Abstract Service (CAS No) | | | | | |

## VII. Certification of Compliance (Complete for all new, upgraded and relined tanks at this location)

| **Installation** (mark all that apply) | | | | | |
|---|---|---|---|---|---|
| Installer certified by tank and piping manufacturers | ☐ | ☐ | ☐ | ☐ | ☐ |
| Installer certified or licensed by implementing agency | ☐ | ☐ | ☐ | ☐ | ☐ |
| Installer registered by implementing agency | ☐ | ☐ | ☐ | ☐ | ☐ |
| Installer is the owner of the tank(s) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Installation inspected by a registered engineer | ☐ | ☐ | ☐ | ☐ | ☐ |
| Installation inspected & approved by implementing agency | ☐ | ☐ | ☐ | ☐ | ☐ |
| Manufacturer's installation checklists have been completed | ☐ | ☐ | ☐ | ☐ | ☐ |
| Another method allowed by state agency (please specify) | _____ | _____ | _____ | _____ | _____ |

**OATH:** I certify the information that is provided in section VII is true to the best of my knowledge, and certify that the installation was performed in accordance with all applicable state and federal laws and regulations. **(THIS SECTION MAY ONLY BE COMPLETED BY THE CONTRACTOR. SEPARATE OATH MUST BE SUBMITTED FOR EACH ACTIVITY PERFORMED BY DIFFERENT CONTRACTOR. )**

Tank No. _____ Permit No. _____

Contractor: _____ (Name) _____ (Signature (must be original)) _____ (Date)

_____ (Position) _____ (Company)

## VIII. Financial Responsibility

Mark all that apply:

☐ Self-Insurance ☐ Guarantee ☐ Certificate of Deposit

☐ Commercial Insurance ☐ Surety Bond ☐ Trust Fund

☐ Risk Retention Group ☐ Letter of Credit ☐ Other Method Allowed

(please specify) _____

## IX. Certification (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

ROBERT WOLF, ASSISTANT COMMISSIONER — Robert Wolf — 8-24-12

Name and official title of owner or owner's authorized representative (print) | Signature (must be original) | Date Signed

# RW COLLINS CO.

*Chicagoland's Premier Environmental Excavation Contractor since 1946*

## CERTIFICATE OF UST ABANDONMENT

1. **UST OWNER/GENERATOR:** Name: City of Chgo Dept of Housing & Econ. Dev't.
   Address: 121 N. LaSalle St, 10th Floor
   Chicago IL 60602
   Contact: Robert Wolf
   Phone: 312-744-2777
2. **UST SITE LOCATION:** Name: Mitchell Reese
   Address: 2929 S Ellis
   Chicago IL
   Contact:
   Phone:
3. **DATE OF CLEANING:** Aug 1- 2012
4. **TANK DESCRIPTION:**

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| a) Previous Contents: | Diesel | | | | |
| b) Capacity (gallons) | 1000 | | | | |
| c) Size (dia. x length) | 48x14 | | | | |
| d) Material of Construction (Steel, FG, etc.) | Steel | | | | |
| e) Observed Integrity | Good | | | | |

5. **UST CLEANING PROCEDURE:**

| | | | | | |
|---|---|---|---|---|---|
| a) High Pressure Wash | ✓ | | | | |
| b) Scrape and Shovel | | | | | |

6. **LEL READING:**
   **BEFORE DEFUSING:**
   DATE: Aug 1- 2012
   READING: 0%
   **AFTER DEFUSING:**
   DATE: Aug 1- 2012
   READING: 0%

7. **TANK CLEANING CERTIFICATION:**
The aforementioned tank was defused and cleaned as indicated.

BY: [signature]

Signed and sealed this 1st day of August, 2012

Patricia A Coyle

OFFICIAL SEAL
PATRICIA A COYLE
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:08/09/13



12H0088

# Appendix H
# Geotechnical Report

# Geotechnical Investigation Report

Sheet Pile Wall Design
434 East 26th Street
Chicago, Illinois

Prepared for:
Department of Fleet and Facility Management (2FM)
30 N. LaSalle Street, Suite 300
Chicago, Illinois 60602

Project Design Engineer:
Tetra Tech
1 South Wacker Drive, Suite 3700
Chicago, IL 60606

Prepared by:

GSG CONSULTANTS, INC.
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January 25, 2019

GSG CONSULTANTS, INC.
ENGINEERS • SCIENTISTS • CONSTRUCTION MANAGERS
623 Cooper Court . Schaumburg, IL 60173
Tel: 630.994.2600 . Fax: 312.733.5612

Integrity | Quality | Reliability

January 25, 2019

Ms. Carol Nissen, PE, PG
Environmental Engineer
Tetra Tech
1 South Wacker Drive, Suite 3700
Chicago, IL 60606

Proposed Temporary Sheet Piling Improvements
434 East 26th Street
Chicago, Illinois

Dear Ms. Davis:

Attached is a copy of the Geotechnical Report for the above referenced project. The report provides a brief description of the site investigation, site conditions and construction recommendations. The site investigation included advancing three (3) soil borings to depths of 61.0 and 70.0 feet.

Should you have any questions or require additional information, please call us at 312-733-6262.

Sincerely,

Alex Barlan, P.E.
Project Engineer

Ala E Sassila, Ph.D., P.E.
Principal

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Geotechnical Report
Proposed Temporary Sheet Piling Improvements
434 East 26th Street
Chicago, Illinois

## 1.0 INTRODUCTION

GSG Consultants, Inc. (GSG) completed a geotechnical investigation for the installation of temporary sheet piling for excavation activities at the property located 434 East 26th Street in Chicago, Illinois. The purpose of the investigation was to explore the subsurface conditions, to determine engineering properties of the subsurface soil, and develop design and construction recommendations for installation of the temporary sheet piling for the project.

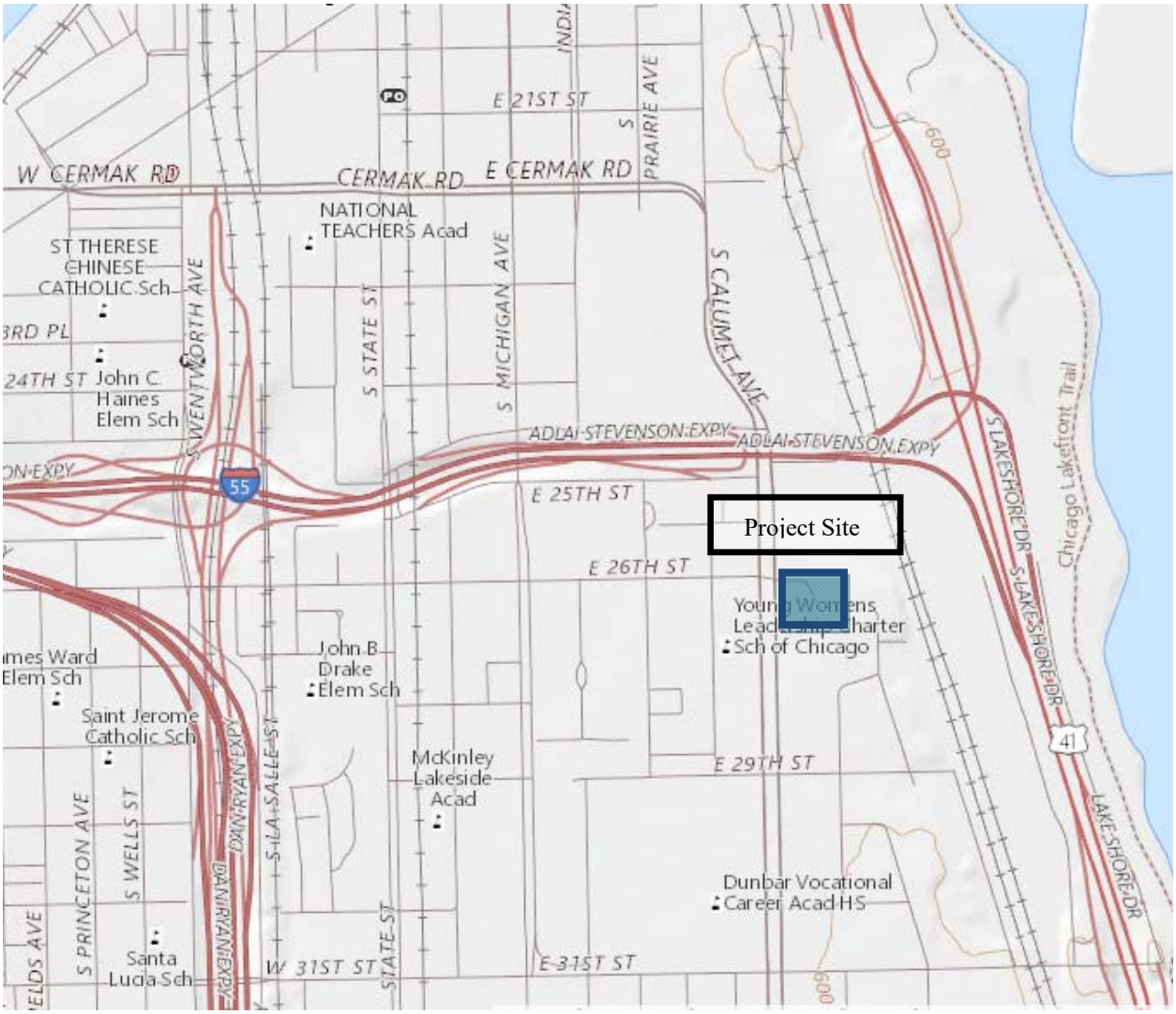



**Figure 1: Project Location Map – USGS National Map**

### 1.1 Site Conditions

The project site is currently a vacant parcel of land with a paved roadway at the north, abandoned parking and demolished building lot to the east end and a grass field to the southwest. The ground surface at the property of the proposed project is relatively flat at about an elevation of 597 to 599 feet .

### 1.2 Proposed Project Information

Based on the preliminary design information provided by Tetra Tech (client), temporary sheet pile retaining walls will be required for excavation of the soils from the site. It is anticipated that these walls would have exposed heights of approximately 15 feet to help facilitate the removal of unsuitable soils. Plans have not been provided for the approximate dimensions of the sheet piling, but the following Table 1 summarizes the assumed/approximate sheet pile wall information.

**Table 1 – Wall information Summary**

| Wall Location | Approximate Length (ft) | Maximum Exposed Wall Height (ft) | Back Slope / Front Slope |
|---|---|---|---|
| North side | 165 | 15 | Level |
| South Side | 165 | 15 | Level |
| West Side | 100 | 15 | Level |
| East Side | 100 | 15 | Level |

## 2.0 SITE SUBSURFACE EXPLORATION PROGRAM

This section describes the subsurface exploration program and laboratory testing program completed as part of this project.

### 2.1 Subsurface Exploration Program

The proposed locations and depths of the soil borings were proposed by the Tetra Tech and were completed based on field conditions and accessibility. The subsurface exploration was conducted between December 3rd thru 7th, 2018 and included advancing three (3) standard penetration test (SPT) borings near the locations of the temporary proposed walls. The borings were drilled to depths of 61.0 and 70.0 feet below existing grade. The locations of the soil borings are shown on the **Appendix A - Boring Location Map**. **Table 2** below presents a list of the borings completed for the new retaining walls.

**Table 2 – Summary of Subsurface Exploration Borings**

| Location | Soil Boring | Depth (ft) | Existing Ground Elevation in feet (in CCD) |
|---|---|---|---|
| Northwest area on 26th Street | B-1 | 61.0 | 597 (17.1 CCD) |
| Southwest area in field | B-2 | 61.5 | 598 (18.1 CCD) |
| East area in parking lot | B-3 | 70.0 | 599 (19.1 CCD) |

The soil borings were drilled using a Mobile B-57 truck mounted drill rig using 3¼-inch I.D. hollow stem augers for B-1 and B-3 and mud-rotary techniques for B-2 below a depth of 40 feet. Soil sampling was performed according to AASHTO T 206, "Penetration Test and Split Barrel Sampling of Soils." Soil samples were obtained at 2.5-foot intervals to a depth of 35 feet, and 5-foot intervals beyond that. Water level measurements were made in each boring when evidence of free groundwater was detected on the drill rods or in the samples. The boreholes were also checked for free water immediately after auger removal, and before filling the open boreholes with soil cuttings.

GSG's field representative inspected, visually classified and logged the soil samples during the subsurface exploration activities and performed unconfined compressive strength tests on cohesive soil samples using a calibrated Rimac compression tester and a calibrated hand penetrometer in accordance with IDOT procedures and requirements. Representative soil samples were collected from each sample interval and were placed in jars and returned to the laboratory for further testing and evaluation.

## 2.2 Laboratory Testing Program

All samples were inspected in the laboratory to verify the field classifications. A laboratory testing program was undertaken to characterize and determine engineering properties of the subsurface soils encountered in the area of the proposed retaining walls.

The following laboratory tests were performed on representative soil samples:

- Moisture content ASTM D2216
- Atterberg Limits ASTM D 4318
- Dry Unit Weight ASTM D7263

Based on the laboratory test results, the soils encountered were classified according to the Unified Soil Classification System (USCS). The results of the laboratory testing program are shown along with the field test results in **Appendix B, Soil Boring Logs and in Appendix C – Lab Results.**

## 2.3 Subsurface Conditions

This section provides a brief description of the soils encountered in the borings performed. Variations in the general subsurface soil profile were noted during the drilling activities. Detailed descriptions of the subsurface soils are provided in the soil boring logs.

The soil boring logs provide specific conditions encountered at each boring location. The soil boring logs include soil descriptions, stratifications, penetration resistance, elevations, location of the samples, and laboratory test data. Unless otherwise noted, soil descriptions indicated on boring logs are visual identifications. The stratifications shown on the boring logs represent the conditions only at the actual boring locations and represent the approximate boundary between subsurface materials; however, the actual transition may be gradual.

### 2.3.1 Soil Conditions

Boring B-1 noted 4 inches of asphalt and 10 inches of base course gravel at the surface (approximately 597 feet MSL) underlain by sand with gravel fill soils to a depth of 6 feet below grade. Beneath the fill, loose to medium dense sand was noted to a depth of 31 feet below grade. Following this depth, very soft to stiff fat clay was encountered to a depth of 61 feet. The fill granular soils had an SPT blow counts between 4 and 10 and the native granular soils had SPT blow counts between 4 and 15 blows. The native high plasticity fat clay soils had unconfined compressive strengths ranging from 0.2 tsf to 1.3 tsf.

Boring B-2 noted 6 inches of topsoil at the surface (approximately 598 feet MSL) underlain by sand with gravel fill soils to a depth of 6.5 feet below grade. Beneath the fill, loose to medium dense sand was noted to a depth of 29.5 feet followed by a very loose to loose silty sand to a depth of 34 feet below grade. Following this depth, a medium stiff clay was encountered to a depth of 48.5 feet followed by a stiff to very stiff silty clay to a depth of 61.5 feet. The fill granular soils had an SPT blow counts between 4 and 24 and the native granular soils had SPT blow counts between 5 and 14 blows. The native clay soils had unconfined compressive strengths ranging from 0.5 tsf to 3.75 tsf.

Boring B-3 noted sand with gravel fill soils to a depth of 3.5 feet below grade (approximately 599 feet MSL or 9.10 CCD). Beneath the fill, loose to medium dense sand was noted to a depth of 26 feet followed by a loose silty sand to a depth of 31 feet below grade. Following this depth, a soft to medium stiff clay was encountered to a depth of 39 feet followed by a soft to stiff silty clay to a depth of 63.5 feet. The boring then noted a dense to very dense silt, trace clay and limestone fragments to a depth of 70 feet. The fill granular soils had an SPT blow counts of 13 and the native granular soils had SPT blow counts between 4 and 14 blows. The native clay soils had unconfined compressive strengths ranging from 0.5 tsf to 1.0 tsf.

Boring B-1 and B2 were terminated at 61 and 61.5 feet upon encountering auger refusal on very hard silty clay soils, while boring B-3 was terminated at a deeper depth of 71 feet.

### 2.3.2 Groundwater Conditions

Water levels were checked in each boring to determine the general groundwater conditions present at the site and were measured while drilling and after each boring was completed.

Groundwater was encountered in boring B-1, B-2, and B-3 while drilling at about 18.5 feet, 8.5 feet and 13.5 feet below grade (approximate elevations of 578.5, 589.5, and 585.5 feet MSL respectively).

Based on the color change from brown to gray and the water surface elevation in the adjacent Lake Michigan, it is anticipated that the long-term groundwater level is near elevation 579 to 580 feet MSL. However, water levels at the time of drilling varied greatly from 578.5 to 589.5 feet. Water level readings were made in the boreholes at times and under conditions shown on the boring logs and stated in the text of this report. However, it should be noted that fluctuations in groundwater level may occur due to variations in rainfall, other climatic conditions, Lake Michigan water levels or other factors not evident at the time measurements were made and reported herein.

# 3.0 GEOTECHNICAL ANALYSES

This section provides GSG's geotechnical analysis and recommendations for the design of the proposed retaining walls and ramp based on the results of the initial field exploration, laboratory testing, and geotechnical analysis. Subsurface conditions in unexplored locations may vary from those encountered at the boring locations.

## 3.1 Derivation of Soil Parameters for Design

GSG determined the geotechnical parameters to be used for the project design based on the results of field and laboratory test data on individual boring logs as well as our experience. Unit weights, friction angles and shear strength parameters were estimated using standard penetration test (SPT) results for the fill and cohesion less soils and in-situ and laboratory test results for cohesive soils. The SPT values were corrected for hammer efficiency and overburden weight. The hammer efficiency correction factor considers the use of a safety hammer/rope/cat-head system, generally estimated to be 60% efficient. Thus, correlations should be based upon what is currently termed as $N_{60}$ data. GSG used a truck mounted Mobile B-57 drill rig for completing the field subsurface exploration at this site. The efficiency of the automatic hammers for the drill rig was measured to be approximately 98%, based on GSG's most recent calibrations records. The correction for hammer efficiency is a direct ratio of relative efficiencies. The following equations should be used in calculating the corrected blow counts for the purposes of design and analysis:

$$N_{60} = N_{Field} * (98/60) \text{ for Mobile B-57 drill rig}$$

Where the $N_{Field}$ value is the field recorded blow counts during drilling activities.

Table 1 presents generalized soil parameters to be used for design based on the laboratory and in-situ testing data:

**Table 3 – Summary of On-site Soil Parameters**

| Depth (Elevation, feet) | Soil Description | In situ Unit Weight γ (pcf) | Undrained | | Drained | |
|---|---|---|---|---|---|---|
| | | | Cohesion c (psf) | Friction Angle ϕ (Degrees) | Cohesion c (psf) | Friction Angle ϕ (Degrees) |
| 0.0 – 6.0 (598.0 – 592.0) | FILL: Black and Brown Sands and Gravels | 125 | 0 | 30 | 0 | 30 |
| 6.0 – 19.0 (592.0 – 579.0) | Brown and Gray Loose to Medium Dense Sand | 122 | 0 | 34 | 0 | 34 |
| 19.0 – 33.0 (579.0 – 565.0) | Gray Very Loose to Medium Dense Silty Sand | 119 | 0 | 32 | 0 | 32 |
| 33.0 – 48.0 (565.0 – 550.0) | Gray Very Soft to Medium Stiff Fat Clay | 80 | 460 | 0 | 0 | 21 |
| 48.0 – 61.0 (550.0 – 537.0) | Gray Medium Stiff to Very Stiff Fat Clay | 80 | 1,530 | 0 | 75 | 24 |
| 61.0 – 70.0 (537.0 – 528.0) | Gray Dense to Extremely Dense Silt | 140 | 0 | 40 | 0 | 40 |

# 4.0 GEOTECHNICAL RECOMMENDATIONS

This section provides recommendation regarding design parameters for the proposed sheet pile design. The recommendations were developed based on the project information provided by the Tetra Tech and the results of the site investigation. If there are any significant changes to the project characteristics or if significantly different subsurface conditions are encountered during construction, GSG should be consulted so that the recommendations of this report can be reviewed. GSG understands that the proposed temporary earth retention System will be sheet pile type. Below is a general discussion of the wall design requirements and required design parameters.

## 4.1 Sheet Pile Wall Design

Sheet pile walls are typically used in cut areas when continuous support must be provided to maintain existing structures or other adjacent facilities. To provide lateral resistance against the retained soil, the walls can be designed to act as a cantilever or can use tie backs behind the wall. The installation of sheet pile walls requires the use of specialty equipment to drive the piles into the ground. The walls maintain the existing site conditions with minimal disturbance to existing structures and can be installed relatively quickly. However, due to the presence of very stiff clays and extremely dense silts near an elevation of 530.0 feet (-49.9 feet CCD), we recommend using a heavier pile section with a minimum thickness of 0.4 inch to alleviate any damage to the pile section during driving if the sheet pile design is to extend past a depth of 55 feet below the existing surface. Grade 50 steel should be used for the sheet pile. The interlocks could be partially clogged during driving and after installation due to fine soil particle migration. The steel sheet piles may be subject to potentially corrosion. Corrosion rates are typically a function of temperature, soil pH, access to oxygen, and chemistry of the environment surrounding the pile. The walls are intended to be temporary, but if the wall is to remain in place as a long-term wall, corrosion deterioration should be considered on the sheet pile wall design.

Based on the overall wall stability, it is recommended that the cantilevered sheet pile system be installed to a minimum elevation of 550 feet (-29.9 feet CCD) with the pile section being at least 50 feet in length. GSG does not anticipate any constructability issues while driving these sheet piles, however, if an alternate system is considered then an anchored wall system may be considered. Different anchor systems such as grouted tiebacks, deadman anchor, or waler beams may be considered. The anchor system will transmit all loads from the soil through the retaining walls to the anchor and will align and brace the walls in position.





## 4.2 Lateral Earth Pressures and Loading

The wall shall be designed to withstand earth and live lateral earth pressures. The lateral earth pressures on retaining walls depend on the type of wall (i.e. restrained or unrestrained), the type of backfill and the method of placement against the wall, and the magnitude of surcharge weight on the ground surface adjacent to the wall. Sheet pile walls are considered flexible and such the earth loads may be calculated using active earth pressure for load above the design grade, and both active and passive earth pressures below the design grade. The active earth pressure coefficient ($K_a$), and the passive earth pressure coefficient ($K_p$) were determined in accordance with AASHTO Section 3.11.5.3 and 3.11.5.4, respectively.

The design should include a structural evaluation of the sheet pile section to meet applied shear and moment, and an evaluation of overturning to determine embedment depth and other design requirements. The simplified earth pressure distributions shown in the AASHTO Standard Specifications for Highway Bridges could be used for the wall design. **Table 4** also provides recommended lateral soil modulus and soil strain parameters that can be used for laterally loaded pile analysis via the p-y curve method based on the encountered subsurface conditions. The passive resistance in front of the sheet pile wall should be ignored for the upper 3.5 feet due to excavation activities and frost-heave condition.

**Table 4 - Geotechnical Lateral Design Parameters**

| Depth Elevation (feet) | Soil Description | Active Earth Pressure Coefficient ($K_a$) | Passive Earth Pressure Coefficient ($K_p$) | At Rest Earth Pressure Coefficient ($K_o$) | Lateral Modulus of Subgrade Reaction (pci) | Soil Strain ($\varepsilon_{50}$) | Adhesion ($C_a$) psf | Friction Angle between Steel and Soils (Tan δ) |
|---|---|---|---|---|---|---|---|---|
| 0.0 – 6.0 (598.0 – 592.0) | FILL: Black and Brown Sands and Gravels | 0.33 | 3.00 | 0.50 | 90 | NA | NA | 17 (0.30) |
| 6.0 – 19.0 (592.0 – 579.0) | Brown and Gray Loose to Medium Dense Sand | 0.28 | 3.53 | 0.44 | 25 | NA | NA | 17 (0.30) |
| 19.0 – 33.0 (579.0 – 565.0) | Gray Very Loose to Medium Dense Silty Sand | 0.31 | 3.25 | 0.47 | 20 | NA | NA | 14 (0.25) |
| 33.0 – 48.0 (565.0 – 550.0) | Gray Very Soft to Medium Stiff Fat Clay | 0.47 | 2.12 | 0.64 | 30 | 0.020 | 460 | NA |
| 48.0 – 61.0 (550.0 – 537.0) | Gray Medium Stiff to Very Stiff Fat Clay | 0.42 | 2.37 | 0.59 | 760 | 0.007 | 850 | NA |
| 61.0 – 70.0 (537.0 – 528.0) | Gray Dense to Extremely Dense Silt | 0.22 | 4.59 | 0.36 | 125 | NA | NA | 11 (0.20) |

Traffic and other surcharge loads should be included in the retaining wall design. A live load surcharge of 250 psf (or the equivalent weight of 2 feet soil overburden) should be applied where vehicular load is expected to act on the surface of the backfill. Heavy equipment should not be allowed closer than five (5) feet to the retaining wall to prevent inducing high lateral

earth pressures and causing wall yielding and/or other damage.

### 4.3 Excavation Base Stability

In open-cuts, it is necessary to consider the possibility of the base of the excavation failure by heaving, due to the removal of the weight of excavated soil. Heaving typically occurs in very soft or soft fat clays, as encountered in the borings, when the excavation depth is sufficiently deep enough to cause the surrounding soil to displace vertically due to a failure of the soil beneath the excavation bottom, with a corresponding upward movement of the soils in the bottom of the excavation. In fat and lean clays, heave normally does not occur unless the ratio of Critical Height to Depth of Cut approaches one. The sheet pile wall designer should check to make sure the sheet pile is sufficiently embedded in the stiffer clay soils to avoid heaving.





# 5.0 CONSTRUCTION CONSIDERATIONS

This section provides general construction consideration during construction activities at the site. Site specific information should be utilized based on site survey condition and construction phasing of the project.

## 5.1 Existing Utilities

Before proceeding with construction, any existing underground utility lines that will interfere with construction should be completely rerouted or removed from beneath the proposed construction areas. Existing utility lines that are to be abandoned in place should be removed and/or plugged with a minimum of 2 feet of cement grout. All excavations resulting from underground utilities removal activities should be cleaned of loose and disturbed materials, including all previously-placed backfill, and backfilled with suitable fill materials in accordance with the requirements of this section. During the clearing and stripping operations, positive surface drainage should be maintained to prevent the accumulation of water.

## 5.2 General Excavations

The contractor will be responsible to provide a safe excavation during the construction activities of the project. All excavations should be conducted in accordance with applicable federal, state, and local safety regulations, including, but not limited to the Occupational Safety and Health administration (OSHA) excavation safety standards. Excavation stability and soil pressures on temporary shoring are dependent on soil conditions, depth of excavations, installation procedures, and the magnitude of any surcharge loads on the ground surface adjacent to the excavation. Excavation near existing structures and underground utilities should be performed with extreme care to avoid undermining existing structures. Excavations should not extend below the level of adjacent existing foundations or utilities unless underpinning or other support is installed. It is the responsibility of the contractor for field determinations of applicable conditions and providing adequate shoring for all excavation activities.

## 5.3 Groundwater Management

Based on the soil boring logs, the long-term water table is about 19 feet below the existing ground surface; however, groundwater was encountered as shallow as 8 feet during the drilling operations. It is anticipated that groundwater issues may be present at the site as the excavation is anticipated to be at a depth of 15 feet. GSG recommends that the sheet piles incorporate interlocking edges and extend thru the sandy soils into the clay soils, to act as a cutoff wall to prevent ground water from entering the site. Some water may still seep through

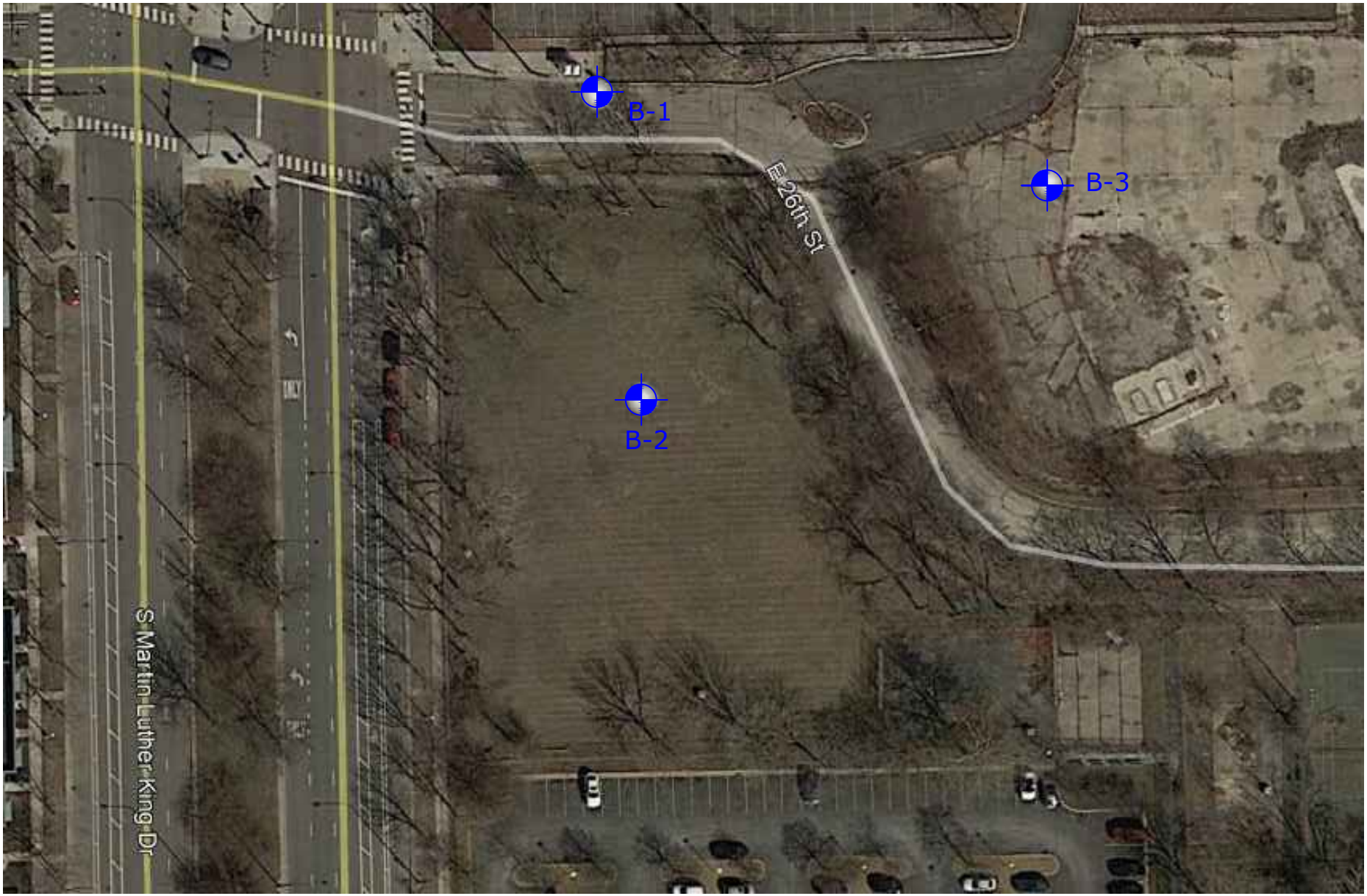
the interlocks of the steel sheeting, but this could be removed by normal sump pump operations. Even then well points may be required to dewater the excavation area and the contractor should provide a dewatering plan detailing how groundwater will be controlled and prevent water infiltration into the excavation/construction site.

## 6.0 LIMITATIONS

This report has been prepared for the exclusive use of 2FM and its structural consultant Tetra Tech. The recommendations provided in the report are specific to the project described herein and are based on the information obtained at the soil boring locations within the proposed retaining wall area. The analyses performed and the recommendations provided in this report are based on subsurface conditions determined at the location of the borings. This report may not reflect all variations that may occur between boring locations or at some other time, the nature and extent of which may not become evident until during the time of construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and review the recommendations presented herein.

# APPENDIX A

# BORING LOCATION MAP




LEGEND : SOIL BORING LOCATION

GSG CONSULTANTS, INC
ENGINEERS • SCIENTISTS • CONSTRUCTION MANAGERS
623 Cooper Court • Schaumburg, IL 60173
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Integrity | Quality | Reliability

| SCALE: | DRAWN BY: |
|---|---|
| NTS | AB |
| | CHECKED BY: AES |
| | DATE: 01/24/19 |

APPENDIX A : BORING LOCATION MAP
PROPOSED TEMPORARY SHEET PILING IMPROVEMENT
434 EAST 26th STREET
CHICAGO, ILLINOIS

T:\Tetra Tech\Carnotite Geotech\Geotechnical\Exhibits\Appendix A - Carnotite- Boring Location Map.dwg, 9/12/2019 8:53:17 AM, jscott, ANSI full bleed A (8.50 x 11.00 Inches)

# APPENDIX B

# BORING LOGS

GSG Consultants, Inc.
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Schaumburg, Illinois 60173
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# BORING NUMBER B-1



**CLIENT** Tetra Tech
**PROJECT NAME** 2FM Carnotite Site
**PROJECT NUMBER** 18-2084
**PROJECT LOCATION** 434 East 26th Street
**DATE STARTED** 12/4/18 **COMPLETED** 12/4/18
**GROUND ELEVATION** 597.00 ft **HOLE SIZE** 3 1/4"
**DRILLING CONTRACTOR** GSG Drilling
**GROUND WATER LEVELS:**
**DRILLING METHOD** HSA
▽ **AT TIME OF DRILLING** 18.50 ft / Elev 578.50 ft
**LOGGED BY** JC **CHECKED BY**
**AT END OF DRILLING** --- N/A
**NOTES**
**AFTER DRILLING** --- N/A

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY (%) | BLOW COUNTS (N VALUE) | UNCONFINED COMPRESSION (tsf) |
|---|---|---|---|---|---|---|
| 0 | | 4 inches of Asphalt<br>10 inches of Base Course Gravel | | | | |
| | | FILL: SAND, with wood fragments - Black - Moist | SS 1 | 56 | 3-5-5 (10) | |
| | | | SS 2 | 56 | 1-2-2 (4) | |
| 5 | | FILL: SAND, fine grained - Brown - Moist | | | | |
| | | SAND, fine grained (SP) - Brown and Gray - Loose to Medium Dense - Moist to Wet | SS 3 | 67 | 4-4-4 (8) | |
| | | | SS 4 | 78 | 5-5-6 (11) | |
| 10 | | | SS 5 | 89 | 5-6-6 (12) | |
| | | | SS 6 | 89 | 4-7-8 (15) | |
| 15 | | | SS 7 | 100 | 2-3-5 (8) | |
| | | ▽ | SS 8 | 100 | 2-3-5 (8) | |
| 20 | | SILTY SAND (SM) - Gray - Loose to Medium Dense - Wet | | | | |
| | | | SS 9 | 100 | 4-4-4 (8) | |
| | | | SS 10 | 89 | 3-5-6 (11) | |
| 25 | | | | | | |

▲ SPT N VALUE
20 40 60 80
● Moisture Content
10 20 30 40
☐ Unconfined Compression (tsf)
2 4 6 8

*(Continued Next Page)*

GEOTECH BH PLOTS - GINT STD US.GDT - 1/24/19 14:18 - \\GSGFS02\PROJECTS - ENGINEERING\TETRA TECH\CARNOTITE GEOTECH\GEOTECHNICAL\FIELD TESTING\18-2084.GPJ

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# BORING NUMBER B-1



**CLIENT** Tetra Tech **PROJECT NAME** 2FM Carnotite Site

**PROJECT NUMBER** 18-2084 **PROJECT LOCATION** 434 East 26th Street

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY (%) | BLOW COUNTS (N VALUE) | UNCONFINED COMPRESSION (tsf) |
|---|---|---|---|---|---|---|
| 25 | | SILTY SAND (SM) - Gray - Loose to Medium Dense - Wet *(continued)* | | | | |
| | | | SS 11 | 89 | 8-7-6 (13) | |
| | | | SS 12 | 100 | 2-2-2 (4) | |
| 30 | | | SS 13 | 89 | 1-1-2 (3) | |
| | | FAT CLAY (CH) - Gray - Very Soft to Medium Stiff - Moist to Very Moist | SS 14 | 67 | 0-0-2 (2) | 0.25 |
| 35 | | | | | | |
| | | | SS 15 | 78 | 0-1-1 (2) | 0.20 |
| 40 | | | | | | |
| | | | SS 16 | 100 | 0-1-2 (3) | 0.50 |
| 45 | | FAT CLAY, trace gravel (CH) - Gray - Medium Stiff to Stiff - Moist to Very Moist | | | | |
| | | | SS 17 | 100 | 2-2-2 (4) | 1.30 |
| 50 | | | | | | |

▲ SPT N VALUE
20 40 60 80
● Moisture Content
10 20 30 40
□ Unconfined Compression (tsf)
2 4 6 8

53

70.1

*(Continued Next Page)*

GEOTECH BH PLOTS - GINT STD US.GDT - 1/24/19 14:18 - \\GSGFS02\PROJECTS - ENGINEERING\TETRA TECH\CARNOTITE GEOTECH\GEOTECHNICAL\FIELD TESTING\18-2084.GPJ

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# BORING NUMBER B-1



**CLIENT** Tetra Tech **PROJECT NAME** 2FM Carnotite Site

**PROJECT NUMBER** 18-2084 **PROJECT LOCATION** 434 East 26th Street

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY (%) | BLOW COUNTS (N VALUE) | UNCONFINED COMPRESSION (tsf) | ▲ SPT N VALUE 20 40 60 80 / ● Moisture Content 10 20 30 40 / □ Unconfined Compression (tsf) 2 4 6 8 |
|---|---|---|---|---|---|---|---|
| 55 | | FAT CLAY, trace gravel (CH) - Gray - Medium Stiff to Stiff - Moist to Very Moist *(continued)*<br>Sand seam at 54 feet | SS 18 | 100 | 2-2-2 (4) | 0.75 | ▲ □ ● |
| | | Spoon refusal at 58.5 feet | SS 19 | | 50 | | |
| 60 | | Auger refusal at 61.0 feet | | | | | |

Bottom of borehole at 61.0 feet.

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# BORING NUMBER B-2



**CLIENT** Tetra Tech
**PROJECT NAME** 2FM Carnotite Site
**PROJECT NUMBER** 18-2084
**PROJECT LOCATION** 434 East 26th Street
**DATE STARTED** 12/7/18 **COMPLETED** 12/7/18
**GROUND ELEVATION** 598.00 ft **HOLE SIZE** 3 1/4"
**DRILLING CONTRACTOR** GSG Drilling
**GROUND WATER LEVELS:**
**DRILLING METHOD** Mud Rotary
▽ **AT TIME OF DRILLING** 8.50 ft / Elev 589.50 ft
**LOGGED BY** JJR **CHECKED BY**
**AT END OF DRILLING** --- N/A
**NOTES**
**AFTER DRILLING** --- N/A

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY (%) | BLOW COUNTS (N VALUE) | UNCONFINED COMPRESSION (tsf) |
|---|---|---|---|---|---|---|
| 0 | | 6 inches of Topsoil | | | | |
| | | FILL: SAND, with gravel and brick fragments - Black and Brown - Moist | SS 1 | 56 | 3-9-15 (24) | |
| | | | SS 2 | 67 | 4-2-2 (4) | |
| 5 | | | | | | |
| | | SAND, fine grained (SP) - Brown and Gray - Loose to Medium Dense - Wet | SS 3 | 78 | 2-3-3 (6) | |
| | | ▽ | SS 4 | 67 | 2-3-4 (7) | |
| 10 | | | | | | |
| | | | SS 5 | 83 | 1-2-3 (5) | |
| | | | SS 6 | 100 | 2-5-9 (14) | |
| 15 | | | | | | |
| | | | SS 7 | 100 | 3-5-8 (13) | |
| | | SAND, fine grained (SP) - Gray - Loose to Medium Dense - Wet | SS 8 | 100 | 4-5-8 (13) | |
| 20 | | | | | | |
| | | | SS 9 | 100 | 6-5-6 (11) | |
| | | | SS 10 | 100 | 4-5-7 (12) | |
| 25 | | | | | | |

▲ SPT N VALUE
20 40 60 80
● Moisture Content
10 20 30 40
☐ Unconfined Compression (tsf)
2 4 6 8

*(Continued Next Page)*

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# BORING NUMBER B-2



**CLIENT** Tetra Tech **PROJECT NAME** 2FM Carnotite Site

**PROJECT NUMBER** 18-2084 **PROJECT LOCATION** 434 East 26th Street

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY (%) | BLOW COUNTS (N VALUE) | UNCONFINED COMPRESSION (tsf) |
|---|---|---|---|---|---|---|
| 25 | | SAND, fine grained (SP) - Gray - Loose to Medium Dense - Wet *(continued)* | | | | |
| | | | SS 11 | 100 | 5-5-5 (10) | |
| | | | SS 12 | 100 | 3-4-5 (9) | |
| 30 | | SILTY SAND, fine grained (SM) - Gray - Very Loose to Loose - Wet | | | | |
| | | | SS 13 | 100 | 2-2-2 (4) | |
| | | | SS 14 | 100 | 1-1-2 (3) | 0.75 |
| 35 | | CLAY (CL/CH) - Gray - Medium Stiff - Very Moist | | | | |
| | | | SS 15 | 100 | 1-1-1 (2) | 0.5 |
| 40 | | | | | | |
| | | | SS 16 | 100 | 1-1-1 (2) | 0.75 |
| 45 | | | | | | |
| | | SILTY CLAY, trace gravel (CL) - Gray - Stiff to Very Stiff - Moist | SS 17 | 89 | 4-6-8 (14) | 2.5 |
| 50 | | | | | | |

▲ SPT N VALUE
20 40 60 80
● Moisture Content
10 20 30 40
□ Unconfined Compression (tsf)
2 4 6 8

0.7

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# BORING NUMBER B-2



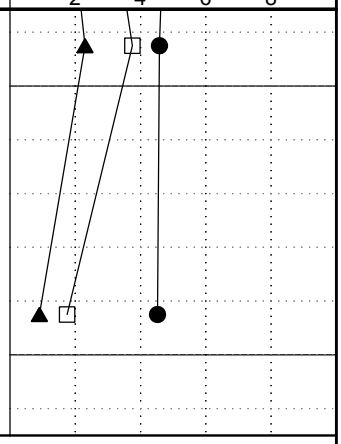
**CLIENT** Tetra Tech **PROJECT NAME** 2FM Carnotite Site

**PROJECT NUMBER** 18-2084 **PROJECT LOCATION** 434 East 26th Street

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY (%) | BLOW COUNTS (N VALUE) | UNCONFINED COMPRESSION (tsf) |
|---|---|---|---|---|---|---|
| 55 | | SILTY CLAY, trace gravel (CL) - Gray - Stiff to Very Stiff - Moist *(continued)* | SS 18 | 89 | 6-10-13 (23) | 3.75 |
| 60 | | | SS 19 | 100 | 2-4-5 (9) | 1.75 |
| | | Auger refusal at 61.5 feet | | | | |

Bottom of borehole at 61.5 feet.

▲ SPT N VALUE
20 40 60 80
● Moisture Content
10 20 30 40
□ Unconfined Compression (tsf)
2 4 6 8



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# BORING NUMBER B-3



**CLIENT** Tetra Tech
**PROJECT NAME** 2FM Carnotite Site
**PROJECT NUMBER** 18-2084
**PROJECT LOCATION** 434 East 26th Street
**DATE STARTED** 12/3/18 **COMPLETED** 12/3/18
**GROUND ELEVATION** 599.00 ft **HOLE SIZE** 3 1/4"
**DRILLING CONTRACTOR** GSG Drilling
**GROUND WATER LEVELS:**
**DRILLING METHOD** HSA
▽ **AT TIME OF DRILLING** 13.50 ft / Elev 585.50 ft
**LOGGED BY** JC **CHECKED BY**
**AT END OF DRILLING** --- N/A
**NOTES**
**AFTER DRILLING** --- N/A

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY (%) | BLOW COUNTS (N VALUE) | UNCONFINED COMPRESSION (tsf) |
|---|---|---|---|---|---|---|
| 0 | | FILL: SAND, with gravel and concrete fragments - Brown and Gray - Wet | SS 1 | 33 | 6-10-3 (13) | |
| 5 | | SAND, fine grained (SP) - Brown and Gray - Loose to Medium Dense - Moist to Wet | SS 2 | 56 | 2-3-4 (7) | |
| | | | SS 3 | 67 | 3-4-4 (8) | |
| 10 | | | SS 4 | 67 | 3-3-4 (7) | |
| | | | SS 5 | 67 | 4-5-5 (10) | |
| 15 | | ▽ | SS 6 | 67 | 5-5-7 (12) | |
| | | | SS 7 | 89 | 3-6-8 (14) | |
| 20 | | SAND, fine grained (SP) - Gray - Loose to Medium Dense - Wet | SS 8 | 89 | 3-3-4 (7) | |
| | | | SS 9 | 89 | 3-4-6 (10) | |
| 25 | | | SS 10 | 100 | 3-6-6 (12) | |

▲ SPT N VALUE 20 40 60 80
● Moisture Content 10 20 30 40
□ Unconfined Compression (tsf) 2 4 6 8

*(Continued Next Page)*

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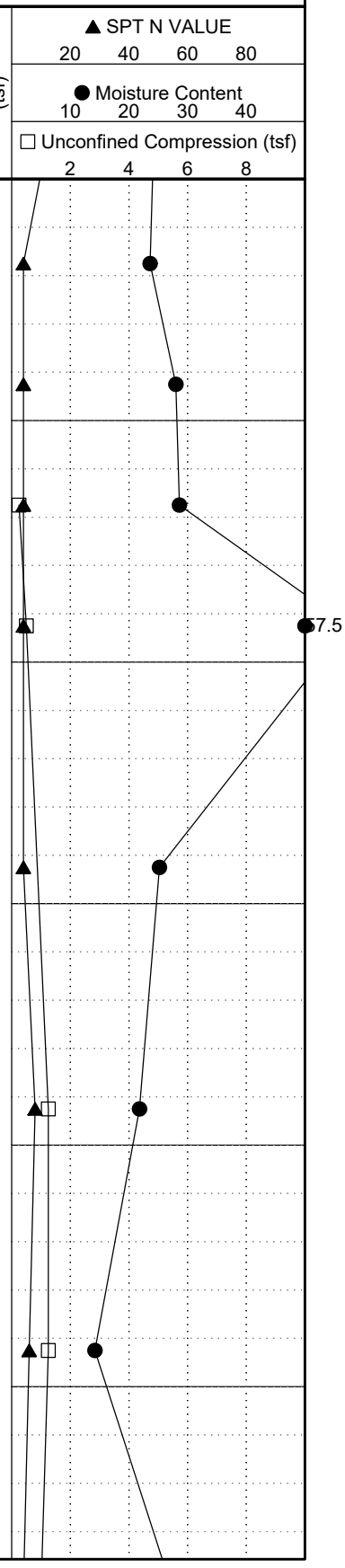
# BORING NUMBER B-3



**CLIENT** Tetra Tech **PROJECT NAME** 2FM Carnotite Site

**PROJECT NUMBER** 18-2084 **PROJECT LOCATION** 434 East 26th Street

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY (%) | BLOW COUNTS (N VALUE) | UNCONFINED COMPRESSION (tsf) |
|---|---|---|---|---|---|---|
| 25 | | SAND, fine grained (SP) - Gray - Loose to Medium Dense - Wet *(continued)* | | | | |
| | | SILTY SAND (SM) - Gray - Loose - Wet | SS 11 | 100 | 2-2-2 (4) | |
| | | | SS 12 | 100 | 1-2-2 (4) | |
| 30 | | FAT CLAY (CH) - Gray - Soft to Medium Stiff - Very Moist | SS 13 | 100 | 2-2-2 (4) | 0.25 |
| | | | SS 14 | 100 | 2-2-2 (4) | 0.5 |
| 35 | | | | | | |
| | | SILTY SAND (SM) - Gray - Loose - Wet | SS 15 | 100 | 2-2-2 (4) | |
| 40 | | | | | | |
| | | SILTY CLAY (CL) - Gray - Soft to Stiff - Moist to Very Moist | SS 16 | 100 | 3-4-4 (8) | 1.25 |
| 45 | | | | | | |
| | | | SS 17 | 89 | 3-3-3 (6) | 1.25 |
| 50 | | | | | | |




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# BORING NUMBER B-3



**CLIENT** Tetra Tech **PROJECT NAME** 2FM Carnotite Site

**PROJECT NUMBER** 18-2084 **PROJECT LOCATION** 434 East 26th Street

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY (%) | BLOW COUNTS (N VALUE) | UNCONFINED COMPRESSION (tsf) |
|---|---|---|---|---|---|---|
| 55 | | SILTY CLAY (CL) - Gray - Soft to Stiff - Moist to Very Moist *(continued)* | SS 18 | 100 | 2-2-2 (4) | 1.0 |
| 60 | | | SS 19 | 33 | 2-3-3 (6) | 0.25 |
| 65 | | SILT, trace clay and limestone fragments (ML) - Gray -Dense to Very Dense - Moist | SS 20 | 56 | 16-22-26 (48) | |
| 70 | | Spoon refusal at 70.0 feet | SS 21 | | 50 | |
| | | Bottom of borehole at 70.0 feet. | | | | |

▲ SPT N VALUE
20 40 60 80
● Moisture Content
10 20 30 40
□ Unconfined Compression (tsf)
2 4 6 8

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# Unified Soil Classification

Soil Classification is based on the Unified Soil Classification System and ASTM Designations D-2487 and D-2488. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; they are described as: clays, if they are plastic, and silts if they are slightly Plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the basis of their relative in-place density and fine grained soils on the basis of their consistency. Example: Lean clay with sand, trace gravel, stiff (CL); silty sand, trace gravel, medium dense (SM).

**Drilling & Sampling Symbols**

SS : Split Spoon
ST : Thin-Walled Tube
HA: Hand Auger
AU: Auger Sample
HS: Hand Sample

**Water Level (ft)**
▽ While Drilling
▽ After Drilling
▼ 24-hour

Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2 inch OD split spoon, except where noted.

| Major Divisions | | | Group Symbols | Typical Names |
|---|---|---|---|---|
| Coarse Grained Soils (More than Half of material is larger than No. 200 sieve size) | Gravels (More than hall of coarse fraction is larger than No. 4 sieve size) | Clean Gravels (Little or no fines) | GW | Well graded gravels, gravel-sand mixtures, little or no fines |
| | | | GP | Poorly graded gravels, gravel-sand mixtures, little or no fines |
| | | Gravels with fines (Appreciable amount of fines) | GM d / u | Silty gravels, gravel-sand-clay mixtures |
| | | | GC | Clayey gravels, gravel-sand-clay mixtures |
| | Sands (More than hall of coarse fraction is smaller than No. 4 sieve size) | Clean Sands (Little or no fines) | SW | Well graded sands, gravelly sands, little or no fines |
| | | | SP | Poorly graded sands, gravelly sands, little or no fines |
| | | Sands with fines (Appreciable amount of fines) | SM d / u | Silty sands, sand-silt mixtures |
| | | | SC | Clayey sands, sand-clay mixtures |
| Fine Grained Soils More than half of material is smaller than No. 200 sieve size) | Silts and Clays (liquid limit less than 50) | | ML | Inorganic silts and very fine sands, rock flour, silty or claye fine sands or clayey silts with slight plasticity |
| | | | CL | Inorganic clay of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays |
| | | | OL | Organic silts and organic silty clays of low plasticity |
| | Silts and Clays (liquid limit greater than 50) | | MH | Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts |
| | | | CH | Inorganic clays of high plasticity, fat clays |
| | | | OH | Organic clays of medium to high plasticity, organic silts |
| | Highly Organic Soils | | Pt | Peat and other highly organic soils |

**Consistency of Cohesive Soil**

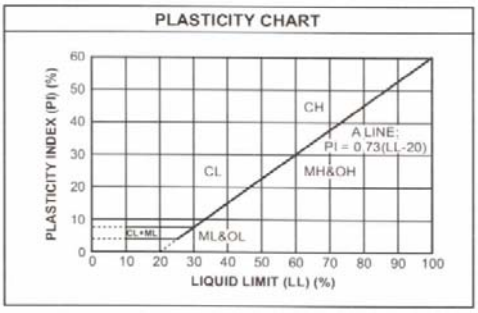
| Unconfined Compressive strength, Qu, tsf | N-Blows/ft. | Consistency |
|---|---|---|
| < 0.25 | Below 2 | < Very Soft |
| 0.25 - 0.50 | 2-4 | - Soft |
| 0.50 - 1.0 | 4-8 | - Medium Stiff |
| 1.0 - 2.0 | 8-15 | - Stiff |
| 2.0 - 4.0 | 15-30 | - Very Stiff |
| 4.0 - 8.0 | 30-50 | - Hard |
| > - 8.0 | > 50 | - Very Hard |

**Relative Density of Coarse-Grained Soils**

| N-Blows/ft. | Relative Density |
|---|---|
| 0-3 | Very Loose |
| 4-10 | Loose |
| 11-29 | Medium Dense |
| 30-49 | Dense |
| 50-80 | Very Dense |
| >80 | Extremely Dense |

**Description Term(s) of Components Present in Sample**

Trace < 10% Little 10-19%
Some 20-34% And 35-50%



# APPENDIX C

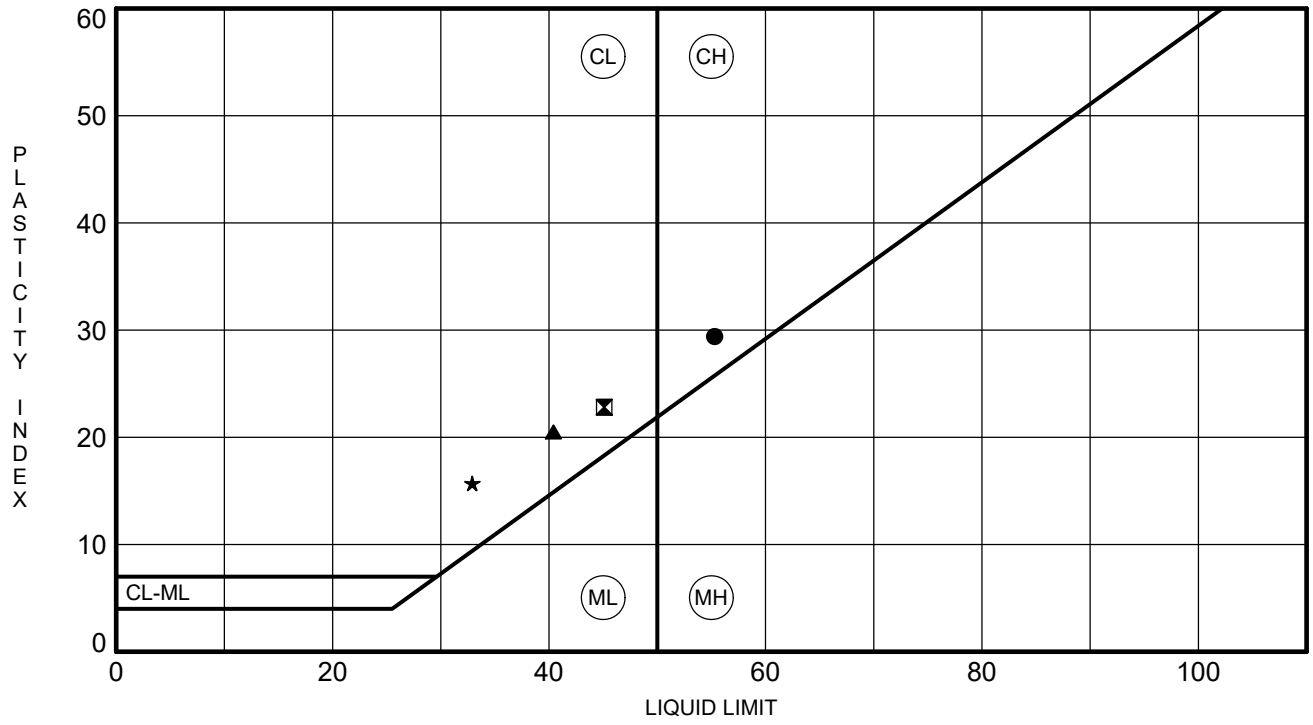
# LAB RESULTS

GSG CONSULTANTS, INC
623 Cooper Court
Schaumburg, IL 60173
Tel: 630.994.2600

# ATTERBERG LIMITS' RESULTS

**CLIENT** Tetra Tech **PROJECT NAME** 2FM Carnotite Site

**PROJECT NUMBER** 18-2084 **PROJECT LOCATION** 434 East 26th Street




| | BOREHOLE | DEPTH | LL | PL | PI | Fines | Classification |
|---|---|---|---|---|---|---|---|
| ● | **B-1** | **38.5** | **55** | **26** | **29** | | |
| ⊠ | **B-2** | **33.5** | **45** | **22** | **23** | | |
| ▲ | **B-2** | **53.5** | **40** | **20** | **20** | | |
| ★ | **B-3** | **43.5** | **33** | **17** | **16** | | |

ATTERBERG LIMITS - GINT STD US LAB.GDT - 1/24/19 10:41 - \\GSGFS02\PROJECTS - ENGINEERING\TETRA TECH\CARNOTITE GEOTECH\GEOTECHNICAL\FIELD TESTING\18-2084.GPJ